

VOLUME XLVIII

NUMBER FIVE

THE NATIONAL GEOGRAPHIC MAGAZINE

NOVEMBER, 1925

CONTENTS

SPECIAL MAP SUPPLEMENT OF THE ARCTIC REGIONS
IN SIX COLORS

AND 32 ILLUSTRATIONS IN FULL COLOR

The MacMillan Arctic Expedition Returns

With 42 Illustrations

DONALD B. MacMILLAN

Flying Over the Arctic

With 10 Illustrations

RICHARD E. BYRD, JR.

History's Greatest Trek

With 52 Illustrations

MELVILLE CHATER

Sun-Painted Scenes in the Near East

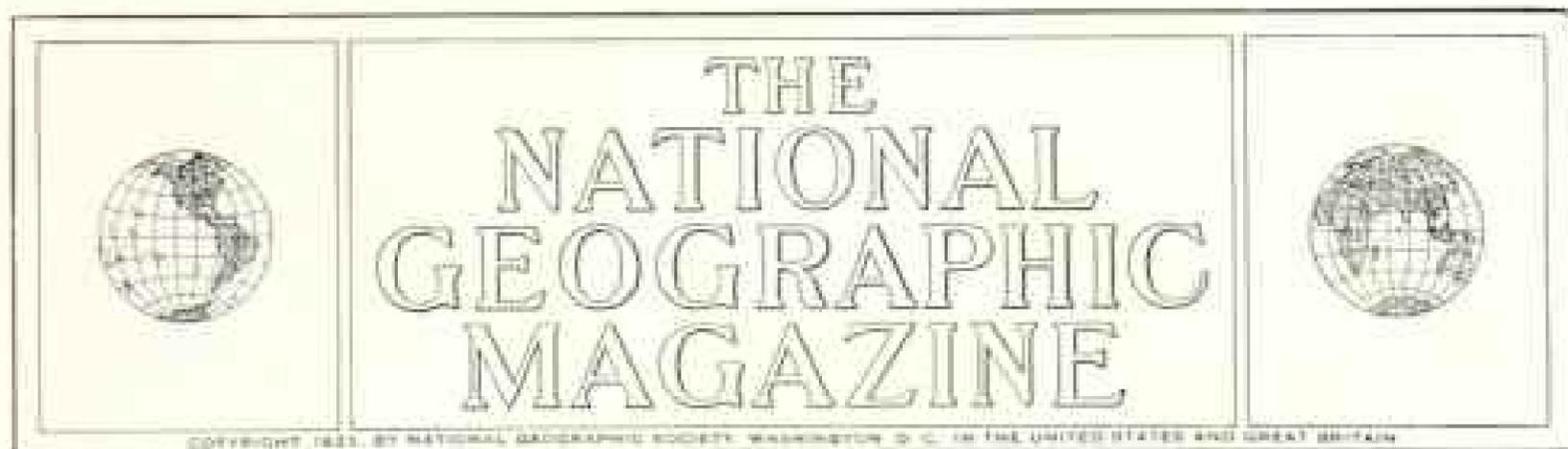
32 Autochromes Lumière

GERVAIS COURTELLEMONT

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
HUBBARD MEMORIAL HALL
WASHINGTON, D.C.

\$3.50 A YEAR

50¢ THE COPY



THE MACMILLAN ARCTIC EXPEDITION RETURNS

U. S. Navy Planes Make First Series of Overland Flights
in the Arctic and National Geographic Society
Staff Obtains Valuable Data and Specimens for Scientific Study

BY DONALD B. MACMILLAN

LEADER OF THE MACMILLAN ARCTIC EXPEDITION, UNDER THE AUSPICES OF THE NATIONAL GEOGRAPHIC SOCIETY,
IN COOPERATION WITH THE UNITED STATES NAVY; AUTHOR OF "PEARL AS A LEADER" AND "THE
"HOMERUN" IN NORTH GREENLAND," IN THE NATIONAL GEOGRAPHIC MAGAZINE

IT is natural for man to wonder what lies beyond the mountain peaks, what strange and interesting things may be below the encircling horizon. Without this incentive there can be but little progress.

True, dreams of untold wealth, of Eldorados, of waters potent with eternal life, of lotus lands free from care, of a life of happiness, have all driven men on into the unknown; but man's inborn desire to seek, to know, has been the dominant factor in the exploration of the world, no section of which has proved more attractive than the North, with its far-stretching, grinding ice fields, its eternal, snowcapped peaks, its encircling sun and stars, its strange forms of animal life, and its swarthy, square-faced aborigines.

Man's ingenuity has devised many a scheme for the exploration of this great unknown area. Staunch ships have been built and crushed. Man has harnessed himself to his sledge and plodded slowly, painfully on. Sails and even gigantic

kites have been utilized in this arduous toil. Siberian ponies, burros, reindeer, dogs, balloons, and motor sledges have all played their part—some successfully. Thus far the dog remains king.

With the marvelous development of airplanes and their noteworthy feat of encircling the world, naturally such means would be considered for conquering the North, especially during the summer months, when the temperature, being well above the freezing point of fresh water, is one of the least factors to be considered in the proper functioning of the gas engine. Given proper *landing places* and *time*, nothing can militate against eventual success, provided engines are fairly reliable.

THE GREAT MYSTERY OF THE POLAR SEA

One great area in the Polar Sea remains a mystery—roughly, that between Alaska and the Pole and northwest of Axel Heiberg Island. Here at least twice land has been reported and here tidal experts have predicted that it would be



Photograph by Jacob Gayer

BATTLE ISLAND AND BATTLE HARBOR FROM THE HEIGHTS OF GREAT CARIBOU,
LABRADOR

The *Bowdoin* lies at the dock, taking on fuel oil for its long run to Etah and return. The white buildings are connected with the fishing industry and general trading. Jutting out behind the general store, in the center, is one of the hospitals of Dr. Grenfell. Against the skyline can be seen the aerial of the northernmost year-round radio station on the east coast of America. Inland from the *Bowdoin* can be seen a corner of the extensive fish-drying platforms. Battle Island is the legendary scene of early fighting between Eskimos and Indians and is the concert platform for the loudest "husky" dog chorus in the world.

found. The quest for this land was the primary object of the so-called Crocker Land Expedition of 1913-17. Inaccessible by ship and extremely difficult to reach with dogs, it awaits exploration by air.

The rough ice of the Polar Sea, thrown into hummocks and pressure ridges by strong winds and currents, precludes the possibility of safe emergency landings. Such exist, however, and can be found in the early spring months, before the warm summer sun thaws the covering of wind-packed snow and reveals a hard, blue, rolling surface interspersed with pools of water of varying depths.

Since no one has ever visited this section during the summer months, no data are available for determining the relative amount of open water. From my own experience and that of Peary and Nansen, it is reasonable to infer that the "leads"

increase in size and number as the season advances. Therefore one's chief dependence should be upon a water plane. However, conditions demanded that a plane might be called upon to take off from and alight upon land, ice, or water. The Loening Amphibian has these requisite qualifications; hence our choice of this particular type.

Etah, North Greenland, eleven and a half degrees from the Pole, is the ultimate port in Smith Sound which a ship can safely visit and leave the same season; therefore my choice of this well-known place as headquarters.

THE ORGANIZATION OF THE 1925
EXPEDITION

The National Geographic Society, ever progressive, ever interested in Arctic study, and ever ready to sponsor plans having as their object the exploration of



Photograph by Jacob Gayer.

THE "BOWDOIN" STANDS BY WHEN THE "PEARY" GOES AGROUND NEAR HOPEDALE, OFF THE LABRADOR COAST

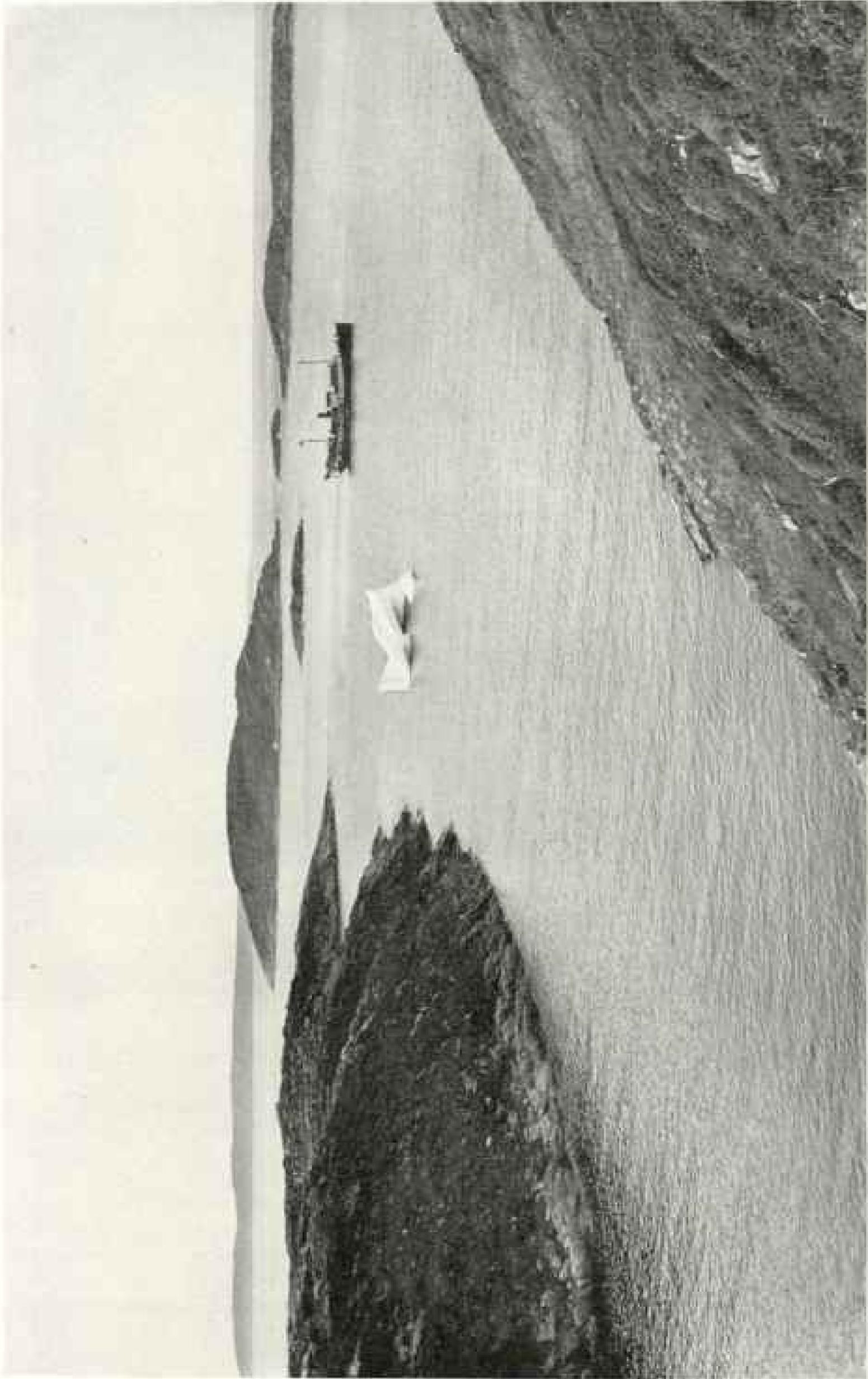
Later, the *Peary* repaid the debt by bucking a way through the dread Melville Bay ice-pack on the way north and by coming to the aid of the *Bowdoin* when she went on the rocks off Redcliffe Peninsula on the return trip (see text, page 513, and illustration, page 504).

the unknown and the diffusion of geographic knowledge, financed my expedition of 1925 from funds provided by its million members, and encouraged me in every possible way to bring back worthy results.

Four men were detailed as assistants: Lieutenant Benjamin H. Rigg, of the U. S. Coast and Geodetic Survey, as magnetic and tidal observer; Dr. Walter N. Koelz, of the U. S. Bureau of Fisheries and the University of Michigan, as naturalist; and Mr. Maynard Owen Williams and Mr. Jacob Gayer as staff correspondent and color photographer, re-

spectively, of the National Geographic Society.

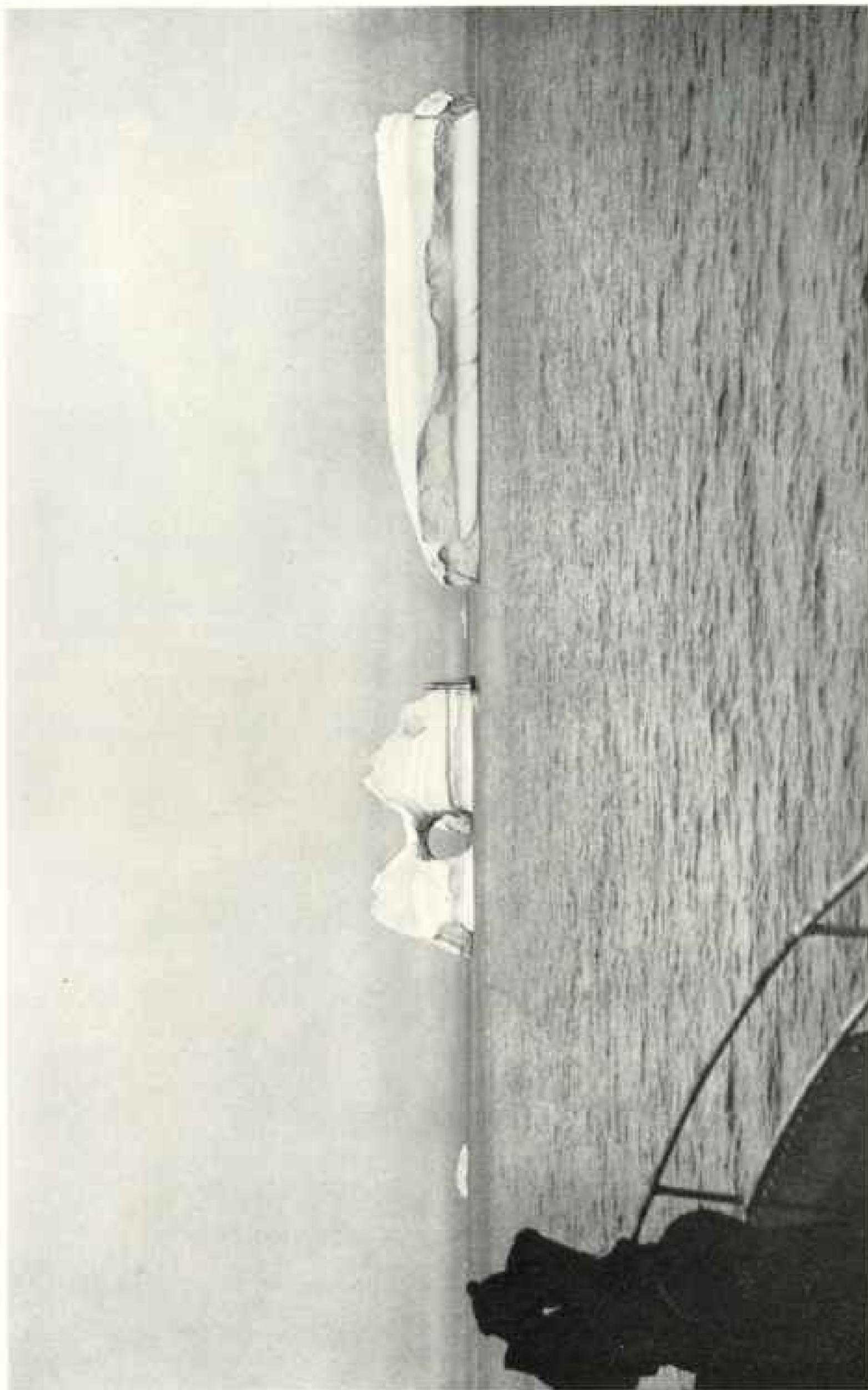
The United States Navy generously cooperated with The Society in the furtherance of my plans by sending a separate unit of eight men and three amphibian planes for the work on the Polar Sea. These men and this branch of the work were under the command of Lieutenant Commander Richard E. Byrd, Jr., of the Bureau of Aeronautics. Since I was merely a passenger on the planes, traveling with his permission, credit should be given to him for what the planes really did. (See pages 519 to 532, inclusive.)



Photograph by Jacob Gæzer.

THE "PEARY" IN HARBOR BEHIND BATTLE ISLAND, LABRADOR

Along the Labrador coast the many islands offshore provide good "inside runs" and adequate harbors. When the straits are so narrow that navigating them is "ticklish work," they are called tickles, and on the trip "down north" both the *Bowdoin* and the *Peary* threaded dangerous passages rather than put out into gales which might sweep the planes from the deck of the latter, which carried the Navy personnel.



Photograph by Jacob Gayer.

MIDNIGHT SAILING INTO THE HOME OF THE ICEBERGS

This splendid arched berg was encountered just at midnight on July 30-31. The *Baradoin's* 60-foot masts are quite dwarfed beside the ice mass, seven-eighths of which is below the water. Within a few hours after this photograph was made the fog was so dense that one could scarcely see the length of the ship, and further cruising among the bergs of upper Ballin Bay was suspended until morning brought a clearer sky.



Photograph by Jacob Gayer

SAM BROMFIELD BROADCASTS ENTERTAINMENT FROM THE LABRADOR WILD

British subject, proud of his king; father of Abram, proud of his son; lover of merriment, proud of his skill, the "Mayor of Jack Lane Bay" plays his fiddle for an invisible audience half a continent away.

In contrast to the lone, silent months that Peary, Greely, and other explorers spent in the Arctic with no word from home, was our experience of hearing the voices of our friends, and concerts from our home cities, by radio.

For the transmission of our day-to-day messages, through the National Geographic Society and the Navy Department, we also depended upon our radio and the fine, unselfish, and unflagging coöperation of the code radio operators who are members of the American Radio Relay League.

Press associations and newspapers coöperated in this news transmission which, in itself, was of value to the science of radio, and which demanded constant resourcefulness at the receiving end, because we never could be sure that we would send by the same operator on two successive nights. It was the amateurs who relayed the messages to be distributed at Washington and made it possible for members of the National Geographic Society and all readers of

newspapers to follow our day-by-day movements.

E. F. McDonald, Jr., was in general charge of radio; equipment furnished by the Zenith laboratories was used, and my own operator aboard the *Bowdoin* was John L. Reinartz, known to amateurs the world over, while the *Peary's* dispatches were ably handled by Paul J. McGee and Harold E. Gray.

TWO SHIPS OF THE EXPEDITION SAILED NORTHWARD ON JUNE 20

The steamship *Peary*, with my second in command, E. F. McDonald, Jr., carrying the Naval unit and the three planes, was given a rousing send-off from the Charlestown Navy Yard on Bunker Hill Day and joined the *Bowdoin* at Wiscasset, Maine, from which port both ships sailed on June 20 for Sydney, Cape Breton Island, Nova Scotia, to take on the last supplies of coal and fuel oil.

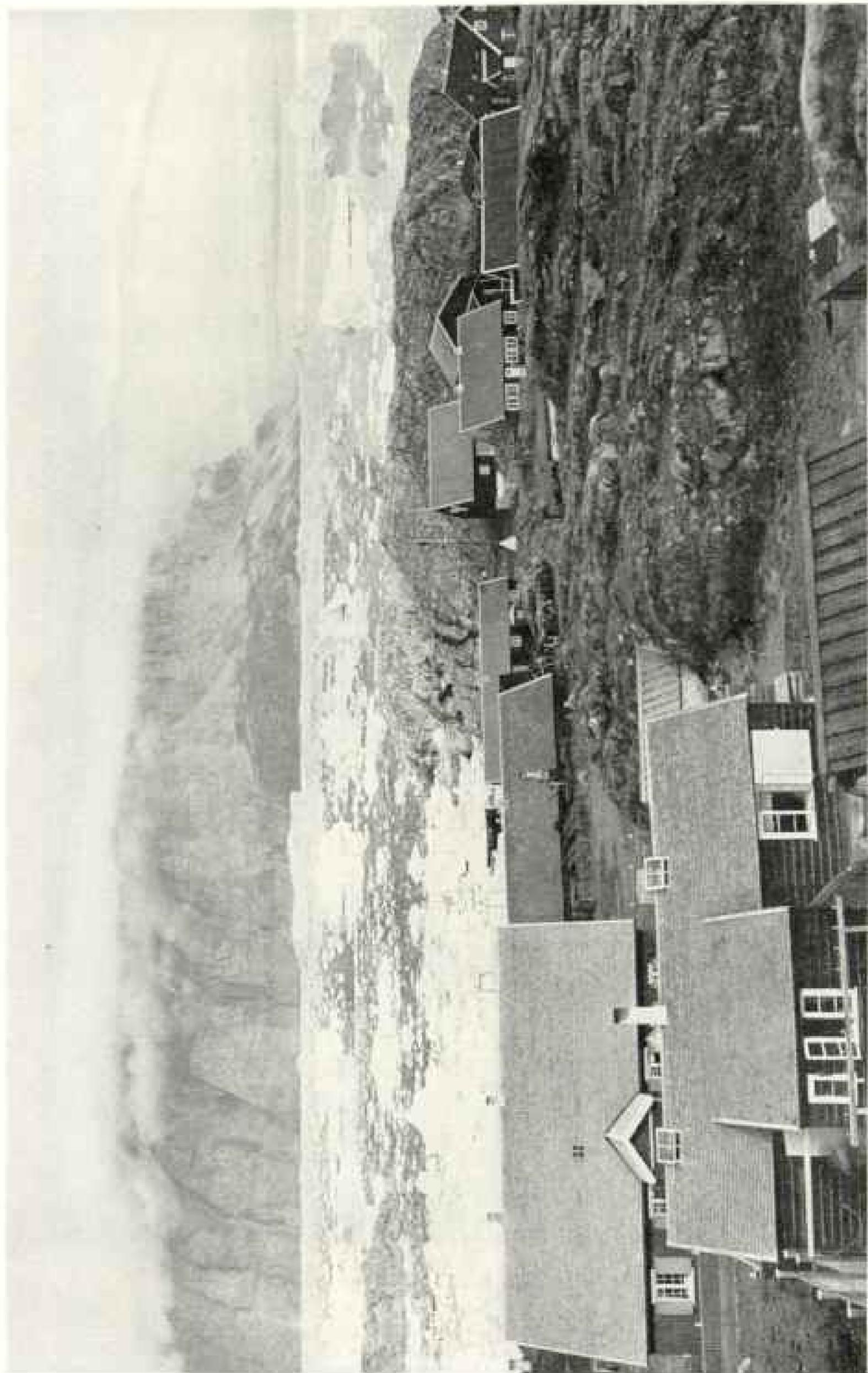
A few necessary changes on the *Peary* were effected at Sydney. Portholes were covered with steel plates, the better to resist ice pressure in dread Melville Bay.



Photograph by Jacob Gayer

GREENLAND GIRLS OF UMANAK

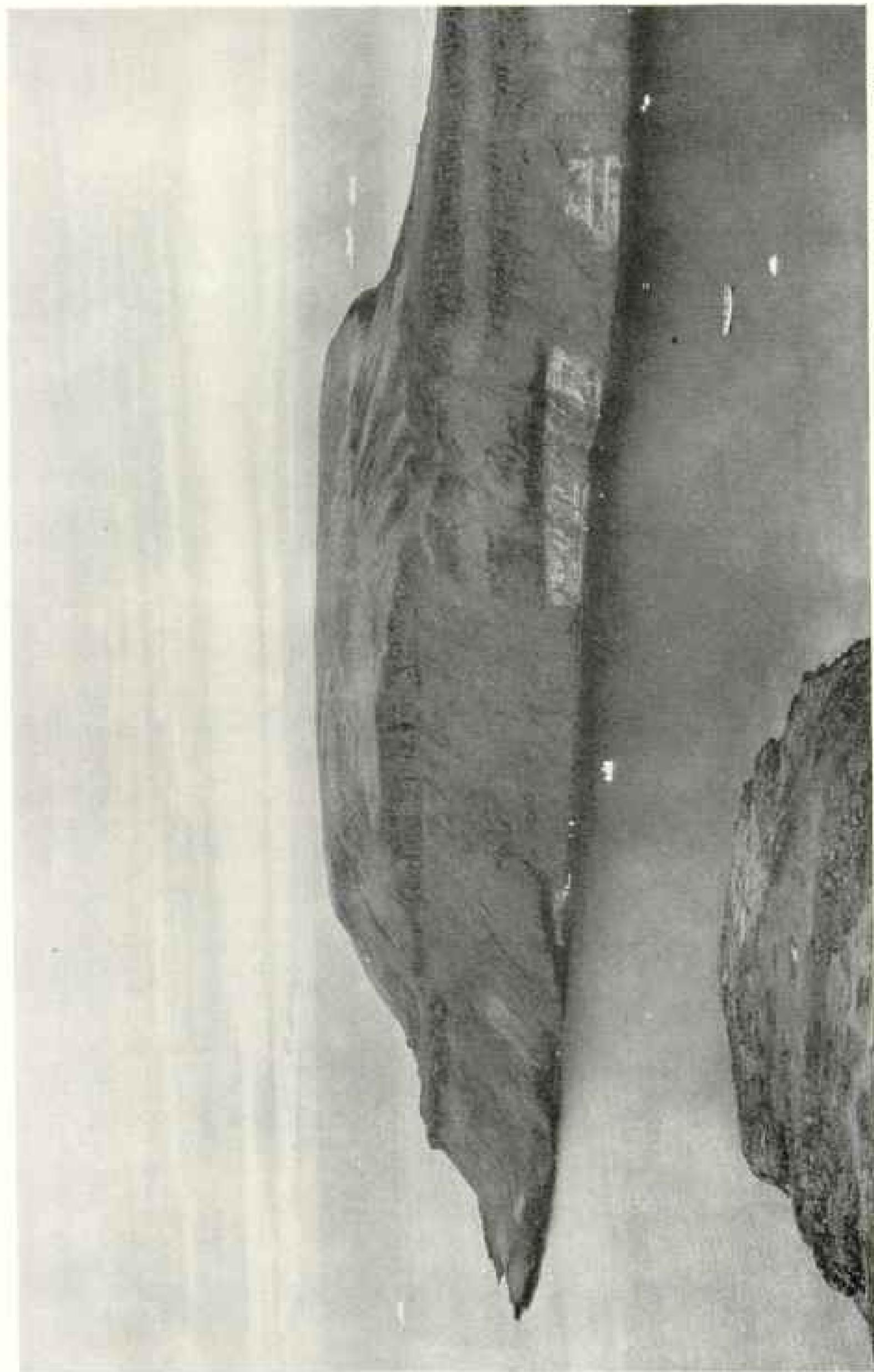
The south Greenland population contains little Eskimo blood, and the people are called Greenlanders irrespective of the proportions of their racial make-up. The costume is distinguished for its bright bead collar and fine boots, but the most colorful bit is the thigh panel on the tight sealskin trousers. Inside a border of shiny red there is a strip of white from a reindeer breast, and the inner section is a polychrome mosaic composed of hundreds of tiny bits of leather sewn to the background. The old style of combing the hair has given way to ugly knitted caps.



Photograph by Jacob Goyert

A JULY DAY AT UMANAK, WHERE THE "PEARY" COALED

The glacier at the head of Umanak Fiord sometimes advances 50 feet a day, and casts off so many bergs that the water is never free of ice. The coal mines are about 14 miles away from this unusually prosperous little settlement on the north edge of the Narsuak Peninsula, north of Disko Island and Disko Bay, where Peary began his Arctic work.



Photograph by Maynard Owen Williams

PANDORA HARBOR AND CAPE KENNECK FROM CRYSTAL PALACE CLIFFS

This quiet harbor, just north of Cape Alexander, was the anchoring place of Sir Allen Young's ship *Pandora* in 1876. Off its mouth herds of walrus are frequently seen and the hills are full of snow-white Arctic hares. In the distance are the snow hills of Ellesmere Island. Etah is about eight miles away to the north, off the right side of the picture. In the right foreground is the *Beaufort*.



Photograph by Maynard Owen Williams

WHEN FOG AND PACK ICE HALTED THE SHIPS ON THEIR NORTHWARD PUSH
THROUGH MELVILLE BAY

Three days from Etah the *Bowdoin* and the *Peary* encountered fog, which made ice pilotage impossible. The situation looked gloomy. Commander MacMillan decided that a diversion was necessary, so a snowball fight was staged by both crews, after which Chief Aërographer Francis dived into the waters of Melville Bay.

The delay caused by this work and the refilling of the bunkers resulted in the *Bowdoin* proceeding to Battle Harbor, Labrador, a few days in advance. Here the *Peary* rejoined us on July 2, both ships going north on the 5th to Domino Run, where we purchased a supply of native sealskin boots, much lighter and warmer for northern work than our homemade product.

Five miles east of Cape Harrison both ships met the ice-pack lying close against the land and extending north in an almost unbroken sheet.

This was the *Peary's* first encounter with the pack. It is generally conceded by experienced men that an iron ship is not the equal of a wooden ship for northern work. When bucking ice, rivets are easily started; when sailing in uncharted waters, grounding is imminent at any moment; and steel hulls are easily punctured by sharp rocks. There are no dry docks in the North except the beach,

which a deep-draft ship cannot reach. A steel hull cannot be compressed without serious injury. A wooden hull will spring back into shape.

The *Peary*, with her 600-horsepower triple expansion engines, her 9-foot propeller, and her triple-plated bow, nosed her way through the ice as if this were mere play. I was relieved of all anxiety about her ice-bucking ability.

Before us lay possibly the most difficult bit of navigation of the whole trip—the inside run from Cape Mikkovik to the Moravian settlement at Hopedale. The most able captain could never navigate this by chart. On the Labrador coast, north of Hamilton Inlet, experience is the only guide.

With one eye over our bow and the other back over my shoulder at the flaring bow of the *Peary*, close behind, I directed the *Bowdoin* over the path she knew so well.

When approaching Flagstaff Tickle,



Photograph by Jacob Gayer

THE LEADER OF THE EXPEDITION WELCOMED BY SMITH SOUND ESKIMOS

Just south of Conical Rock the *Bowdoin* was greeted with the sound of guns, and two Eskimos dashed out from the shore in their kayaks to welcome the members of the Expedition. They are here seen receiving gifts of tobacco, one of the few things for which the Eskimo must depend upon the outside world (see text, page 500).

nine miles from Hopedale, the course lies near a breaking ledge so close on the starboard that Captain Steele of the *Peary* was a bit overcautious. I was on the point of waving him in, when up shot the bow of the *Peary* and over she went on her side. We whirled the *Bowdoin* hard-a-starboard and within a few minutes were alongside the *Peary* (see page 479).

Always when a ship grounds the all-important question is: "Is the tide running or falling?" To our relief, it was rising, and it was only a matter of time until the *Peary* would be afloat. But, since pounding upon the rocks would certainly result in injury to the hull, it be-

hooved us to do everything possible to get her off at once.

Captain Steele, with his practical knowledge of the sea, suggested that the *Bowdoin* pull the *Peary* off by the masthead, a well-known method of decreasing the draft of a ship. Our attempt to do this resulted in pulling the *Peary* over from her list to port to a heavy list to starboard and in snapping our hawser. We then ran out kedge anchors from stern and bow and picked up Captain Steele and three of his crew in a small boat, who were vainly endeavoring in a rough sea to run out another hawser.

In the meantime some of the men on



Photograph by Maynard Owen Williams.

ROLLING A WALRUS ONTO A ROCK BEACH AT LOW TIDE

In winter the Eskimos are skillful in hauling their walrus trophies onto the ice, but in summer they capture specimens too heavy to drag ashore. They bring their catch as near to land as possible, and then make the receding waters provide them with a dry dock.



Photograph by Jacob Gayer.

WHERE AN ADVANCING GLACIER BECOMES A SHRINKING LAKE

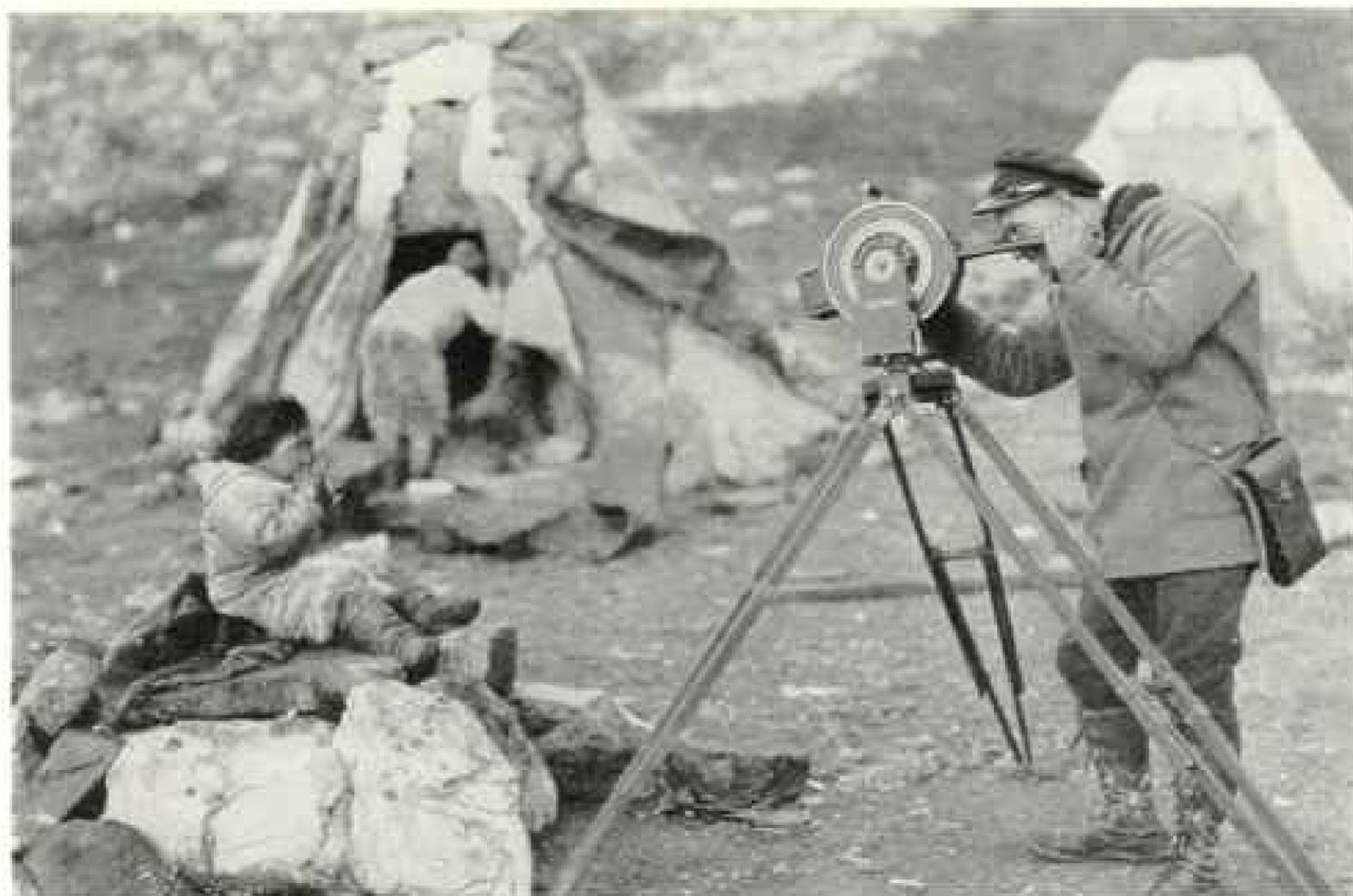
Within the memory of living men John's Glacier, which terminates Foulke Fjord, ended at least half a mile back of Alida Lake. To-day it drops away into the lake itself.



Photograph by Jacob Gayre

THE EXPEDITION NATURALIST SKINS BIRDS ON THE DECK OF THE "PEARY"

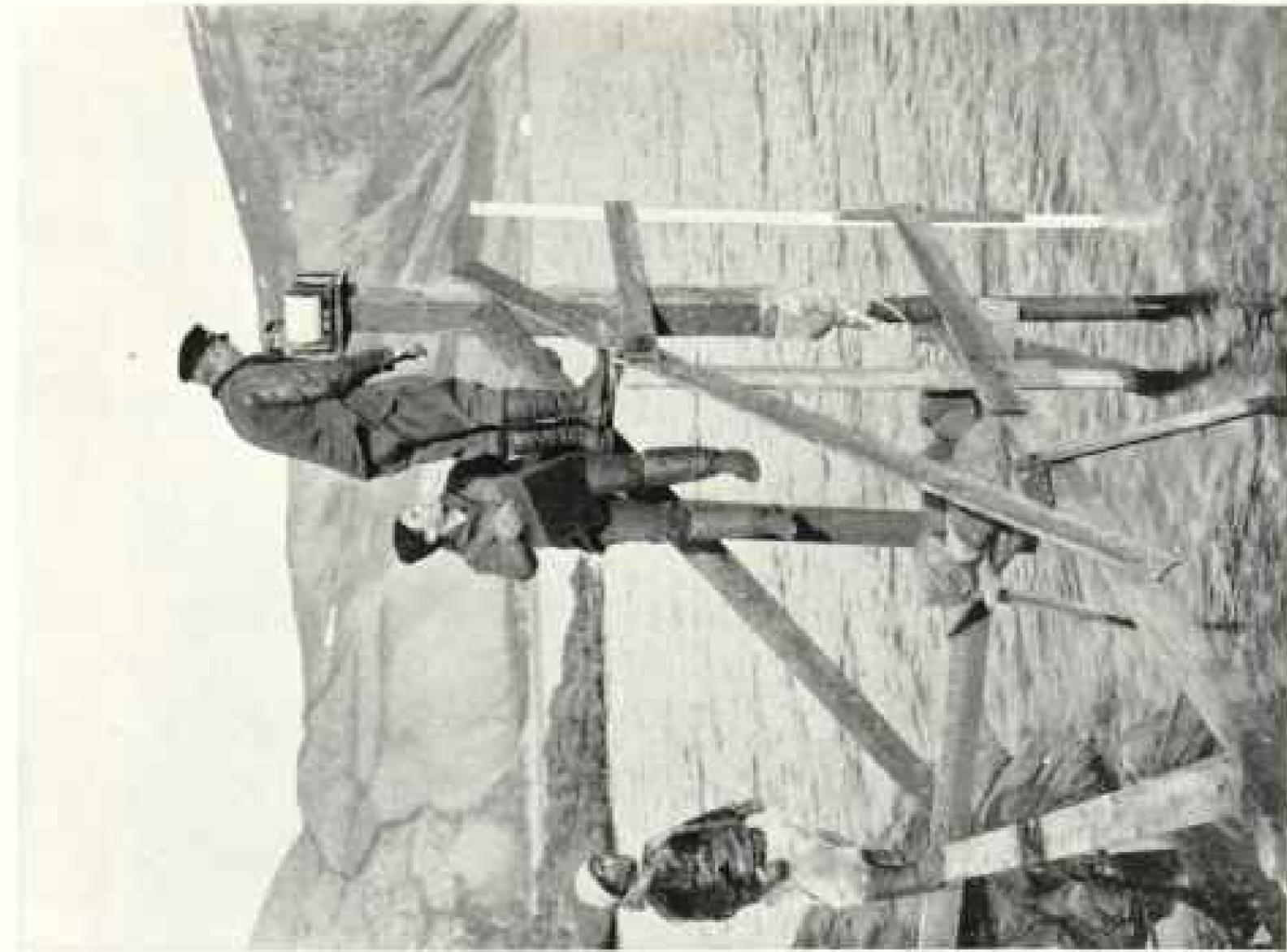
Lacking adequate storage space for his specimens, Dr. Koelz spread out his drying skins on his bunk, while he slept on deck. Each specimen had to be properly ticketed and no egg was taken unless the mother bird could be secured.



Photograph by Maynard Owen Williams

POSING FOR THE NAVY'S AÉROGRAPHER AND MOTION-PICTURE PHOTOGRAPHER

This future hunter among the Smith Sound Eskimos shows how acceptable a ten-cent mouth organ can be to a regular boy who had never seen or heard one.



THE MACHINE WITH WHICH THE TIDES AT ETAH SIGNED THEIR FIRST AUTOGRAPH

Lieutenant Benjamin H. Rigg carried with him to Etah an automatic tide gauge which recorded every move of the sea. Because of an unusual tidal range, the piping taken to the Arctic was not long enough and an extension had to be made of boards from airplane crates.



Photograph by Jacob Gilyer.

AK-KOM-A-DING-WA WATCHES LIEUTENANT RIGG AT HIS SCIENTIFIC WORK IN ETAH

Over the tent flies the flag of the United States Coast and Geodetic Survey, under which Rigg has worked on our South Atlantic coast, off Alaska, and in the Sulu Sea. The magnetic force at Etah is only one-tenth as strong as at New York, so compass readings require great care.



Photographs by Maynard Owen Williams

NGO-KA-PING-WA AND HIS HARPOON TROPHY

In capturing this walrus head there was plenty of excitement for all. At least a hundred walrus were in the herd which gave battle to the Expedition hunters. One kayak was overturned, two bladder floats were punctured by enraged walrus bulls, and the herd was kept at bay by rapid fire from high-power rifles. Three walrus were dragged in for meat and museum specimens.



REINARTZ, AT ETAH, LISTENS IN ON THE WORLD

Much of the success of the Expedition's radio work depended upon the eager cooperation of Reinartz's associates of the American Radio Relay League in transmitting messages. More than 30,000 words of news dispatches alone were sent out from the *Borofoin* addressed to the National Geographic Society and released by it, day and night, to the press associations (see text, page 482).



ESKIMO WOMEN ON THE "PEARY" LISTEN IN



Photographs by Jacob Gayre

PRIMITIVE MAN ESTABLISHES CONTACT WITH HIS FELLOWS ABROAD

In-you-gee-to, one of Peary's men, sings an Eskimo song for the nation for whose representatives he considers no feat impossible. Commander MacMillan introduced the phonograph, the telephone, the movie, and many other modern inventions to his Eskimo friends; but as for wireless, why should it not be more simple to talk without wires than go to all the trouble of stringing them? The photograph shows the dining saloon of the *Peary*.

the *Peary* were packing bags preparatory to leaving the ship. Many interesting and amusing incidents happened during the excitement.

Captain Steele, starting his steam winch, soon had his hawser tight as a fiddle string. With the rising water, the *Peary* swung from the rock and rode to her kedge, a few yards from the breaking reef.

Instructing Captain Steele to keep directly behind us, we threaded Flagstaff Tickle, passing two bad underwater rocks, where many a Newfoundland fishing schooner has been wrecked.

Upon reaching Hopedale we found the Mission flag snapping in the breeze to give us welcome.

It would take many issues of the NATIONAL GEOGRAPHIC MAGAZINE to give its readers an adequate idea of what these brave and unselfish Moravian missionaries have been doing on the bleak Labrador coast for the last 154 years! Were it not for the Moravians, there would not be a single living Eskimo on that coast to-day. From the time that Jensen, standing with outstretched hands in the bow of a boat, called, "I am your friend!" life has been safe for Eskimos there.

Eskimo history is the history of all savages, slowly retreating from the outposts of civilization and dying from its diseases. Once a great race, extending to the northern shores of the Gulf of St. Lawrence, they are not to be found to-



Photograph by E. K. Reber

AK-KOM-A-DING-WA, CONFRONTED WITH AN ELECTRIC FAN
IN THE ARCTIC, SEES THE JOKE

But he did not appreciate the use of this unusual bit of Arctic equipment. The National Geographic Society photographers, in their effort to record the delicate tints of the North, were forced to dry their plates quickly to avoid spottiness (see text, page 515).

day until one reaches the half-breed at Mokkavik, 55° 14' N.

The strenuous fight of the Moravians has been waged not so much against the ignorance, superstition, evil practices, and primitive religion of the savage as against the sins of the so-called civilized.

ESKIMO WOMEN OUTFIT EXPEDITION
WITH SEALSKIN COATS

The crews of both our ships fairly mobbed the Mission store in their eagerness to secure the light, water-tight seal-



Photograph by Maynard Owen Williams

THE ESKIMO WOMAN'S CHIEF TASK: REPAIRING FOOTWEAR

In a region where death from exposure is a constant threat during much of the year, the work of woman has evolved into that of seamstress. Koo-e-tig-e-to's wife here shows how a skin stocking is made. Since the jaw gives the firmest possible grip, it is much used in shaping the Eskimo footwear.



Photograph by Maynard Owen Williams

ME-TIK, WHOSE NAME MEANS EIDER DUCK, SHOWS HOW TO EAT RAW MEAT

The flesh of birds is much esteemed by the Smith Sound Eskimo, who has few worries over a balanced diet and who never suffers from scurvy. Rheumatism, ascribed by some to the all-meat diet, is common.

skin native hoot. Two days of busy sewing by the native women fitted out many of the crew with blanket "dickies" and sealskin coats.

On July 10 we were away at 1:30 a. m., threading our way through the narrow Dark Tickle, on past hidden rocks to Windy Tickle, where we anchored to give me an opportunity to run up in the powerboat for my old interpreter, Abram Bromfield, who had accompanied me on two previous trips.

On our return to the *Bowdoin*, preparations were made for the immediate departure of both ships for Greenland. When the anchor was on the bow, I rang the telegraph "Full speed ahead!"

With amazement I noted the engine turning rapidly, but not an inch of headway. For the first time in my service, the *Bowdoin* refused to move. Had we broken our shaft? Had we lost our propeller? I peered into the water under

our counter and saw the propeller still in place, but absolutely dead.

After calling to the *Peary* to go on, and promising to rejoin her in Greenland, a more thorough examination was made.

A NEW PROPELLER FITTED TO THE
"BOWDOIN"

The *Bowdoin*, with her 10-foot draft, was designed to equal the rise and fall of Arctic tides with a view to beaching her, when necessary, for repairs, but our accident happened at one place in Labrador where there is a rise of only four feet at neap and seven maximum at spring tides. We needed at least eight.

We were in a serious predicament. The *Peary* could not do the summer's work alone. She had gone on with the planes and aviators, but the *Bowdoin* carried spare parts, three Liberty engines, and 1,500 gallons of gas. There was only one thing to do—return to Hopedale,



COMMANDER MACMILLAN WITH ONE OF HIS YOUNG ESKIMO FRIENDS AT ITAIT



Photograph by Maynard Owen Williams

IN-YOU-GEE-TO READY TO FEED THE RAVENOUS DOGS OF ONE OF HIS SLEDGE TEAMS

Those whose dependence has been on the Eskimo dog have infinite faith in its powers and usefulness. Engine or fuel, as the conditions require, the husky begins life as the playmate of the children and often ends it in saving the life of his master. Always hungry, often savage, the Eskimo dog still has qualities which endear him to all his friends.

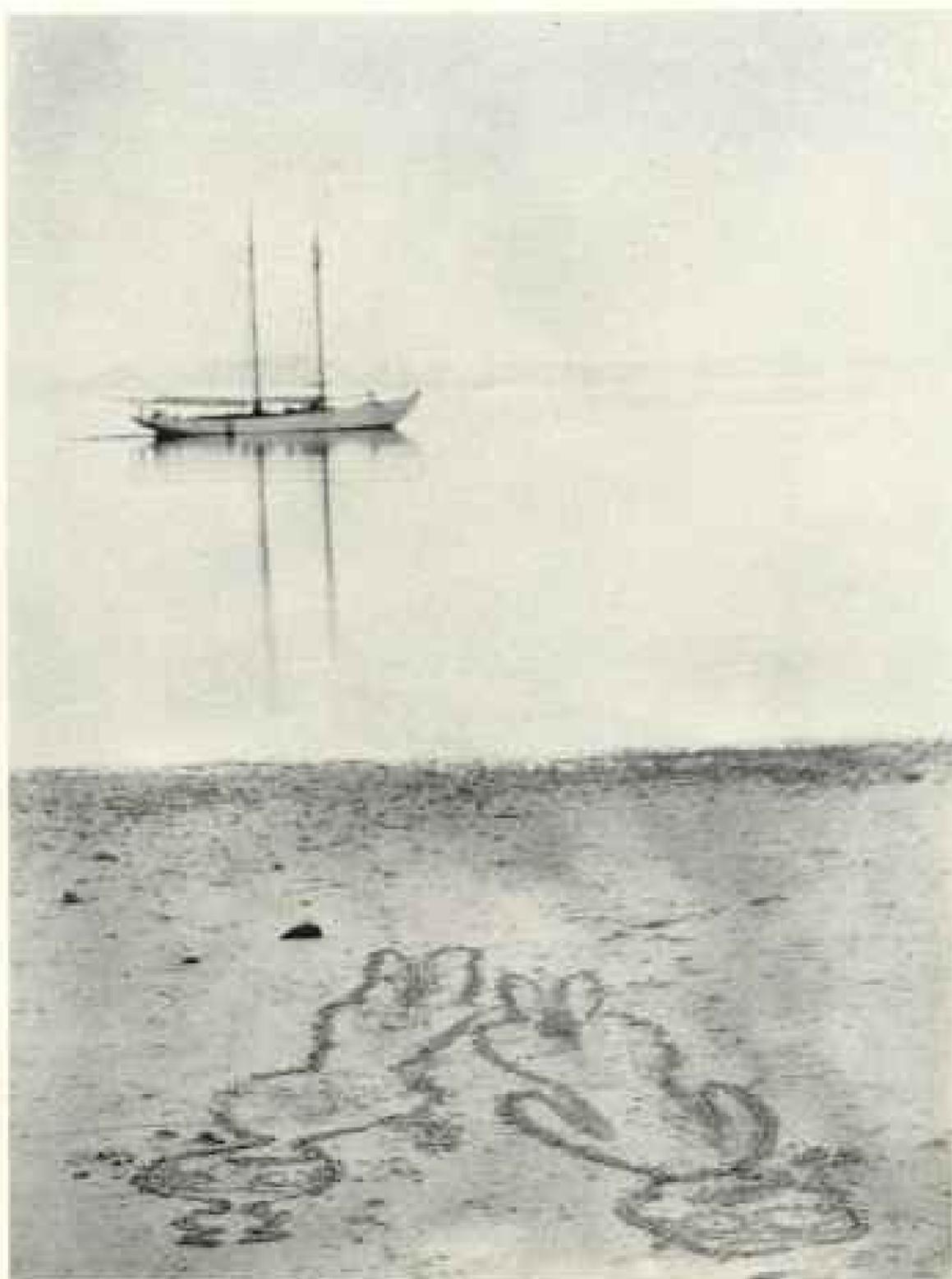
where there were higher tides and plenty of Eskimo help and equipment. Our trip back, towed by the Bromfield motorboat, was a painfully slow 25 miles.

Now began a tedious delay for a greater tidal range and a struggle to lift the stern of the *Bowdoin* sufficiently high to substitute our spare propeller. This was finally accomplished in five days by shifting all heavy weights to the bow and placing eight empty casks under the stern. Even then the men were compelled to work in ice-cold water and amid swarms of ravenous mosquitoes!

With interest we examined our old propeller, now upon deck. The cause of the injury was apparent. When endeavoring to salvage the *Peary* lifeboat at the time of her grounding, we had wound a rope so tightly around our main shaft just abaft of the stuffing box that the patent gears of our self-feathering propeller had actually burst the hub.

We were away on the 19th at full speed to rejoin the *Peary*, anxiously awaiting us at Godhavn, Disko Island. Early on the morning of the 24th, after a fine run up the spectacular Greenland coast, we shot around our sister ship and dropped anchor in front of the Governor's house. We were together again.

The *Peary* is a coal burner, and before



Photograph by Maynard Owen Williams

IMPROMPTU ESKIMO ART ON ONE OF GREENLAND'S RARE SAND BEACHES: IGLOODAHOUNY

At Etah new ice had formed on the harbor. At this spot on Robertson Bay, only 50 miles farther south, there were footprints of bare feet, showing where the Eskimo children had been at play. It is hard to distinguish between the Eskimo men and women, since the costume is much the same, but the hourglass or lamp-chimney hair dressing of the figure (head down) on the left shows that it represents a woman. The *Bowdoin* is anchored in waters made smooth by the iceberg barrier reefs at the mouth of Robertson Bay. In the distance is Herbert Island, near whose shores in 1909 Peary, the Pole conqueror, helped his Eskimos hunt winter food before he dashed homeward with the glad news of his discovery.

leaving home I had made arrangements for fuel at some Greenland port, but the Danish officials declared that no coal could be spared at Godhavn. Through wireless communication with Washington, however, the good offices of the Danish Minister, Hon. Constantin Brun, were enlisted and by the time the *Bowdoin*



Photograph by Maynard Owen Williams

WHAT A GEOGRAPHIC PHOTOGRAPHER FOUND IN OG-BLOO-YAH'S TUPIK

Nothing pleased the Eskimos more than the pictures of their people as printed in the *NATIONAL GEOGRAPHIC MAGAZINE* for June, 1925 (see, also, illustration, page 510), and a copy of this number is here seen amid the clutter of presents and household utensils. Teapot, comb, matches, wooden beads, A B C book, and knitted cap—it is evident that the explorer, bringing gifts, has modified the life of the primitive folk of Igloodahoumy.

arrived coal had been promised at Umanak, as much as we could possibly load on the ship. Governor Rosendahl, of Godhavn, volunteered to accompany the *Peary* to the coal depot, 180 miles north, personally to superintend the loading of the coal.

A SEAL HUNT ON THE PACK ICE

As both ships proceeded northward we encountered our first ice off South Upernivik, a scattered field, through which we easily passed. A half hour later we met the real pack—hard blue ice five feet thick. We were glad to follow the *Peary*, slowly smashing through it with her reinforced steel-concrete bow.

Finally conditions were such that we tied up to a large sheet to await better luck. When I awoke from an hour's sleep, I found the field dotted with hunters and photographers.

Within a few minutes Rawson came running over the ice, shouting that Bromfield had killed a seal and wanted his har-

poon. The seal, our first fresh meat, was quickly secured and brought on board.

With a change of tide the leads began to open up. We blew the *Peary's* steam whistle to recall our men, all of whom responded except Salmon, who was caught on the far side of a wide crack, which he crossed subsequently with difficulty.

We fought the pack all day, the *Boxdoin* generally following the more powerful *Peary*, which split big pans wide open. When dealing with the solid, unbroken pack ice, the *Boxdoin* was far inferior to her big sister, but in loosely packed ice, in narrow leads with sharp turns, the *Boxdoin* left the *Peary* almost hull down.

At 6 o'clock we were free of the ice and stopped our engines for 45 minutes to await the *Peary*. At 11:30 we were again in the midst of it, slowly working westward toward Cape York.

On July 29 little progress was made. We did not know which way to turn, since a thick fog prevented intelligent ice

pilotage. Fresh bear tracks kept the boys interested and a bit excited over the prospect of fine rugs for their dens.

The 30th was a hard day for both ships. The *Bowdoin* was so tightly wedged that the *Peary* was called upon to extricate her from the jaws of huge ice pans.

As it happened, I spent the day conning the *Peary* through the ice, and therefore had a good opportunity to witness the *Bowdoin* in action—a wonderful sight. Like a thing alive, she twisted and turned through the leads, and when meeting a floe which she could not avoid, fairly leaped out of the water, her clean-cut bow shooting up to such an angle that it seemed as if she were coming out bodily on top of the ice.

CAUGHT IN THE PACK

Finally the *Peary*, strong as she is, was absolutely helpless. Four times she had hurled herself at full speed into a crack between two tremendous pans, hoping so to shatter the edges that she might squeeze through. The *Bowdoin* circled about in a narrow basin, jockeying for a dash at the rift made by the bigger ship the instant the latter cleared the narrow opening. The last time, the *Peary* became so tightly wedged that her 9-foot, 4-bladed propeller failed to back her out. We stopped engines, put out ice anchors, and awaited a change of wind and tide. Our best was not enough.



Photograph by Maynard Owen Williams

THE EXPEDITION NATURALIST SUGGESTS LOOSER STYLES IN TROUSERS

The wife of Oo-bloo-yah marvels at the size of American men and wonders how she can alter a pair of bearskin trousers to fit one of the Expedition's slenderest members. Both the Eskimo and his wife are thin-hipped, and their trousers are altogether too small for adult Americans. Her tailoring duties do not interrupt this woman's afternoon smoke.

The Arctic is full of surprises, the biggest of which is the sudden change in ice conditions. To the novice our case appeared hopeless and our date of arrival at Etah seemed a long way off. At 4 p. m. we were held tight. At 10 the *Peary* started through the lead without the help of the engine!

So rapidly was she moving that we ran a towline to the *Bowdoin*, snuggling under the red, white, and blue tails of the planes, as if afraid of being left behind.



Photograph by Maynard Owen Williams

AN ESKIMO YOUNGSTER SHOWS EVIDENCE
THAT THE SEA HAS ITS UNICORNS

The chief game of the men of Igloodahoumy is the narwhal, or sea unicorn, and beside each tupik were found several spiraled tusks which the Expedition members eagerly sought as souvenirs. It is not unusual to find narwhal tusks 10 feet in length and thicker at the base than baseball bats.

At five the next morning we were again underway, breaking out through the pack into open water and heading straight to Cape York, the hard-fought goal at the end of the Melville Bay ice field.

There most of our men saw their first polar bear not in captivity. She ambled along over the ice fields, just out of rifle range, on a course parallel to that of the *Peary*. To our surprise, she turned toward us, and plunged into open water almost under the bows of the ship. A fine shot by McDonald gave us a specimen for the Provincetown Museum.

Cape York was blocked with ice and clearly inaccessible. We reluctantly passed it by, for here we always receive the first news of the Smith Sound Eskimos.

A broken field extended northward in under the Crimson Cliffs. While we were working through it, two rifle shots were heard and two kayaks were seen paddling toward us from three tents on the beach. The visitors were Tung-we, an old-time assistant of Peary's, and young Mamona.

"Tobacco!" was the cry, as it always is during the summer months, when these natives are cut off from the trading station, Thule, at North Star Bay. We stopped our engines, supplied their wants, and hastened on (see page 487).

Shortly after passing Conical Rock we encountered a fog so dense that we narrowly missed several large bergs looming mountainlike in the mist. The *Peary*, being longer, does not respond as quickly to her helm as the *Bowdoin*. She was therefore in greater danger of collision. A radio request from Captain Steele that we lay to for a while was readily complied with, since the compasses on both ships were extremely sluggish and at times varied by 20 and 30 degrees.

THE EXPEDITION REACHES ITS BASE AT
ETAH

The fog soon lifted, and we hastened on to Etah, where we arrived in a snow-storm, three hours ahead of schedule, on August 1.

My plans were for the arrival on this date and for the departure about August 25, but not later than September 1. Since the crews of our ships numbered 39 men and we were only provisioned for three



Photograph by Maynard Owen Williams

MOTHER AND INFANT IN THE CLOTHING WHICH COMBATS ARCTIC COLD

The first essential of Eskimo dress is that it must be practical, for storms are frequent and the nomad life precludes a large wardrobe. The sealskin blouse, with the hood in which the baby is carried, serves to keep out the rain and snow. An underblouse of eider-duck breast-skins furnishes warmth. The short trousers are of fox skin and the long, frost-bleached sealskin boots are waterproof. Woman's chief duty in the North is to provide the clothing which will protect her family from the cold (see, also, illustration, page 494).



Photograph by Maynard Owen Williams

SIP-SOO'S DAUGHTER IN FRONT OF HER SUMMER HOME AT
IGLOODATOUNY

On a grassy slope, whence one can look across an arm of Robertson Bay to Herbert and Northumberland Islands, one of Peary's men has set up his tupik, the sealskin tent which serves the Eskimo for a summer home. Here Sip-soo's youngest daughter is seen with a draft animal of the future, already a pet.

months, an enforced wintering in the North, by one or both, would be a serious matter.

Our work of landing and assembling planes, of establishing food and fuel stations on Ellesmere Island, and of flying at least 2,000 miles must all be done within this allotted time. Every minute must show something accomplished.

My men on the *Boxedoin* at once began work on the landing beach, removing all stones and boulders and smoothing it up until it was acceptable to Commander

Byrd and his men. The sides of the wing boxes were utilized as runways by weighting them with rocks (see page 522).

PLANES READY TO FLY
IN THREE DAYS

On August 3 the *NA-2* was ready for flight — remarkably quick work by the mechanics, a picked body of skillful men. The *NA-3* and *NA-1* followed quickly, in spite of unfavorable weather conditions. On the 4th all planes were in the air, and at nightfall, piloted by Lieutenant M. A. Schur in *NA-2*, we made the first flight over Greenland. But the engines were not running satisfactorily. Minor troubles developed in all of them.

On the 6th two planes were loaded to the limit with gas and supplies, with the intention of establishing a substation across Smith Sound. They failed to get off the water. Rain, fog, and low-lying clouds did their worst. It was decided to put a new engine in the *NA-1*. Indeed, within 10 days all three had new engines and all had been refitted with new propellers.

Fog, rain, and wind precluded all possibility of flight on the 7th. On the 8th two Eskimos came walking over the stony hills from Anoritok, 19 miles away, to see the giant birds of the white men. They had heard the roar of the Liberty engines and had seen the black dots in the sky. With deep interest they scrutinized every detail of what they had heard so much about.

That evening we left for Cannon Fiord, on the western side of Ellesmere Island, hoping to establish a substation which might help us to Cape Thomas Hubbard, distant in an air line 250 miles.*

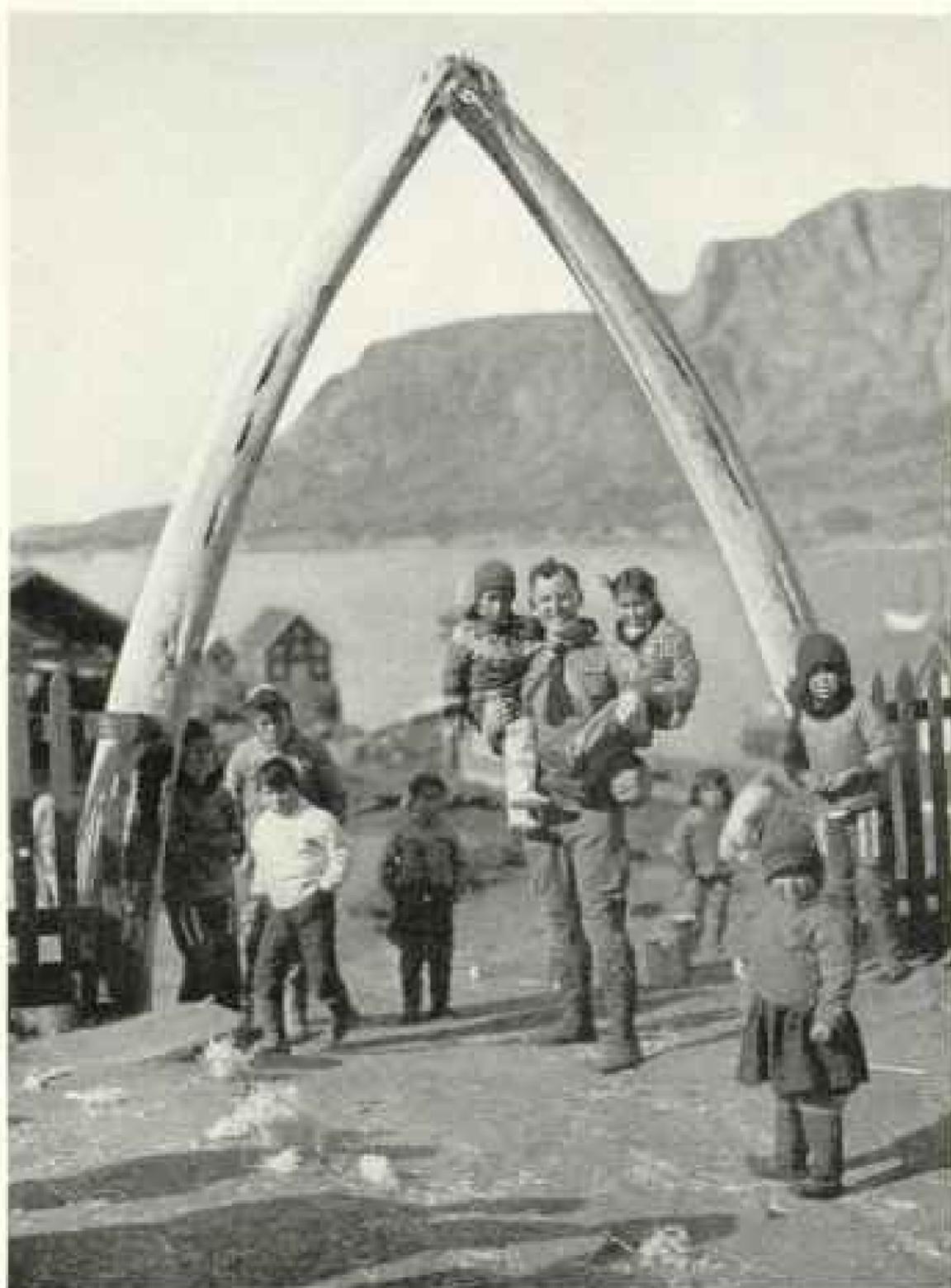
Smith Sound was practically covered with large sheets or pans drifting out of Kane Basin, the surface of which was of such a character that a safe landing was impossible, either with wheels or skids. Narrow lanes of open water (leads) offered possible landing places in case of emergency. But, once down, there would be no way of rising out of these leads until they had widened in lower Smith Sound.

At an altitude of 3,000 feet, we passed directly over Peary's winter quarters at Payer Harbor, and a few minutes later over the boulder to which I had bolted, in the summer of 1924, the National Geographic Society's tablet to the memory of the Americans of the Greely Expedition who died here in the spring of 1884.

There it stands, as a silent tribute, through the darkness and storms of the great night and the long sunlit Arctic day, to the bravery and loyalty of the men who here gave their lives for the advancement of science.

Open water was visible all along the north side of the shore to the west of Cape Sabine. Buchanan Bay and Kane

* See, also, "Flying Over the Arctic," by Lieutenant Commander R. E. Byrd, Jr., in this number of the NATIONAL GEOGRAPHIC MAGAZINE.



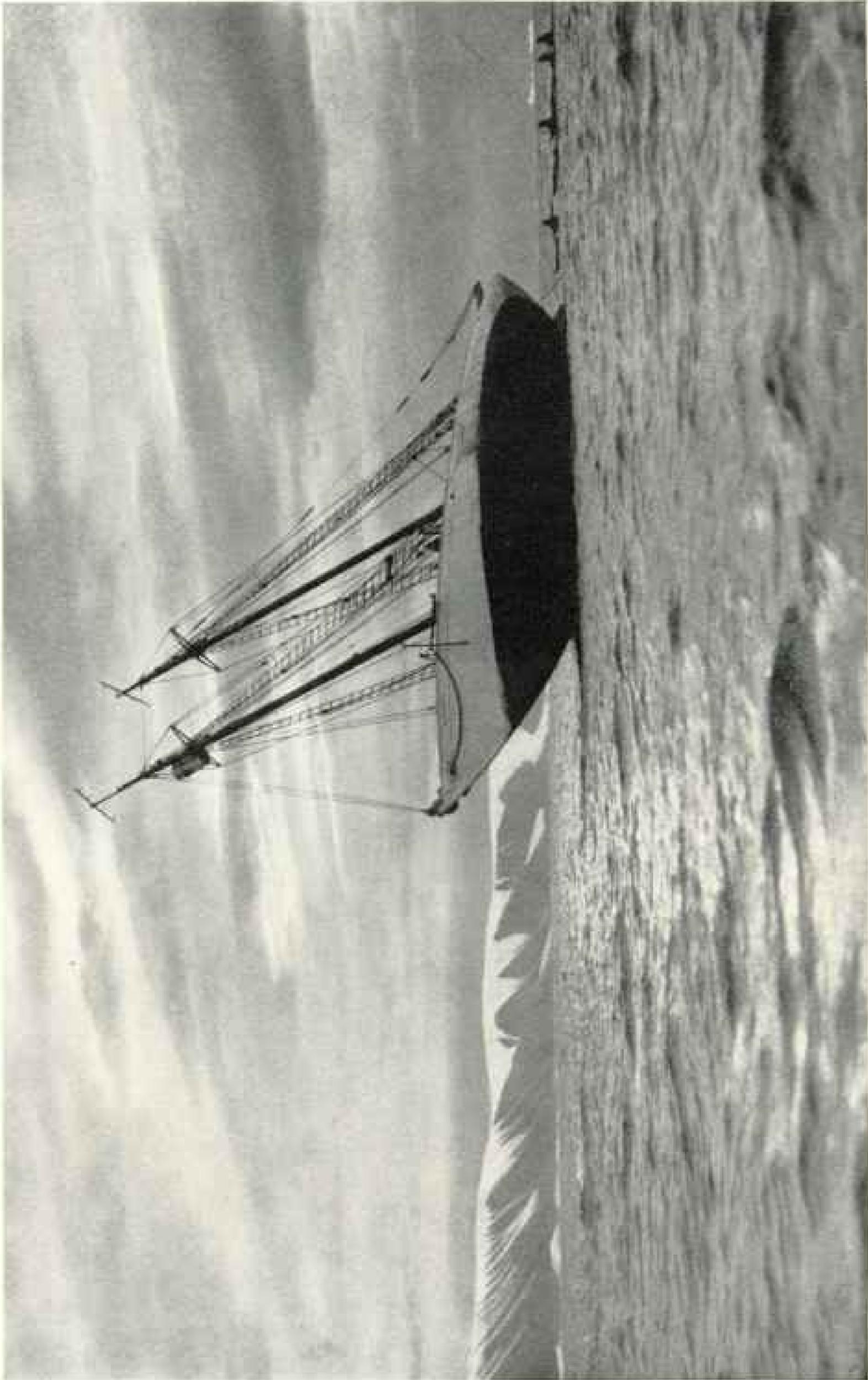
A GEOGRAPHIC PHOTOGRAPHER WITH HIS HANDS FULL

One of the little girls in her bright bead collar was afraid the camera might "go off," so the camera man submitted to the ordeal along with the rest. The gateway here seen is made of whalebone and frames a view from the home of the Governor of Holstensborg.

Basin, as far as the eye could see, were practically a solid sheet of ice, with the exception of a narrow lead alongshore on the south side of the Bache Peninsula.

FLYING OVER A TRAIL, LABORIOUSLY FOLLOWED WITH DOG SLEDGES

In passing over Ellesmere Island the novice naturally would have selected the valley route, which is at a maximum height of 300 feet and has at intervals possible landing places. Schur, Reber, and Bennett, the three pilots, preferred to have beneath them the snowcapped hills, which rise to an altitude of about



Photograph by Maynard Owen Williams

THE "JOWDOWN" HIGH AND DRY A MILE OFFSHORE IN MURCHISON SOUND.

While on the way to Karna to take Commander MacMillan's favorite Eskimo helper home after an airplane trip to Igloodaboumy, the flagship of the Expedition ran hard aground. A heavy deckload of gasoline drums was thrown overboard, but the sturdy little ship did not float until, near high tide, the wash from a bursting iceberg carried her off. All except six out of the 30 drums of gasoline were later rescued, in spite of a choppy sea and strong wind which carried them miles from the ship (see text, page 513).

4,000 feet, and to my surprise declared that they would rather take their chances with wheels than with skids.

A DREAM THAT CAME TRUE

A second long flight on August 11, over a more southerly route to Bay Fiord, was of intense interest to me, considering that I had traveled every foot of it by dog team in all kinds of weather. What it would be like in the summer had been a puzzling question to me.

The reader can imagine with what pleasure I looked down from a height of 5,000 feet upon big hills over which we laboriously pushed our sledges in 1914-16 and in 1924. Stripped down to undershirts and reeking with sweat, we had wallowed in snow thigh-deep, yelling at our dead-tired dogs until our throats were raw and our voices gone.

At that time I looked up into the deep-blue sky of a beautiful May day and muttered to myself, "Some day the aviator will laugh at this!" The dream had come true, as dreams generally do if one persists in them.

With absorbing interest old camping places were recognized and various experiences recalled. Here the Reid Glacier, at right angles to the course of the valley, blocked it completely, forming a gigantic dam; behind it was a lake large enough for us to have landed on its surface if necessary.

Alexandra Fiord, an inlet of Buchanan Bay, was really inviting looking, with not a particle of ice and as smooth as a mirror. The ice condition in Flagler Fiord had improved considerably since our visit a few days before, affording landing places throughout at least one-half of its length.

AN EMERGENCY DEPOT IS SIGHTED

Returning, we took a more southerly course, going east by way of the Beitstad Fiord (an arm of Hayes Fiord), which, to our surprise, was entirely free of ice. Skimming the tops of the big hills, we passed over Rice Strait (between the mainland and Pim Island, of which Cape Sabine is the northeastern extremity) to find, if possible, the hut and provision station built by the Canadian Government in 1924 with a view to the estab-

lishment of a Northwest Mounted Police station at that point.

As Schur spiraled down toward the *Fram's* winter quarters of 1898-99, we descried the square dot, which we knew to be the building, a short distance from the edge of the water.

We had learned from the Smith Sound Eskimos that they had visited the station during the spring and had found it filled with food—an emergency station for us, if need be, for we knew that our brother Canadians would not object to our using these supplies if it came to a matter of life or death.

A MOTHER WALRUS AND HER BABY DISTURBED BY AIRMEN

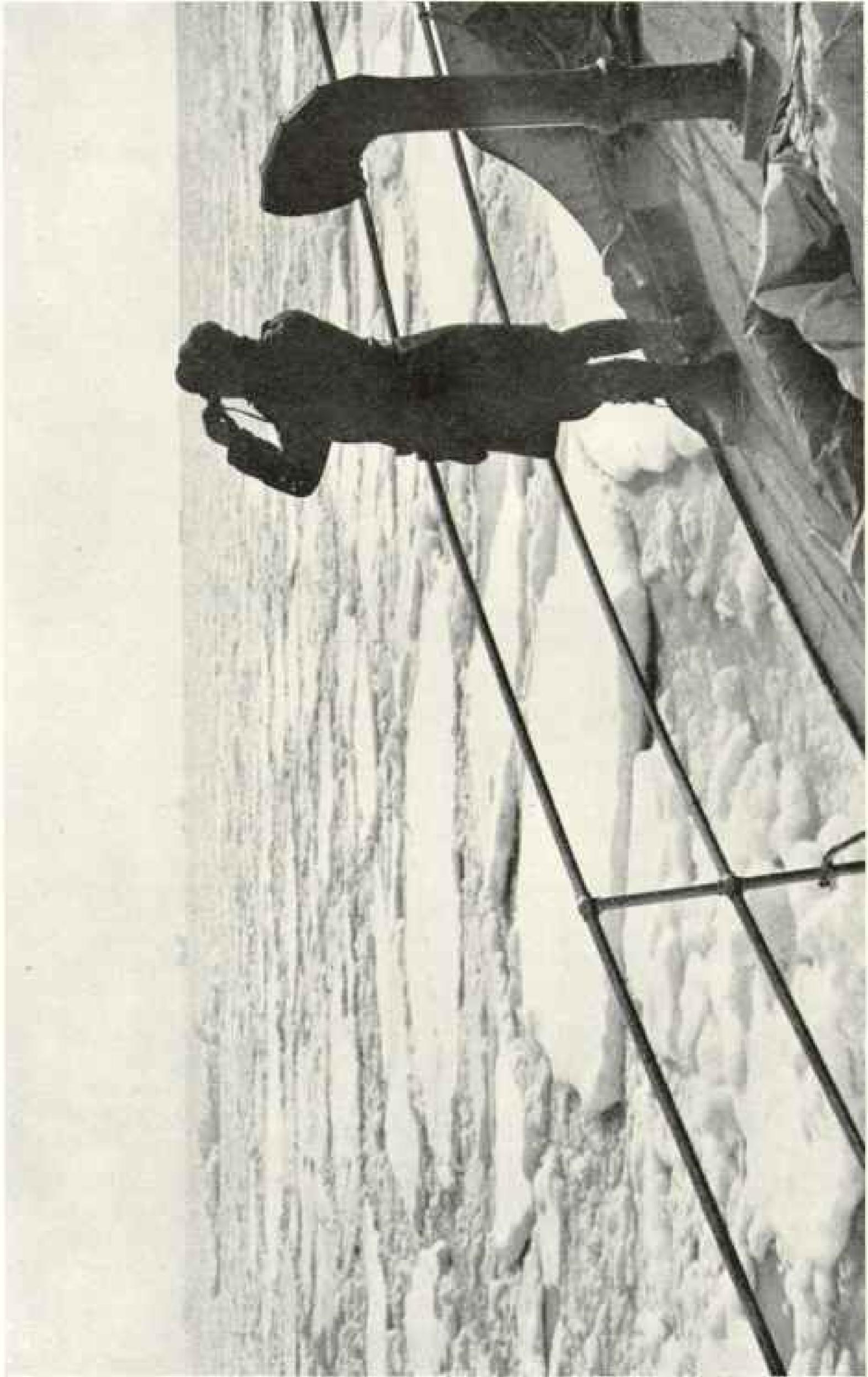
We now headed out over the ice fields of Smith Sound for home. A few miles west of Littleton Island we saw a mother walrus and her baby sleeping on a pan of ice. As we dropped to an altitude of 100 feet, the mother sleepily raised her head, roused by the roar of the *Liberty*.

She was plainly perplexed as to the nature of this strange and gigantic bird swooping over her. She and her ancestors had feared nothing from the air, their sole enemies being man and the polar bear. Would she brave it out? She stirred uneasily, then prodded her little one, and away they lurched beneath the water, refuting the theory that when animals encounter a new enemy for the first time they exhibit no fear.

As the waters of Beitstad Fiord had been found to be ice-free, Commander Byrd decided to attempt to land supplies at its head, as such a station might be utilized on a return trip from Eureka Sound if food or fuel were needed.

Two of the planes succeeded in reaching the mouth of the fiord, but were unable to establish a station, owing to rough water and cross winds.

On August 12 the wind blew so hard from the south that nothing could be done. We spent the day watching the planes to prevent them from going adrift and in picking up empty barrels, boards, and half of the raft, used by the mechanics in working upon the planes, which a rough sea around the *Peary* had torn loose and thrown on the beach.



Photograph by Jacob Geyer.

THE ONLY ICE PACK ENCOUNTERED ON THE RETURN VOYAGE

Summer sun and heavy seas had broken up the notorious Melville Bay ice, and the Peary made her way through this broken field with little difficulty.

The 13th was our unlucky day. Everything that had not happened previously seemed to occur then. The day was ushered in with a gale from the northeast, which later veered to the north. At 5:30 a. m. a boat broke loose from the *Peary* and went drifting seaward. With very little hope of ever recapturing it, I went after it in our 12-foot rowboat. Just outside of Etah Harbor I found it dashing on the rocks, half filled with water.

This salvaged, I reached the *Bowdoin* in time to see the *NA-2*, fastened by a long rope to the stern, slowly sinking, her seams having started in the rough sea. She was not to be outdone in the dramatic manner of her sinking. Bow first is the custom with big ships, and bow down she went, lifting her red, white, and blue tail high into the air, ready for the plunge (see, also, text, page 529).

Instant work by John M. Jaynes, my engineer, and Ralph P. Robinson, my mate, saved her. Rocheville, a Navy mechanic, who was always on his job, immediately freed the forward compartment of its load of plane equipment and water. Pumps were started and in a few minutes the *NA-2* was riding lightly again, but since the engine was filled with salt water a new one must be substituted.

A few minutes after this incident a volume of black smoke rolled up from the forward deck of the *Peary*. With her decks loaded to the rails with gasoline, was she on fire? A blazing bundle of waste was tossed over the rail; the fire was out.

THE FIRST CACHE IS LANDED 107 MILES FROM THE SHIPS

The day ended with floe ice endeavoring to carry two of the planes out of the harbor. As a miniature berg scraped and crunched along the side of the *Peary*, Rocheville sat on the end of a plane wing with legs stiffly extended to ward off the enemy and save the fabric. This plane safe, we turned our attention to the *NA-1*, directly in the path of two small bergs driving fast before the wind. Our motorboats dragged the plane to one side, letting the bergs pass on their way out to sea. So ended one day in the Arctic.

With the *NA-2* now disabled, the *NA-1* and *NA-3* got away on the 14th

and succeeded in landing their first cache of supplies at the head of Flagler Fiord, distant from the ship 107 miles. They returned to Ellesmere Island in the evening, but were unable to leave anything additional because of drift ice. A realization of the fact that, because of prevailing ice conditions in the North, no dependence could be placed upon a supply station once established was a severe blow to the plans of the Naval unit.

From my sledging experience and also from the reports of the natives, I had confidently believed that all of Flagler Fiord and Eureka Sound would be suitable for landing throughout the summer months.

SECOND CACHE LANDED ON SAWYER BAY

August 15th was a beautiful day. The *NA-1* and *NA-3* got away at 10:45 p. m. in another attempt to land supplies at the head of Flagler Fiord, and, if weather conditions permitted, to go on into Cannon Fiord. At 8:30 the next morning they were back, reporting that Flagler Fiord was inaccessible. They had therefore gone on to the head of Sawyer Bay, on the north side of the Bache Peninsula, and had there left a small cache. (See Map of the Arctic Regions, supplement with this number of the NATIONAL GEOGRAPHIC MAGAZINE.)

The afternoon of the 17th was the finest we had had since leaving Labrador. Unfortunately, the *NA-1* required a new engine and the *NA-2* was permanently disabled.

Work continued on the third of our planes in the vain hope that something might yet be done. On the evening of the 17th, from the deck of the *Bowdoin*, some 200 yards distant, we noticed flames under the stern of the *Peary*, close to the *NA-3*.

It proved to be a fire on the water—burning gasoline which had overspread the surface. Before it could be extinguished, one wing of the imperiled plane was so badly scorched that it was decided to substitute a new one. To remove her engine and replace one wing would require at least three days.

Such happenings should not be credited to carelessness, for they occur from engine back-fire, repair torches, etc.



Photograph by Maynard Owen Williams

IN BEADS AND BOOTS

In south Greenland the chief charm of the women's costumes lies in bright red or blue boots, with mosaics of varicolored leather down the front, and in heavy bead collars, each weighing two pounds or more and each woven in a pattern devised by its wearer. Christina, whose photograph this is, would not like to be called an Eskimo, nor should she be, as the present population in the chief Danish settlements contains little Eskimo blood.



Photograph by Maynard Owen Williams

AN IMPROMPTU MOVIE CROWD ON THE DECK OF THE "BOWDOIN" AT HOLSTENSBORG

Wherever there were lonely missionary workers or curious natives along the route of the *Bowdoin* and the *Peary*, motion pictures were shown. In Etah the perpetual daylight made it necessary to darken the fore-castle, but the total native population of 15 souls did not overcrowd the narrow space. Here, at Holstenborg, the nights were dark enough, so that the pictures, chiefly of Arctic scenes photographed on former trips, could be exhibited on the deck of the *Bowdoin*.

It was now August 18. As a result of 13 days' work, two small deposits of food and fuel had been advanced 107 miles only. All spare motors and three spare propellers had been utilized. One plane only was now available for flight and her wireless equipment was not in working order.

Under such conditions, although Commander Byrd was eager to take the remaining plane, unattended, across Smith Sound and possibly over Ellesmere Island, a forced landing and inability to take off again, or serious motor trouble, would have resulted in a delay in starting for home and possibly both ships, wholly unprepared for wintering in the Arctic, might be imprisoned for a year. I therefore vetoed the daring proposal.

In 18 days the planes had been able to land at a point only 107 miles from base in the direction of our goal—the vast unexplored area lying between Alaska and the North Pole. Could they pos-

sibly fly 2,000 miles in the remaining 10 days? Yet this distance must be covered if airplanes were to do work left undone by us with dogs in 1914-17. Figure weights and cruising radius of planes as we could, even eliminating all possibility of accidents, there seemed no way that the task could be accomplished before September 1.

FLIGHT WORK IS TERMINATED

We might have reached Axel Heiberg Island and the edge of the Polar Sea, but nothing was to be gained by that. The Expedition had other worthy objects in view, and these would be daily sacrificed to no purpose. To delay even one week might result in failure of all our program.

Our photographers and scientists had been very considerate and patient, and had done everything possible to further the plans for putting planes beyond the limits of the known, yet they were all of



Photograph by Maynard Owen Williams

SEEING HERSELF AS THE GEOGRAPHIC SEES HER

In 1924 Commander MacMillan took a photograph of this Holstensborg girl, which was published in the NATIONAL GEOGRAPHIC MAGAZINE for June, 1925. Nothing gave as much pleasure to her on the return of the *Bowdoin* as to see her own picture, taken the year before.

one accord that nothing could be gained by remaining longer at Etah. I therefore requested Commander Byrd to give up all plans for future flights across Smith Sound and make ready to return home.

Knowing from past experience that from now on Etah Harbor would be very inhospitable, that we could expect bad gales of wind down the fiord from the Greenland ice-cap directly upon our little aviation beach, it seemed wise to dismantle the two planes at Igloodahouny, in Robertson Bay, to the south, and therefore it was suggested that they fly down to this Eskimo settlement. The *Bowdoin* proceeded at once to await their arrival, but that night Gayer and his pilot, while securing aerial views over Smith Sound, barely reached Etah in safety, and the plane was utterly unable to fly down the coast.

Our decision to terminate our flight work seemed to be justified. The planes simply could not do the work required of them, at least not until the conditions so new and trying to planes had been studied and corrected.

E-TOOK-A-SHOO TAKES HIS FIRST AIRPLANE RIDE

The *NAT* arrived at Igloodahouny at 10 a. m. on the 22d. At eleven, with Bennett as pilot, I left for the Eskimo village of Karna, 25 miles to the southeast, to visit my old dog-driver, E-took-a-shoo, and bring him back by plane if he cared to come—a new experience for one whose career with me has ever been varied.

The waters of Inglefield Bay were so filled with ice that for the moment I doubted if Bennett, expert as he is, could make a landing in such rough water, for the wind was blowing at least 40 miles an hour. He dropped prettily between the drifting ice pans, lowered his wheels, by motor, and taxied up to a rocky shore, enabling me to land from one wing.

E-took-a-shoo was there, all smiles. "Get your mittens and come on!" I yelled. Without inquiring where we were going, he turned and ran to his tupik (sealskin tent).



Photograph by Maynard Owen Williams

SEWING A TOP DECK ONTO A SUKKERTOPPEN KAYAK

The kayaks, or hunting boats, of the Greenlanders of Sukkertoppen are among the lightest, most graceful, and most easily handled of all those in the North. Seal-skin, sewed on with reindeer sinew, forms the covering for a light wooden frame. The man standing is holding the hoop with which the opening is surrounded. The waterproof leather shirt is tied tightly about this, so that when the Greenlander puts to sea he and his boat form a single water-tight unit.

He came out, followed by his wife, looking a bit bewildered, and climbed into the rear seat, and we were off—he didn't care where.

As far as I could detect from his emotion, he had always been in the air. His trust in the infallibility of the white man's creation and the man who handled it was most interesting psychologically. He and In-you-gee-to, who flew at Etah, as far as I know the only Eskimos in the world to fly, will have much to tell during the coming winter, when they harness their dog teams and drive about, making those delightful visits with which the night-bound Eskimos pass the long winter.

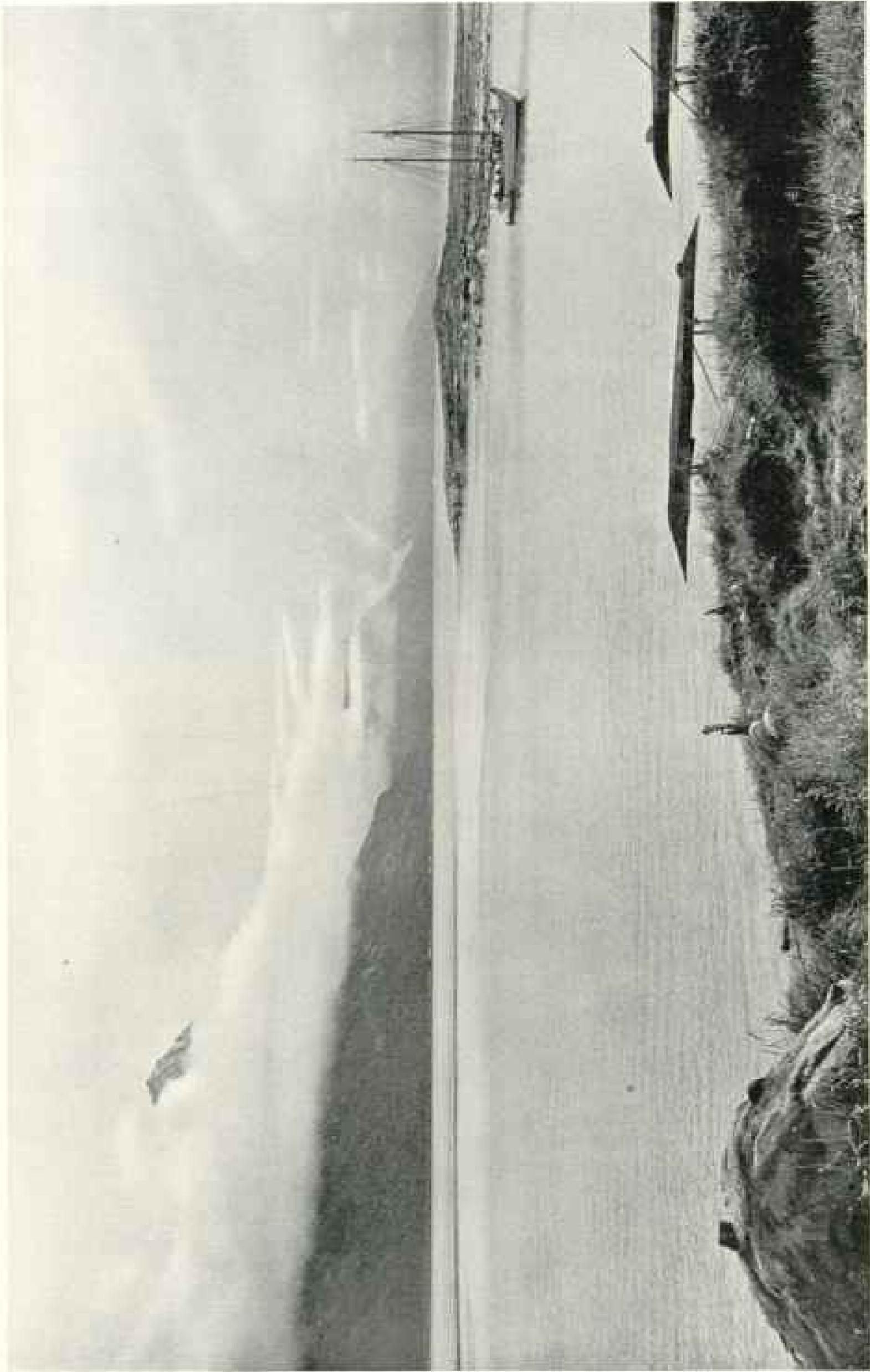
PLANES FLY OVER GREENLAND ICE-CAP.

Our flight work terminated with a short trip by Commander Byrd and Bennett up Robertson Bay and in over

the Greenland ice-cap. The *Peary* arrived on the morning of the 23d. Leaving orders for her to follow the *Bowdoin* down the coast, we proceeded to Karna to land E-took-a-shoo.

The waters of this part of the North are almost wholly uncharted. Off the Redcliffe Peninsula (the tongue of land between McCormick Bay and Inglefield Bay), however, there is a dotted line indicating shoals. I might have known that this was put there by Peary and meant something definite, but a careful examination from the air on the day before failed to reveal any dangers.

We were going at full speed about one mile off the beach when there came a tremendous crash, hard enough, it seemed, to rip the whole bottom out of our staunch little ship and sounding especially violent to both Robinson and myself, who were down in the cabin don-



Photograph by Maynard Owen Williams

ALPINE SCENERY IN A GREENLAND FJORD

The *Bonadoin* is anchored in the tiny harbor in front of the village of Kornok, on Godthaab Fjord, between Godthaab and the Norse ruins. In the right foreground are two kayaks set bottom side up on stands to keep the sealskin covering from rotting.

ning oilskins in anticipation of a heavy rainstorm approaching from Inglefield Bay.

We scrambled up the ladder to the afterdeck. One glance was sufficient. We were high and dry, as a sailor would say, and so high forward that I knew we would not come off until the next tide (see illustration, page 504).

The all-important question right then was, "What kind of a bottom are we on?" If on ragged rocks, the *Bowdoin*, with her heavy deckload of 30 barrels of gas, might suffer considerably in spite of her staunch construction of white oak, armored with ironwood and backed with cement.

Over the rail the gas must go, and over it went, into a choppy sea, the heavy steel drums drifting rapidly off to leeward. Full speed astern was of no avail, for in the meantime the tide had dropped.

"Why not fasten the barrels together and anchor them?" one bright member of my crew suggested. Within one busy, soaking hour all but six had been captured and fastened to anchors.

THE "BOWDOIN" COMES OFF THE ROCKS

To receive a serious injury to the hull of the *Bowdoin* 3,000 miles from home might place us in a predicament. It would relieve us of considerable anxiety to have the *Peary* standing by, in case we were in need of her help. She received our signals and rushed to our assistance.

Meanwhile the *Bowdoin* had listed so heavily to starboard and was so high on the rocks that we could walk under her prow and make an examination of her keel. We found the shoe almost completely gone and the keel itself so badly split and splintered that we trimmed off large sections with an ax. But, knowing the thoroughness of her construction, we had no fears whatever as to her seaworthiness for the homeward trip.

To watch the incoming tide flow over her rail and up the slanting deck was no new experience. It had happened in 1923 and 1924. We knew that she would rise as she did, and within an hour we were afloat and chugging along in search of anchored barrels. All but six were found and reloaded, and we proceeded to Karna, to land E-took-a-shoo.

Two hours' anchorage here convinced us that no ship should ever call at this port. Under the pressure of a strong northeast wind, great blocks of glacial ice came down across our anchor chain, threatening to pick us up bodily and sweep us down Inglefield Bay.

We were glad to up anchor, snap the bells, and scud before the wind for Cape Parry.

In the next two days, backing strong head winds and heavy seas, and encountering fogs and snowstorms, both ships groped their way southward.

A last good-bye at a small encampment must be made if possible to deliver a few presents sent north by Miss Miriam Look, of Hope, Rhode Island.

From the crow's nest a landing seemed impossible because of closely packed ice. A small boat would never do it. Therefore I decided to work the *Bowdoin* in through the pack.

With Lieutenant Rigg, of the United States Coast and Geodetic Survey, throwing the lead whenever he could find an opening in the floe ice, hugging close to our hull, we sounded our way within 100 yards of the shore, and then, accompanied by Maynard Williams, who was always eager to embrace every opportunity to secure photographs for the NATIONAL GEOGRAPHIC MAGAZINE, I landed upon the rocks, not without difficulty, owing to a heavy swell following the recent gale.

It was up and down, grab and hold. With the help of the natives, who were especially active when they saw biscuit, tobacco, and other presents in the boat, we finally succeeded in getting a footing, and within a few minutes were surrounded by the whole contingent of men, women, and children.

Here was a summer encampment but a decidedly winter scene, a rare opportunity for Williams, who took advantage of every minute we could spare. A final "Good-bye!" and we were in pursuit of the *Peary*, far off in the ice fields, speeding south for home.

HOLSTENSBORG, UNIQUE PORT OF CALL

Our next stop was at Holstensborg, the most interesting settlement in the Northern Inspectorate of Greenland. Years ago it was the home port of the



Photograph by Maynard Owen Williams

A GREENLAND UMIK, OR WOMEN'S BOAT

These seemingly unwieldy craft, made of seal-skin, rowed by women and steered by some graybeard of the community, are not seen as often as in former years; but when the boat and head girls were asked to parade their umiak they readily launched it and drove it past, even when the wind in the sails opposed their efforts. From youth the Greenland women are strong wielders of the oar, and large boats can be seen in charge of mere infants, who, of course, cannot swim, the water being too cold to invite surf-bathing.

American halibut fishermen, some of whom are buried in the little cemetery overlooking the harbor. Its well-kept, painted buildings nestle among the rounded, rocky hills, each festooned with strings of dried halibut heads, food for the long winter to come. Its up-to-date canning factory is a pleasant surprise and its product, canned halibut, delicious.

Bucking a heavy sea and head wind, we proceeded slowly south along the coast to Sukkertoppen, the most impressive looking village that we visited in Greenland, with its popular *Kolonibysterer*, or Governor, Mr. Christian Langskov. No less popular was his congenial wife and even more so to the younger members of my party was his charming daughter, Ebba, twenty years of age.

Within a few minutes of our anchoring Governor Langskov visited the ship and gave us the "keys of the city," so to speak, and throughout our stay he was unremitting in his care and attention to every detail of our comfort.

Sukkertoppen might well be designated "The Venice of Greenland," situated as it is upon a collection of peninsulas and islets connected with bridges. So attractive did some of my men find this settlement that they declared that they would gladly remain there for the winter.

At Godthaab the *Peary* recoaled and since she was to go direct to Battle Harbor I made additions to the *Boredoin's* crew by taking on Dr. Koelz and Jacob Gayer.

Koelz is the most energetic naturalist I have ever known. I believe that he accomplished more during the summer than many scientists in the North have done in years. Among his collections are 1,500 bird skins! And these in addition to fish and flowers galore!

THE ARCTIC'S COLORS PHOTOGRAPHED FOR THE FIRST TIME

Gayer, the color photographer of the National Geographic Society, has succeeded in obtaining natural color repro-

ductions of Arctic life and scenes—the first ever to be made north of the Arctic Circle.

Gayer learned the necessity of keeping his plates cool while taking pictures of cacti for the National Geographic Society in New Mexico,* where a vault in a stone courthouse was the only safe depository for his autochrome plates when the temperature stood at 103° in the shade. But when he insisted on taking an electric fan to the Arctic his friends laughed. The explanation lay in the fact that color plates must be dried rapidly if their tints are to remain faithful.

The amateur may consider his small kodak a burden, but Gayer thought nothing of shouldering a 60-pound load in Greenland and walking miles with it, climbing slippery hills over treacherous rocks in pursuit of his color records.

The costumes of the Far North, the markings of new species of trout just as they are taken from the water, the red lichen which one finds on Arctic snow, the elusive tints in glacier and iceberg—these have been recorded on a photographic plate for the first time.

The cheery character of the Eskimo has been the cause of frequent comment, and such cheer as is faithfully recorded in color in Gayer's plates is truly contagious. Out of the frozen North to which he took a paradoxical but necessary electric fan, he has brought a record of smiles that will warm the heart of every admirer of his difficult but eminently successful work.†

Members of The Society may remember that one of the objects of our expedition was a study of the Norse ruins of Greenland, really the first chapter in American history. Near Godthaab was situated the so-called Western Settlement of the Norsemen, consisting of about 90 farms and 4 churches, and Governor Simony kindly appointed Doctor Børresen, resident physician, as our guide to a Norse building discovered some years ago, the best now standing in the Western Settlement.

* See "Canyons and Cacti of the American Southwest" in the NATIONAL GEOGRAPHIC MAGAZINE for September, 1925.

† Many of Mr. Gayer's natural-color photographs made in the Arctic will be reproduced in an early number of the NATIONAL GEOGRAPHIC MAGAZINE.—EDITOR.

The Godthaab Fiord is 60 miles in length and as beautiful as it is long, revealing a composite picture of Norway and Switzerland—the fiords of the former, the snowcapped peaks of the latter. It was interesting to know that within a few yards of the shore we were sailing in waters nearly 2,000 feet deep; that some of the peaks towered almost from the water's edge to more than 5,000 feet in height! And more interesting was it to realize that we were sailing the same waters traversed by the hardy Vikings in their high-prowed open boats more than 900 years ago!

THE FIRST GLIMPSE OF NORSE RUINS

As we approached the head of the fiord and beheld the glaciers descending from the great Greenland ice-cap we were "all eyes" for our first glimpse of a Norse ruin. In the gathering twilight it was very distinct—a square rock building, standing in the center of an elevated plain 100 feet above the water's edge.

It was with a feeling almost of reverence that we stood at the open door of what had apparently been a church, a beautifully built and well-preserved rock structure, in size roughly 20 feet square, with walls 10 feet in height. Its roof, probably of logs and thatched with turf, was missing (see page 516).

If it did serve as a church, naturally arises the question, "Why not windows?" In lieu of these we discovered small port- or peep-holes, for it is hard to conceive how anything, even arrows, could have been hurled through such small openings. I am informed by some of the Danish officials that churches served the double purpose of worship and defense, and it is possible that the Norsemen went to service, as our Pilgrim forefathers in New England did, with weapons in their hands.

Within a few yards of this structure were the remains of several buildings and also the rock outlines of their stockyards and barns for cattle, which we know they had—sheep, goats, and cows.

What little we had the good fortune to see—and we are extremely grateful to the Danes for this privilege—whetted our appetites for more and for further investigation in the future.



Photograph by Maynard Owen Williams

THE PRINCIPAL NORSE RUIN AT THE HEAD OF GODTHAAB FJORD

The farmer-sailor Norsemen had two colonies in south Greenland. This fortress-church at Ujaragssuit is one of the finest of the ruins in the smaller of the two settlements. About 20 feet square and 10 feet high, it is made of uneven slabs forming smooth exterior and interior walls with smaller rubble between. The land about this ruin is now a swamp covered with dwarf trees and bushes (see text, page 515).

We reached Godthaab on the night of September 17, feeling well repaid for the 120-mile run of the *Bowdoin*.

On the morning of September 21 we were away for Labrador with a fair wind and fairly good weather, but in the evening a gale came in from the northeast and east, with a driving rain and heavy sea.

After a stormy passage the Labrador hills of Cape Mugford loomed up through the driving mist, their tops white with new snow on the morning of the 24th. Appreciative of the fine harbors which had sheltered us in the past, we struggled against wind and sea to get up under the land before dark—a vain hope. We were forced to square away down the coast for Jack Lane Bay. At midnight we caught the welcome 2-second flash of Cape Harrigan, our first lighthouse since leaving the Labrador coast on July 19.

There was great rejoicing at the Bromfield home, on Jack Lane Bay, as we anchored in front of the door. Only that

morning the family had discussed the lateness of our return and had given us up for the year, fearing that our good little ship had been frozen in the pack ice of the Far North.

No time to be lost. We were under way at daybreak, bound south for the Moravian settlement at Hopedale. Here we rid ourselves of that frightful load of Navy gasoline.

The *Bowdoin* was now a different ship. Her decks were clear. She was stripped for action.

Driving before rain and wind, the ship swept down the Labrador coast a frightened bird.

Off Cape Strawberry our main gaff snapped, but a new one, ordered by radio, awaited us at Battle Harbor.

Only one night here to fit our new stick and lace on the sail and we were away, heading down through the Belleisle Strait for home.

As we entered the harbor of North Sydney on the morning of October 6,



Pacific and Atlantic Photograph

THE "BOWDOIN," MACMILLAN'S FLAGSHIP, ARRIVING AT WISCASSET, MAINE, ON HER RETURN FROM THE ARCTIC

At the mainmast is the Stars and Stripes, at the foremast the flag of the National Geographic Society.

with the Stars and Stripes at the main and the National Geographic Society flag at our fore, we were instantly recognized by the various craft and saluted by several steamers, all of which we answered with our air whistle.

When half way up to Sydney we descried a powerboat awaiting us, one occupant of which was vigorously waving a large American flag. The National Geographic Society was the last to bid us Godspeed in early July, through its President, Dr. Gilbert Grosvenor, who accompanied us as far as Battle Harbor. It was the first now to welcome us home through its representative, Mr. J. R. Hildebrand.

No sooner were we docked than a throng gathered around the schooner.

Within four hours all of my men had received much-needed hair cuts, had enjoyed apples, bananas, grapes, and peaches; had read their mail and were ready for home. The *Bowdoin* had taken on one thousand gallons of fuel oil and declared she was ready for our last 500 miles.

We cast off lines at 1:30 and proceeded down the harbor and out to sea with a smashing fair wind.

If wind and sea had remained from the same quarter, we would have had a comfortable night, but as darkness came on,

the wind whipped around from the southeast to northwest, with vivid flashes of lightning and driving rain. A nasty cross sea caught the *Bowdoin* from every direction. She slipped tons of water over her bow and over both rails, threatening to wash some of my men overboard.

We finally shortened down to a foresail alone, to ease ship a bit. In taking down our forestaysail, or jumbo, Salmon was almost completely buried by a sea which swept over the bow, and Melkon was taken off his feet. Working in the pitch dark, they did well to remain on deck.

A CLOSE CALL

Fearing for their safety and not hearing a sound above the roar of the wind and rush of waters, I left the wheel for a moment and ran forward to learn if they were still there. I found them tugging on the sail, endeavoring to lash it down to the boom. I had no sooner reached the wheel than the third member of my watch, Rawson, our fifteen-year-old cabin boy, was knocked down by a sea which swept aft along the deck, flush with the low rail—a close call.

At this moment the ominous slatting and banging of a sail revealed that the lacing on our foregaff had given way. This meant the loss of our most valued sail unless it could be taken in at once.

"All hands on deck!" and up they came with a rush, showing that each man had tumbled into his bunk "all standing," as we say at sea.

No man on shore can properly visualize such a scene—roar of wind, swash of waters, snap and crack of canvas and ropes—a little ship buried in froth, dark oilskin-clad forms working rapidly here and there, the blackness punctuated with orders from the officer in charge, as wave after wave reached over the rail, ending with a thud against lifeboat or cabin.

With engine full speed ahead, we were dropping backward, and there were times when the *Bowdoin* seemed to have decided to go back North. She headed east and fairly ran away with the bit in her teeth and her jaws frothing.

But the next morning was glorious—a beautiful fall day, and good weather.

All day we raced along in under the land—a glorious sail—with the *Peary*, which had been awaiting us at Halifax,

slowly creeping up. Not until we rounded Cape Sable, however, and were well in toward Seal Island, on the last leg of our voyage, did she forge past us, her lighted cabins giving her the appearance of an ocean liner. Three long blasts of her whistle ended the race, as she crept ahead and disappeared into the night, heading up for Monhegan Island, off the Maine coast, nearly abreast of Wiscasset.

It may be of value to those who are interested in birds to know that all the next day various species came fluttering to our decks and rigging. Many of them were easily caught in the hand, although apparently not exhausted. Among them Dr. Koelz recognized the chipping sparrow, junco, ruby-crowned kinglet, black-and-white creeper, and myrtle warbler. Some of them flew down into our cabins, into the engine room, and even spent the night in our bunks.

At 5 o'clock in the afternoon we caught the faint outlines of Monhegan and headed for the southern entrance. As we entered and ran through the harbor, we were saluted by the *Peary* and by the islanders crowding the dock.

A GALE AT HOME PORT THRESHOLD

We had arrived on time and were ready to leave for Wiscasset the next morning; but the next morning had no intention of permitting us to leave. At 5 a. m. I was aroused by the slatting of the hal-yards and the roar of the wind through the rigging. The gale increased in strength through the morning and by mid-afternoon we were in the center of a chaos of white water. Up to this time we had been anchored behind a ledge. I decided to go around into the harbor itself. Well we did, for that night Monhegan, with other parts of the American coast, experienced a real gale.

Sunday was little better. It was the irony of fate that, within 30 miles of home and thousands of people awaiting our return, we were unable to reach the mainland, but at 6 a. m., October 12, the *Peary* and the *Bowdoin* steamed out of the island shelter and at 9:30 anchored in Wiscasset, to be met by Governor Brewster of the State and by hundreds of people crowding docks and streets.

We were home!

FLYING OVER THE ARCTIC

BY LIEUTENANT COMMANDER RICHARD E. BYRD, U. S. NAVY (RET.)*

COMMANDING OFFICER, U. S. NAVAL AVIATION ARCTIC UNIT

AVIATION will conquer the Arctic—and the Antarctic, too. But it will be difficult and hazardous. These things, however, only increase the extraordinary lure of the Polar regions.

It seems fitting that the United States Navy, so prominent in Arctic history, and the National Geographic Society should have joined hands last summer in Arctic exploration by aircraft. This work will not end until all the wonderful records made by the dog sledges have been surpassed and the heart of the great unexplored area reached—an area, containing a million square miles, which has so far baffled all attempts to penetrate it.

The world was determined that the North Pole should be reached, and now it will not be content until the secrets of this unexplored area are revealed.

Peary's great achievement was the culmination of centuries of effort, where tragedy was frequent and failure the rule. But each tragedy and each failure, along with each success, was a stepping stone for the next explorer who came along.

So it is with exploration from the air. The MacMillan Expedition has, we hope, taken aviation conditions in the Far North out of the column of the unknown, and we believe that in the air battle with the Arctic elements last summer we learned some facts of value to all future aviators in Polar regions.

At 5:30 a. m., August 2, the morning after the *Peary* reached Etah, the eight officers and men comprising the Naval Aviation Unit started to work, with the

enthusiastic assistance of Commander MacMillan, the Eskimos and all hands, building with the airplane wing crates a runway for the planes on the ridiculously inadequate beach (see illustration, page 522).

PLANES ARE ASSEMBLED IN THREE DAYS

Working in the open on the delicate parts with bare hands, and at times exposed to snow squalls, my men got the wings and disassembled planes to the beach, erected and flew them by August 4. The rapidity with which they did this is still a matter of wonder to me. With any other planes than the Loening Amphibians, with their combination wheels and boats, I do not see how the flying ships could have been dragged up on land.

The beach proved entirely too small and soft, so we moored the planes out to buoys, which were dropped several hundred feet offshore. We thereafter operated entirely from the water.

Some of the gales which the planes had to ride out in the harbor were so severe that our anchors, which ordinarily would have held planes twice the size of our amphibians, dragged, and it became necessary to keep the planes most of the time tied up astern of the *Bowdoin* and the *Peary*.

Almost invariably our hours of sleep were interrupted by the deck watch with a report that one of the buoyed planes was dragging anchor, that the wings of another were about to strike the ship's side, or that a miniature iceberg was bearing down upon a third.

The weather being calmest from midnight to seven or eight o'clock in the morning, we frequently flew during the night hours.

On August 4 we took our ten specially picked carrier pigeons ashore in the pigeon house, to get them oriented to the locality (see illustration, page 524). On the 10th we turned them loose, but only four of them returned. Chief Aërographer Francis, who acted as Navy pho-

* Commander Byrd had charge of the navigational preparation for the transatlantic flight of the NC flying boats, the *NC-4* being the first craft to accomplish the voyage by air; he was assigned as one of the navigational officers of the *ZR-2* for her proposed flight across the Atlantic from England to America; he prepared navigation data for the *C-53* proposed first transatlantic flight by dirigible. This last-named flight was to have been from Newfoundland to the British Isles. The ship flew from New York to St. John, New Brunswick, and was there destroyed by storm. The author served as lieutenant commander in naval aviation during the World War.—THE EDITOR.



Photograph by Maynard Owen Williams

THE CHIEF OF THE NAVY PERSONNEL, WITH THE BUMSTEAD
SUN COMPASS

Lieutenant Commander Richard E. Byrd, Jr., who had charge of the Navy unit, is here seen in Arctic flying costume. The sun compass was invented by Chief Cartographer Albert H. Bumstead, of the National Geographic Society staff. Because of the variations of the magnetic compass (see red arrows, the Arctic Regions map supplement) and the weakness of magnetic force in the Arctic, this sun compass, which can be used in clear weather throughout the mid-summer months, was found of great value (see text, page 523).

tographer, meteorologist, and pigeon man, reported to me that they had been killed by Arctic falcons.

It would seem, then, that pigeons are not practicable for communication purposes in that part of the Arctic. We had thought that they might be used for communicating with Etah in case of a crash, if our radio was put out of commission.

We spent August 5 making radio tests and full-load tests. We found that, with

the load of food, rifles, ammunition, boat, etc., stowed in the tail, a plane was thrown out of balance, so we spent the 6th taking a 33-gallon emergency gasoline tank out of the bow to make room for stowing the gear. At 7:00 p. m., August 6, fog descended, visibility became very poor, and it began to rain. The downpour continued for 24 hours, after which a southwest gale sprang up. This blow turned into a snowstorm the following day at 2:00 p. m.

ONLY 15 DAYS LEFT
FOR FLYING

From general conditions and information supplied by the Eskimos, it was realized from the first that we were having scarcely any summer at all, so the Naval unit put forth its greatest effort in accomplishing its work in the shortest possible time. In fact, it turned out that after the planes were ready for flight there were but 15 days of "summer" in which to accomplish our mission.

It is an astonishing fact that of those

15 days only three and three quarters were good for flying; two were fair flying days and one indifferent. More than half the time was either dangerous or very dangerous for flying. Yet the three planes flew more than 6,000 miles, 5,000 miles of which were flights from Etah on the work of accomplishing our mission; and we saw 30,000 square miles from the planes, a large part of which, being inaccessible to foot travelers, had never before been

seen by human eye. Our first reconnaissance flight was to Cape Sabine, which lay on our proposed course toward the Polar Sea, 30 miles from Etah. We found that the ice began several miles north of Etah, and covered all the water to the northward as far as we could see.

FLYING WHERE FORCED LANDING WOULD HAVE MEANT A SMASH

We flew low on that trip, hoping to find the ice smooth enough to land on, but it was rough and corrugated, and in such condition that landing upon it would have been as disastrous as landing among large rocks — a plane would have been completely demolished and, of course, the flyers probably would not have been able to walk away from the wreck.

We realized that the ice-landing skis which we had brought to use in place of wheels would be of no use to us under such conditions. There were pools of water on the ice and here and there open leads filled, more or less, with detached pieces of ice. It was easy to see why Ellesmere Island is inaccessible in the summer to the dog-sledge travelers.

ENGINE CHANGED WHILE PLANE BOBBED ON WATER

In all the hundreds of square miles of ice over which we flew later on, we did not see a single place on the ice where a landing could be made without disaster!

The engine on the *NA-1* had developed



Photograph by Jacob Gayer

THE FIRST AMPHIBIAN LEAVING THE "PEARY" AT ÉTAH

The three Navy planes were stored during the voyage from Boston on the narrow after deck of the *Peary*. Lowering them to the water, floating them to the rough, stony beach, and putting on their wings with Eskimo help was an extraordinary, if not unprecedented, feat, while changing the 900-pound engines in the planes, as they were tossed on the waves below the boom which supported the machinery, was an even more remarkable achievement.

a knock on the 5th and we decided to put in a new motor, for we felt that we had to do everything humanly possible to prevent a forced landing on the ice. The mechanics shifted the 900-pound motor with the rather jerky ship's boom, while the plane bobbed up and down in the water alongside the ship. I watched the men work, but it is still a mystery to me how they did it.

Bennett and Sorensen worked all day and all night connecting up the intricate



Photograph by Maynard Owen Williams

THE FIRST NAVY PLANE TO BE ASSEMBLED ON THE NARROW, ROCKY BEACH AT ETAH

This view, taken in a drizzling rain on August 3, shows the *NA-2* almost ready to take the air. Runways constructed of the sides of the wing boxes lead down into the water, which is near high tide. The wings for the two other planes are seen to the right, and in the distance is the pigeon house in which the Navy pigeons were kept (see, also, page 524).

mechanism of the motor, out in the cold and the wet, and reported the plane ready on the morning of the 7th. The work had been accomplished in about one-fourth the time I expected it to take. When the motor started and hit on all twelve cylinders, it was a very pleasant surprise. Then Bennett and Sorensen reported ready to fly! Rest seemed to mean nothing to them. But the weather was nasty and I made them turn in.

That is the kind of spirit every one of the officers and men with me displayed. No handicaps—and there were plenty—were too great for them to overcome. Any operation of planes at all in the Far North last summer was necessarily difficult, and no ordinary effort would have enabled us to cover 6,000 miles—a feat which evinces the great courage, indomitable spirit, and unusual ability of the personnel with me.

At 4:00 a. m. on the 8th, during a gale, the *NA-3*, which was tied up to an anchored buoy, barely missed destruction from a drifting iceberg. Later she began

to drag anchor, so we had to tie her up astern of the *Bowdoin*. The bad weather persisted until 7:00 p. m., when I immediately gave orders to prepare for our first long flight into Ellesmere Island to attempt to put down a base. I wish to emphasize the fact that on account of the distance to the center of the unexplored area from Etah, at least one base is necessary and two are advisable.

THE FIRST LONG FLIGHT OVER ELLESMERE ISLAND

We left Etah Harbor at 9:10 p. m., with Schur, pilot; MacMillan, passenger; and Rocheville, mechanic, in the *NA-2*; and Reber, pilot; and myself, relief pilot and navigator, in the *NA-3*. Just before we took off, a herd of a dozen walrus came up a few feet from our plane. They apparently became enraged at it and dived toward us, but we gave the motor the gun and could not see them when they rose to the surface again because of the spray kicked up by the propeller.



Photograph by Jacob Gayer

THE "NA-2," THE FIRST OF THE NAVY PLANES TO BE LAUNCHED FROM THE BEACH AT ETAH, IN THE SHELTER OF PROVISION POINT (SEE, ALSO, PAGE 522)

To the upper right is the Peary and beyond her John's Glacier. In the background are Dodge's Mountains, 1,500 to 2,000 feet high, a polychrome tapestry of brown-black rock lightened by bright-orange lichens and with gray high lights formed by the droppings from the millions of little auks which nest and summer in the rock talus.

We set a course for Cannon Fiord, which lies on a line with Cape Thomas Hubbard on the Polar Sea (see Arctic Regions map supplement with this number of the NATIONAL GEOGRAPHIC MAGAZINE), from which Peary in 1906 thought he saw the high peaks of a great land to the northwest.

At last we were to find out whether or not we could navigate a plane where the north magnetic pole is on one side, off to the southward, and the North Pole is on the other side, and where the force of the earth's magnetism that acts on the compass needle is very weak.

I noted immediately that the steering compass did not move at all, but pointed east all the time. Fortunately we had provided a more sensitive instrument, which we called the navigator's compass. It began to swing at first, but after we had

steered a steady course it finally settled down.

In clear weather the sun compass enabled us to do accurate navigation. I was delighted with it. Mr. Albert H. Bunstead, of the National Geographic Society, invented it for our trip and I consider it a great contribution to science (see p. 520).

When we reached Cape Sabine we took a bearing on two points 30 miles apart, the direction of which Peary had established, and found that in addition to the 103° of error caused by our being north of the magnetic pole, there was an additional error of 30°, an unheard-of deviation.

The course we wanted to steer over the ice was northwest, but on account of these errors of the compass we had to steer east by the compass needle. That was a curious sensation.



Photograph by Jacob Gayer

CHIEF AÉROGRAPHER FRANCIS AND HIS PIGEON COOP AT ETAH

As soon as the ships reached Etah, the pigeons were ferried ashore to become accustomed to the surroundings, so that they could bring back messages in case of accident to the planes. After a week the birds were released; all except four were lost (see text, page 519).

As we flew over the ice of Smith Sound, we could see at a glance the area Peary and Bartlett had such a difficult time getting through with the *Roosevelt* in 1908. The thought occurred to me: How we could have helped Peary by indicating to him the direction of the very few open leads of water so easily visible to us, but so difficult to locate even from the crow's nest of a ship! I was impressed, too, with the fact that we were traversing in a few minutes areas that it had taken him days to cross.

We reached Cape Sabine at 9:40 p. m., and passed directly over the spot where 18 of General Greely's men died from cold and hunger. I have never seen a bleaker spot.

A NEW CONCEPTION OF THE ARCTIC'S RUTHLESSNESS

Over to the northward we could make out Bache Peninsula, which Peary traversed in 1898 and where his hunters killed musk oxen for a fresh meat supply.

After passing Cape Sabine, the view

that opened was magnificent and we were stirred with the spirit of great adventure—with the feeling that we were getting a comprehensive idea, never before possible, of the Arctic's ruggedness and ruthlessness.

I believe that we have a new story to tell of the grandeur of Ellesmere Island. It was evident that the greater part of the land we saw had been inaccessible to the foot traveler, who, keeping largely to the water routes, with the view cut off by the fiords' great perpendicular cliffs, could not have realized the colossal and multifold character of the glacier-cut mountains.

But there was no time to enjoy the view. Any slight engine trouble might require a landing, so I naturally looked about for some suitable place in which to put a plane down if necessary. The landing would have to be made flying at 40 or 50 miles an hour.

I searched carefully and did not see a single place on the land or on the water where a landing would not have meant



Photograph by Jacob Gayer

THE FIRST ESKIMO AIR GUIDE ABOUT TO HOP OFF

The one Eskimo at Etah who can understand English is In-you-gee-to, who was with Peary on his drive to the Pole. His willingness to serve in any way, his industry, and his helpfulness in assembling the Navy planes caused him to be chosen as the first Eskimo to act as an air guide in the Far North.

disaster. The land was everywhere too irregular and the water was filled with ice either broken up into drifting pieces or in large, unbroken areas. At that moment I realized we were confronted with an even more difficult and hazardous undertaking than we had anticipated. I knew, too, that no matter what judgment we exercised we would have to have a little luck to comply with Secretary Wilbur's last admonition to me to bring the personnel back safely. The Secretary had taken a great personal interest in the Expedition.

Commander MacMillan had confidently believed that the fiords would be free of

ice. That they were not was due probably to the fact that we were having scarcely any summer.

We could not use the sun compass, as the sun was obscured, so we continued steering east by the magnetic compass. By sighting astern on known points I was delighted to find that we were almost exactly on our course. A little later, however, the wind-drift meter indicated a strong wind from the north and we had to change course about 10° to allow for it.

No idea of the extremely irregular and rugged character of Ellesmere Island can be gathered from the maps and charts, and many of the mountains we saw were



Photograph by Jacob Gayer

OVER ELLESMERE ISLAND

Cruel in reality, bristling with deadly rock masses and snowy peaks, this little-known land had an eerie fascination for the U. S. Navy airmen. Many of the most spectacular features of the Ellesmere Island scenery were not photographed, for cameras were left behind as "excess baggage" when the planes were loaded with every possible ounce of gasoline for supply bases.

uncharted. The higher mountains were snow-covered and their glaciers extended down to the sea.

SNOW-CLAD PEAKS BAR THE WAY

We continued on to Knud Peninsula (the tongue of land lying between Hayes and Flagler Fiords), flying at an altitude of 4,000 feet. Low-lying clouds hung over the peninsula, with many rugged peaks appearing above them.

Ahead we saw very high snow- and cloud-covered mountains which appeared to be impassable. We kept on, however, hoping to find some way through, but

soon realized that the clouds were so high that no aircraft loaded as ours was could possibly get over them. The weather astern had begun to thicken and the clouds covered most of the landmarks.

Weather conditions change very rapidly in the Arctic, a fact which is of great concern to the aviator, who can not fly through fog and clouds over the land as he can over the sea, since there is great danger of running into a mountain or cliff. Neither can he land and wait for the weather to clear, if he has no landing place! Nor can he keep on flying around, as his gas eventually gives out.

We decided to fly over the clouds and take a chance on finding Etah. Without a landmark it was necessary to steer a compass course. Luckily, we found a rift in the clouds over Smith Sound, with fog only in places here and there on the water. So we were able to make the ships' base without much difficulty, although a 30-mile wind from the north made rough landing.

Upon our return, Aërographer Francis handed me a report that a gale of great intensity was rushing toward Etah from the south. All flying was, therefore, "secured." A driving snowstorm soon set in, bearing out Francis' prediction. The next morning at 3 o'clock a piece of iceberg weighing perhaps 500 tons was driven by the gale between the *Peary* and the planes, barely missing the latter, and giving us some anxious moments.

EAGER VOLUNTEERS FOR EVERY FLIGHT

A few hours later I called the Naval unit together and told them that I would never order any of them to fly over that land again. But when the time came they were always ready and eager to volunteer for any flying that was to be done.

That afternoon it was decided, in conference with Commander MacMillan, that we would try to get beyond the high, snow-covered mountains by going through a gap to the south of our course, even though this was a roundabout route to our proposed Polar Sea base on Axel Heiberg Island.

The gale subsided at 5:30 and we made a reconnaissance and radio test flight to Cape Sabine. We ran into snow over the Cape and found Ellesmere Island completely covered with fog and snow.

The weather cleared toward Ellesmere Island the next morning, August 11, so all three planes prepared to leave immediately for Bay Fiord to attempt to put down a base of fuel, food, and ammunition on its shore. I sent by radio the following report of that flight to the Secretary of the Navy:

August 11th—Three planes left Etah this morning at 10:40. Personnel *NA-2*, Schur pilot, MacMillan navigator; *NA-3*, Reber pilot and Nold mechanic; *NA-1*,

Byrd pilot and navigator, and Bennett pilot-mechanic, for the purpose of locating a landing place to form a base between Etah and Polar Sea.

This base is absolutely necessary, as fuel and food must be deposited on shore of Polar Sea before a flight over it can be made.

Passed over northwest end of Cape Sabine at 11:15. Reached eastern end of Flagler Fiord at 11:45. Altitude of *NA-1* 7,000 feet, *NA-2* and *NA-3* about 4,000 feet. Reached western end of Flagler Fiord at 12:07 p. m. Temperature bitterly cold several degrees below zero at 7,300 feet.

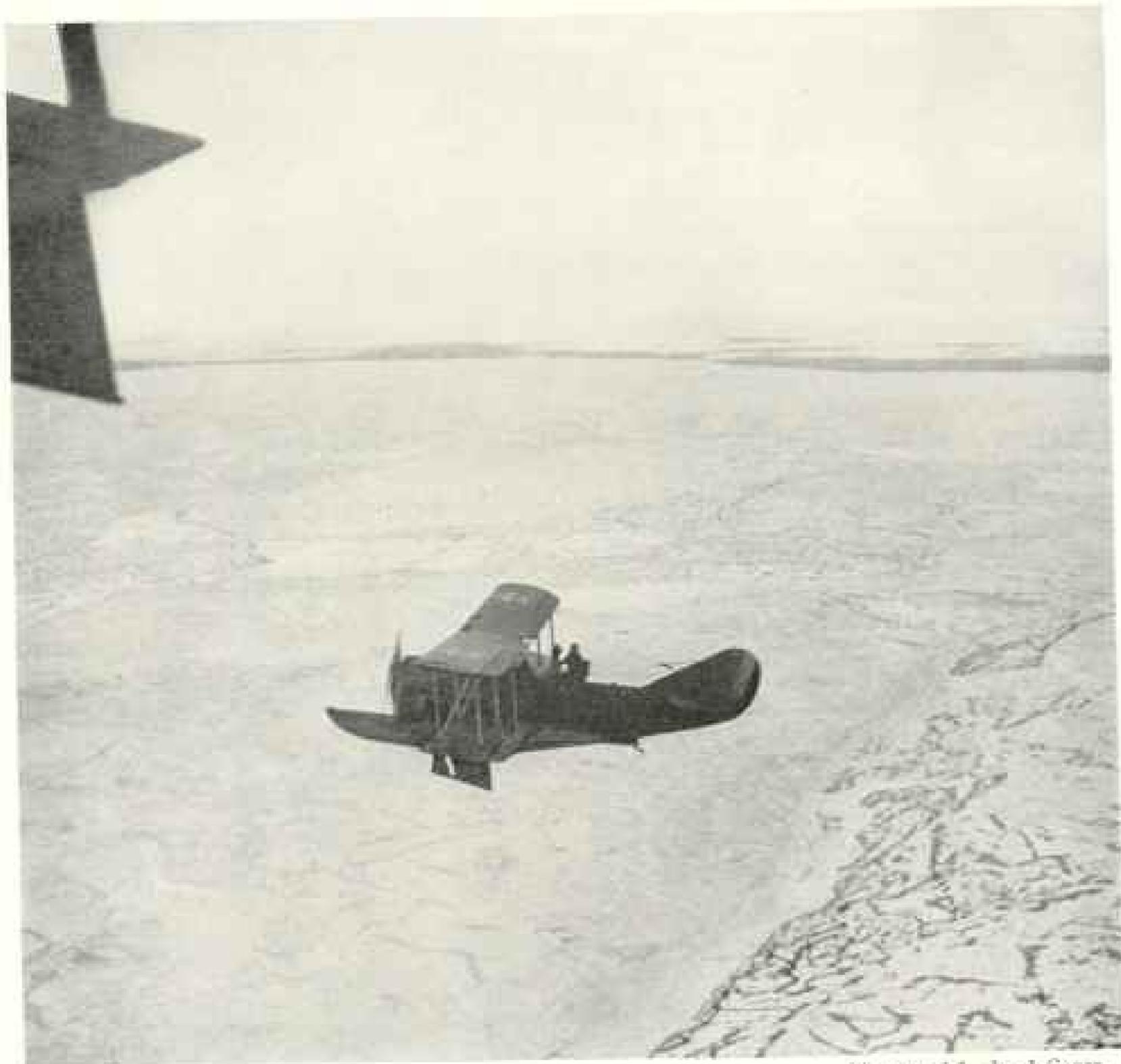
Hundreds of mountain peaks to left all covered with dazzling white snow and clouds covering everything to right, with mountains much higher than shown on chart, as at altitude of 7,300 feet some of the mountains, most of which are not shown at all on maps, were hundreds of feet higher than plane. Saw much land probably never seen before.

At 12:07 set course to 250° true, which made compass course of approximately 12°. Checked magnetic compass with sun compass and found that magnetic compass had 30° westerly deviation, which put compass 170° off the true course. Sun compass very good when sun is visible.

Hit the eastern end of Bay Fiord at 12:45 p. m. The fiord was largely obscured by clouds. That part of the fiord which could be seen was almost entirely covered with ice. At 12:48 *NA-2* disappeared in clouds to the right and *NA-3*, which was having difficulty getting altitude, turned back toward Etah. *NA-1* continued to Enreka Sound southwest of Axel Heiberg Island 200 miles from Etah and found only one suitable landing place, which was on the northern shore of Bay Fiord in approximately longitude 85. (This landing place was only temporary, being an opening in the ice cleared by the wind.)

NA-1 returned to search for other planes, but clouds had closed in behind and had to fly over them. Set course for Beitstad Fiord and found it free of clouds and also ice. Approximately 100 miles from Etah. *NA-2* and *NA-3* reached Etah at 2:30 p. m. and *NA-1* at 3:15. Reber reported that he suffered slightly from snow blindness. All personnel suffered some from cold.

Must take advantage of this good weather, so three planes will start to-night at 9:00 p. m. to establish a sub-base at western end of Beitstad Fiord. Will leave there food, cooking utensils, primus stove, rifle ammunition, and gasoline and oil. Personnel will be the same as for flight this morning except that McDonald will go in *NA-3* instead of Nold and Rocheville in *NA-2* instead of MacMillan. Distances are given in statute miles.



Photograph by Jacob Gayer

SISTER PLANES FLYING OVER ICE-BOUND SMITH SOUND EN ROUTE FOR ELLESMERE ISLAND

Along the Greenland shore fairly wide leads can be seen. What seems a smooth field of ice below is actually ridged into rough hummocks with towering icebergs added like the plums in a pudding. Chief Aerographer Francis is seen outside the cockpit securing a cinema record of this epic Arctic flight.

My joy at finding the *NA-2* and *NA-3* safe at Etah was great.

FIRST LANDING ON ELLESMERE ISLAND

On August 12 I sent the following report to the Secretary of the Navy:

Left last night at 9:30 p. m. for Beitstad Fiord: *NA-3* Reber and McDonald; *NA-2* Schur and Rocheville; *NA-1* Byrd and Bennett. At 10 o'clock *NA-2* had to turn back, due to low temperature of motor. *NA-1* and *NA-3* reached eastern end of Beitstad Fiord at 11 p. m. Did not land in Beitstad Fiord, due to strong cross wind from southwest.

This fiord is magnificent. Its cliffs rise straight up from the water for 2,000 feet. Landed on western end of Hayes Fiord, but strong wind rushing down from glacier made anchoring or taking the plane up to the rocky coastline impossible. Took off and both planes reached ship at midnight.

Have found another spot free of ice where a landing might be made—the western end of Flagler Fiord. Commander MacMillan has agreed to establish a base there as soon as the weather permits. It blew a gale most of the day and Ellesmere Island has been covered with fog.

At last we had been able to land in the interior of Ellesmere Island, but the water



Photograph by Richard E. Byrd, Jr.

VERHOEFF GLACIER, GREENLAND, AS IT APPEARED AT AN ELEVATION OF 1,500 FEET

One of the most thrilling experiences of Navy airmen in the Arctic was the flight over the great Greenland ice-cap. On a day of remarkable visibility the *NA-1* took off from the beach at Igloodahoumy and flew directly over Verhoeff Glacier, mounting gradually to an elevation of 11,000 feet, from which the ice-cap could be seen for 100 miles in every direction. It was found that one area to the east attained an elevation equal to that of the plane itself—a greater altitude than had ever been reported for this great sheet of solid ice (see page 532).

had been dangerously rough. We noted on this occasion a very interesting thing. The wind rushed down the glacier, but changed its direction several miles from its foot. We afterward found that no matter what the direction of the wind elsewhere it generally flowed down the glacier and then subsided or changed its direction some miles beyond the foot.

Another interesting phenomenon experienced in the Far North was the difficulty of judging distances—something at which the aviator must be expert. This difficulty was occasioned by the great size of the cliffs and the clearness of the atmosphere—when it is not misty. When we landed in Hayes Fiord we thought we were landing a few hundred feet from the ice fringe on the shore line at the foot of the 2,000-foot cliffs, whereas to our great surprise we found ourselves more than a half mile away.

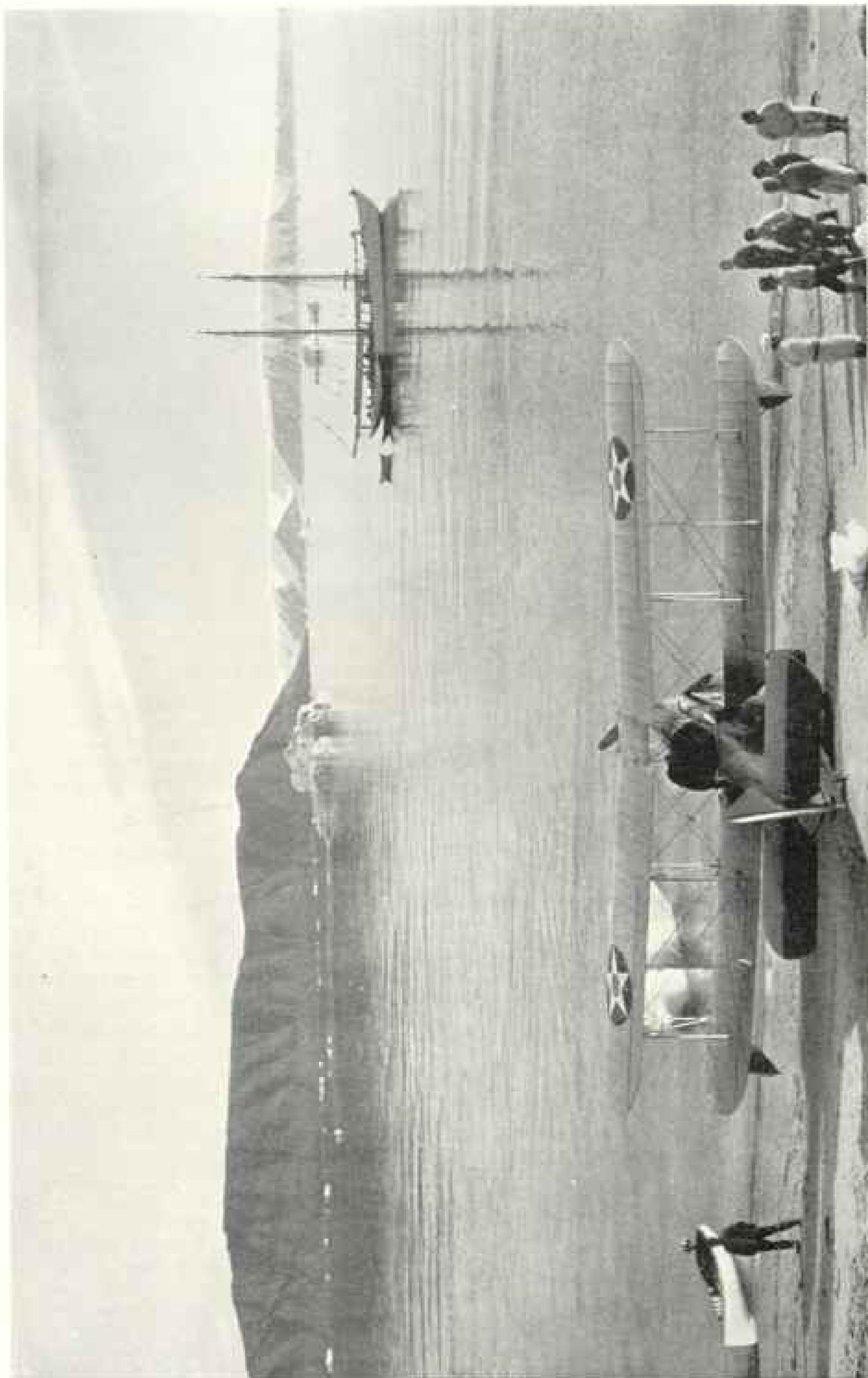
I shall pass over the operational diffi-

culties we experienced from gales and ice and cold.

After being buffeted by a gale on the morning of the 13th, the *NA-2* began to sink. The engine was half covered with water, but MacMillan and his crew, by prompt and heroic effort, saved the plane. We later hoisted it on the deck of the *Peary* to change the water-soaked motor, but it was never able to fly again.

Having seen open water at the mouth of Flagler Fiord, we decided to attempt to put down a base there. I reported that flight to the Secretary of the Navy as follows:

August 14th—At 11:45 this morning *NA-3*, Schur and Sorensen; *NA-1*, Bennett and Byrd, left Etah for western end of Flagler Fiord, 107 miles from Etah. Reached objective at 1:15 and found at last a place to land in water. Got planes 50 feet from beach and waded ashore with supplies. Deposited, 100 yards from beach, 200 pounds of food and 100 gallons of



Photograph by Maynard Owen Williams

THE "BOWDOIN" AND THE "NAUTILUS" AT IGLOODAHOUNY AUGUST 22, 1925

The approach of winter drove the last of the Navy planes south from Etah to a sandy beach on Robertson Bay. The *Nautilus* is here seen on the day of her last flight, when Commander Byrd and Bennett flew inland over the Greenland ice-cap, in a region where Peary did some of his early work in 1892. Behind the flagship *Bowdoin* can be seen the snowy slopes of Herbert Island, near whose shores the narwhal is captured (see, also, illustration, page 500).

gasoline, 5 gallons oil, primus stove, camping outfit, smoke bombs, rifle and ammunition, gallon kerosene and can of matches. At 3 p. m. large block of ice drifted into *NA-1*, but after half hour got her clear. Wind carries ice with great force.

Left Flagler Fiord at 3:35 p. m. and reached Etah at 5:10 p. m.

In order to take advantage of fair weather, as soon as planes can take on gasoline will leave for base and deposit gasoline and oil. *NA-3*, Nold pilot; *NA-1*, Bennett and Byrd. Taking only one pilot in *NA-2* in order to carry more fuel.

On that flight Nold said that he experienced the loneliest time of his life.

IN FEW HOURS ICE COVERS LANDING PLACE

When we reached Flagler Fiord we found that during the few hours we had been away the ice had closed in and completely covered our landing place.

We then cruised about for some 60 miles attempting to locate a landing place in one of the other fiords, but were unsuccessful.

About a half hour before midnight, there was the effect of twilight among the fiords and in the dimness we lost track of Nold in the *NA-3*. Finally we located him, just a speck in the distance and apparently headed for the North Pole! We gave our motor all the power she had and after a good race overhauled him. What Nold's compass was doing, or what he was about, I have never found out, but I don't wonder that he felt lonely.

I had on polar bear trousers, Eskimo boots lined with sheepskin, and a reindeer-skin jacket—the warmest clothes known—but while leaning out of the cockpit to navigate I got very cold.

The next day we started out again. For a week Bennett had had very few hours' rest, but he insisted on going with me. Being the better pilot, he did most of the flying while I navigated and flew from time to time when I was sure of our location, and could let the navigating go for a while.

I made the following report of that flight to the Secretary of the Navy:

August 16th—*NA-3*, Schur and Sorensen; *NA-1*, Byrd and Bennett, left Etah at 10:45 p. m. for Cannon Fiord. At midnight ran into fog and low clouds 105 miles from Etah. Mountains completely covered with fog, so impossible to get over them. Found that the base that we had

put down in Flagler Fiord was still blocked with ice. Found some open water in Sawyer Bay. Landed at 12:15 a. m. and located break in ice foot large enough to beach planes. Ate a midnight lunch and waited for clouds and fog to clear. Thin scum ice formed in places during night. Finally at 4:15 a. m. weather cleared sufficiently to start for Cannon Fiord.

Two planes took off, but Schur, in *NA-3*, landed and signaled that his motor had developed a knock that made it dangerous to attempt to get over the mountains. He was instructed to wait for *NA-1*, which went on alone at 5 a. m. to investigate Cannon Fiord.

At altitude of 5,000 feet cleared mountains shown on chart at 5:20, and got over unexplored regions of Grinnell Land. Found high, uncharted mountains entirely covered with snow. Saw many square miles never before seen by man. There was an uncharted lake frozen over. The jaggedness, irregularity and many deep valleys presented a magnificent but awful spectacle. The air was the roughest ever experienced by us.

At 5:30 reached high peaks that were completely covered with clouds. Made effort to get through, but it was impossible. Returned to Sawyer Bay, reaching there at 6 a. m., and planes deposited 100 gallons of gasoline, 5 gallons of oil and some pemmican. *NA-3* and *NA-1* started return trip at 7:05. Ran into 50-mile gale over Smith Sound and reached Etah at 8:30. Had difficulty tying up to ships, due to very rough water. It has been blowing a gale all day and snowed from 9 to 10 p. m.

Several times on that flight we had almost gone into a tail spin, due to the roughest air I had experienced in nearly eight years of flying. Bennett said he had never encountered anything like it.

FLAMES ENDANGER PLANES

On the 17th the gale finally subsided. At 8 p. m. some gasoline on the water around the *Peary* caught fire and for a few moments it looked as if the *NA-3*, which was tied up astern, and the whole ship would go. Sorensen and Rocheville used splendid head work in casting the *NA-3* adrift immediately and Lieutenant Schur showed great calmness and judgment in procuring a fire extinguisher and throwing it to Nold, who was on the flaming plane.

My diary for the 17th has the following entry:

"The saving of the *NA-3* from destruction by fire to-day was just another example of the fine spirit of the personnel the Navy has assigned to me for this

duty. Whether we succeed or fail, they deserve the highest success. They have overcome almost insuperable odds that the elements and poor facilities have brought about. They have been indefatigable and courageous, and whenever there has been a job to do they have needed no commanding officer to tell them to do it, to spur them to greater effort.

"What they have accomplished on this trip has been almost superhuman, and even if we succeed in the highest measure it can not increase my pride in them. Their attitude seems to have been to live up to the best traditions of the Navy. They never hesitated to spend hours flying over areas where their lives depended entirely on the reliability of the engines."

ONLY ONE FORCED LANDING IN ARCTIC

There was one forced landing during our Arctic work, but it did not come until we were ready to leave Etah, where there was open water.

By the 20th the burned wings on the *NA-3* had been replaced by new wings, a new engine installed, and we were ready to go again; but on that day Commander MacMillan gave orders to get ready for the return trip. He stated that the head of Etah Fiord had frozen over the night before and that a forced landing in Cannon Fiord or Eureka Sound would certainly result in a freezing-in of the planes.

The leader of the Expedition was right. He knows the Arctic, and it is due to his good judgment that the personnel and the planes got back to this country safely.

We were all depressed that we could not go on with our work, for we were learning the location of the few water landing places and we never gave up the hope of accomplishing our mission. With more time and a better season, I am confident that the unexplored area could have been reached.

However, there was another great adventure ahead of us—the flight over the Greenland ice-cap. We spent several days making photographic flights, and on the 22d the *NA-1* and *NA-3* left Etah for Igloodahouny, 50 miles south of us. Reber piloted the *NA-3*, with Gayer, of the National Geographic Society, as photographer, and Nold as mechanic; Bennett, Francis, and I were in the *NA-1*.

A half mile from Etah the engine of the *NA-3* threw her connecting rod and stopped dead. Reber was forced to land and had to be towed back. The *NA-3* was then put on the *Peary* alongside the *NA-2*.

I was sorry to see Reber have that hard luck, for, due to serious illness, he had been able to make only two flights over Ellesmere Island. He is one of the most courageous and experienced flyers in the Navy.

FLIGHT OVER THE GREENLAND ICE-CAP

After landing to see that the *NA-3* had gotten down without injury, we continued in the *NA-1* to Igloodahouny, where we found a fine beach. We landed and made camp.

At 3:15 Bennett and I left for a flight over the Greenland ice-cap. The visibility was wonderful that day, and we climbed to an altitude of 11,000 feet. We could see 100 miles in every direction. As we got farther in over the ice-cap it grew bitterly cold, although at 7,000 feet we had encountered a warm stratum of air.

We were flying in a direction a little south of east over a part of the ice-cap never before explored, and we saw in the direction we were going that it reached an altitude equal to that of the plane—11,000 feet—higher than any altitude heretofore reported (see, also, page 529).

To me the Greenland ice-cap is one of the great natural wonders of the world—1,500 miles long, about 630 miles wide, with an area of 700,000 square miles of solid ice and averaging over a mile in height—the world's great iceberg factory.

The glaciers near the foot are greatly crevassed, but farther up, where they join the ice-cap, they are fairly smooth and firm. The shape of the ice-cap seems to be that of the crystal of a watch, so that it would be difficult to land an airplane near its edge without dashing into a crevasse; but 50 to 60 miles inland, though a bit rolling, there seem to be flat places where a plane with skis could land.

We returned to Igloodahouny literally frozen stiff, but we were proud of the *NA-1*, for she had flown more than 2,500 miles in the Arctic in every kind of weather, and she appeared to be in just as good condition as when we started.

HISTORY'S GREATEST TREK

Tragedy Stalks Through the Near East as Greece and Turkey Exchange Two Million of Their People

BY MELVILLE CHATER

AUTHOR OF "REDISCOVERING THE RHINE," "THROUGH THE BACK DOORS OF BELGIUM," "THROUGH THE BACK DOORS OF FRANCE," "THE LAND OF THE STALKING DEATH," ETC., IN THE NATIONAL GEOGRAPHIC MAGAZINE

EVER since the expulsion from Eden, man has been trekking, and folk wanderings are the roots of his history; but with 1922 began what may fairly be called history's greatest, most spectacular trek—the compulsory internigration of two million Christians and Moslems across the Ægean Sea. Slowly gathering impetus through the centuries, of a sudden these human tidal waves reared and burst on its shores.

This trek, brought about by the startling recuperation of Turkey after her defeat in the World War and her subsequent triumph over the Greeks in Anatolia, eventually developed into a regulated Exchange of racial minorities, according to specific terms and under the supervision of the League of Nations. But the initial episodes of the Exchange drama were enacted to the accompaniment of the boom of cannon and the rattle of machine guns and with the settings painted by the flames of the Smyrna holocaust.

THE FIRST DERELICTS OF THE TREK

The first human derelicts of the Exchange were the Anatolian Greeks, who moved seaward in long files on their 500-mile trek from behind the Turkish Nationalists' lines. Though most of them lived several weeks' walking distance from the war zone, it is conceivable that the Nationalists did not relish having in their rear the distant kinsfolk of their Greek antagonists. And so, through 1920-21, the flow of the deportees, leaving uncounted dead among the snowy mountains and scorching plains of Asia Minor, went on.

For more than two thousand years inner Anatolia had mothered these descendants of the adventurous spirits who had followed Alexander the Great into Asia. A thousand years still earlier its coasts

had been Hellenized by pre-Greeks fleeing from their invaded homeland. Now, exiled from their vine-clad cottages and bazaar booths, the deportees huddled half-naked in seacoast market places, hailing, like castaways, whatever chance vessels might rescue them from the ever-rising waters of refugeedom.

And thus the first 100,000 in history's greatest trek slowly filtered into Greece.

When, in the late summer of 1922, I steamed in between two far-flung promontories, while the sun spilled over Mount Pagos to illumine the vast sweep of red-roofed houses clothing its flanks, I little realized that I was watching one of the last dawns to rise over ancient Smyrna.

Once ashore, on the shipping-crammed quay, my companion and I threaded among camel trains and through narrow streets from whose overhanging balconies two neighbors might almost shake hands.

A climb to the topmost arch of Mount Pagos' crumbled fortifications afforded a view of the outspread checkerboard of Smyrna's sedulously separated quarters—the Turkish marked by minarets and cypresses; the Frankish, outstanding with fine residences, and the Greek and Armenian, crammed with an amazing density of small shops—the whole red-roofed panorama girdled by an illimitable sweep of blue waters which stretched horizonward within the gulf's embracing shores.

A SIX MONTHS' CATAclySM OF FLEEING PEOPLES

"Let's make a last snapshot of Smyrna," we said, before descending from Mount Pagos. Indeed, it may have been the very "last," since a few weeks later that magnificently outspread scene of peace and prosperity lay in ashes; for upon the Turkish offensive of August 26 the Greek army collapsed on a 150-mile front.



© E. J. Hardcastle

A REFUGEE FROM THE BLACK SEA PORT
OF SAMSUN

He took part in the trek of the "first hundred thousand" Greeks from Asia Minor (see text, page 533).

The ensuing six months' cataclysm of fleeing peoples came as if there had been telepathically broadcast in great waves that swept Anatolia, Smyrna, Thrace, and Constantinople, the instinct of panic. The Greeks in these widespread areas suddenly awakened to find themselves on the brink of a whirlpool.

Refugees from anywhere within 150 miles inland herded seaward into Smyrna. At first they came in orderly trainloads or in carts, with rug-wrapped bedding, some little household equipment, and perhaps even a few animals. But as the distant military momentum speeded up, the influx became a wild rabble of ten, then twenty, then thirty thousand a day. Their increasingly scanty possessions betokened a mad and yet madder stampede from the scene of sword and fire, until September 7 saw utterly destitute multitudes staggering in, the women wailing over the first blows of family tragedy, whereby mothers with no food for their babies had been forced to abandon their older children in wayside villages.

By now Smyrna's broad quay swarmed with perhaps 150,000 exiles who camped and slept there, daily stretching their rugs as makeshift shelters against the sun, whose furnacelike heat was the mere forerunner to a terrible epic of fire.

The American consul general summoned his fellow nationals—the staff of the American college, together with local representatives of relief organizations and commercial firms—and formed a unit, later known as the American Disaster Relief Committee, for the distribution of bread along the quay.

All day long of September 8 and far into the night sounded the tramp of Greece's defeated troops surging toward the transports that chafed under full steam; then these, followed by the harbor's entire shipping, fled seaward. And, like a rising curtain, the dawn revealed only the grim hulls of neutral warships, come to "observe," across that com-

merce-deserted harbor, the catastrophe of Greece's Asian adventure.

A few hours later there came riding into Smyrna and past its close-barred shopfronts a body of Turkish cavalry, black-uniformed and scimitar-bearing, their left hands raised aloft, as in reassurance, while they called "Fear not!" to the white-faced populace huddled in side-alleys.

Before nightfall the whole division was in, with two infantry divisions following.

A DANCE OF FLAMES BECOMES A FIERY HURDLE RACE

A few days after the triumphal entry of the Turks, the army of quay-squatters saw flames dancing in the old, wood-constructed Armenian quarter, a mile and a half away. The dance became a fiery hurdle race, as the wind-fanned flames leaped from balcony to balcony across the narrow streets; then the race became a hungry conflagration whose roaring mouth ate through and gulped down that mile-and-a-half breadth of city down to where the refugee multitude huddled between a waste of fire and a waste of sea.

And now fresh multitudes were disgorged upon them—fleeing Smyrniotes laden, refugeelike, with snatched-up babies and bedding. The city had become a Titanic blast furnace, whose wind-driven flames fanned the quay with so dreadful a heat that the multitudes dipped their blankets in the sea and swaddled themselves. Maddened horses, their harness afire, ran amuck through the press, leaving a wake of crushed bodies, which roasted where they lay.

All afternoon, until the sun died in rayless eclipse behind a cindery pall, and all night long, by the glare, the flood of men and beasts debouched from doomed city upon delirious quay. Affrighted faces mingled with wild-eyed animals, and human cries with the neigh of horses, the scream of camels, and, last, the squeaking of rats, as they scuttled by in droves from the underworld of a lost Smyrna.

Some of the destroyers had crept in close enough for men aboard to behold pandemonium's silhouette against a two-mile frontage of leaping flame, to sicken at the unforgettable odor of Smyrna's hecatomb, to catch the shrieks with which



Photograph by Ernest H. Schoeilsack

AN ANATOLIAN GREEK GIRL OF KONIA

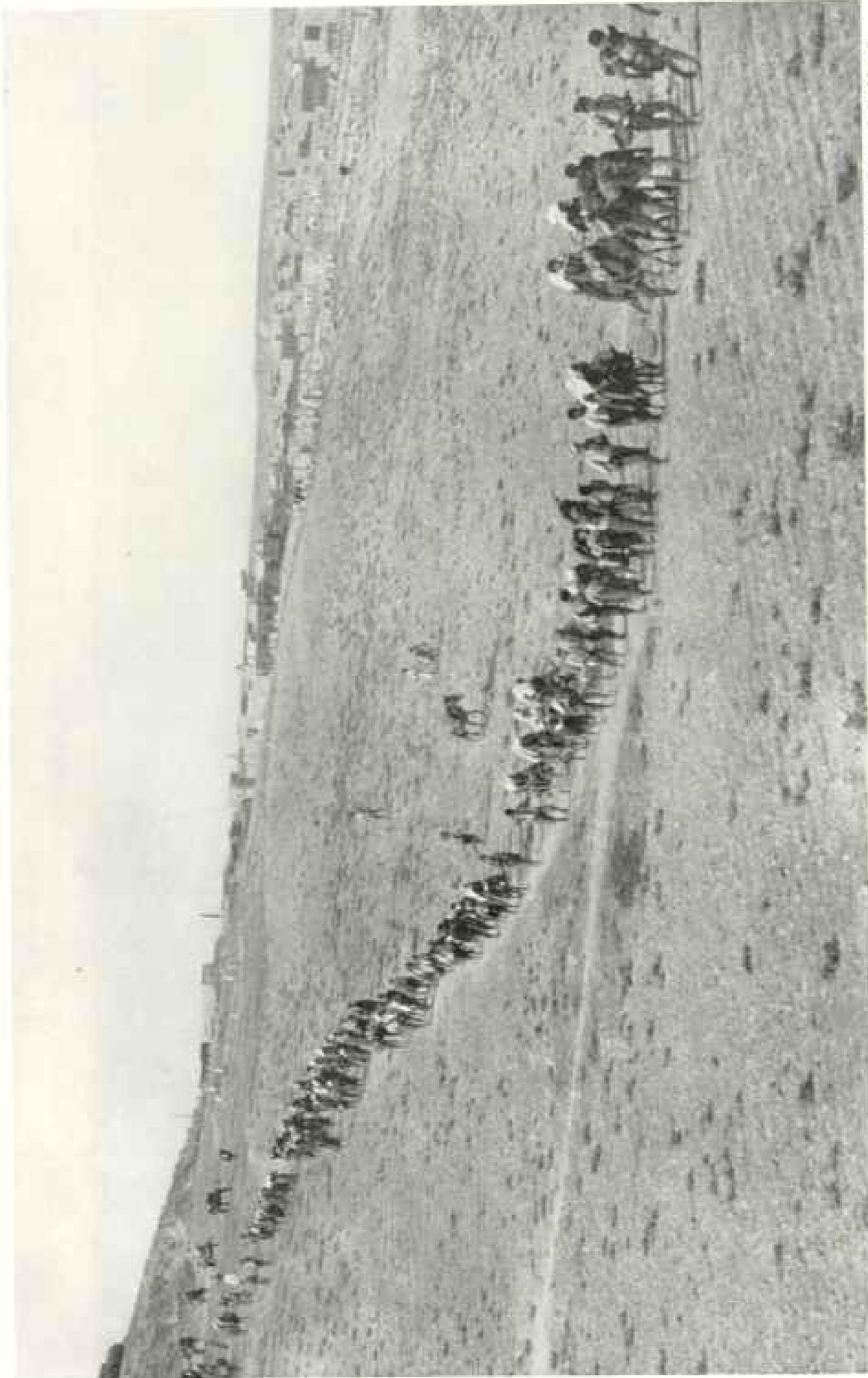
She is wearing the parti-colored costume which was fashionable a hundred years ago in the Greek colonies.



Photograph by Ernest B. Schoedsack

ANGORA, THE "DOOM TOWN" OF ANATOLIA

Since it has become the capital of the Turkish Republic, this ancient inland city, 220 miles southeast of Constantinople, has experienced a mushroom growth.



Photograph by C. D. Morris

A SECTION OF THE TREKING TRAIN OF 5,000 CHRISTIANS WHO MADE THEIR TRAGIC WAY FROM KHARPUT TO THE SEA

Although Kharput, in central Asia Minor, is only 160 miles by air line from Trebizond, on the Black Sea, these unhappy refugees were forced to pursue a circuitous route which stretched to 500 miles (see text, page 357).



Photograph by C. D. Morris

DYNAMITING THE WALLS OF BUILDINGS ALONG THE QUAY DURING THE SMYRNA FIRE

the multitude's outermost ranks, hurled back by its scorched inner ranks, toppled over the jetty's verge and into the sea.

Beside this nightmare of 300,000 souls crushed together on Smyrna's quay, with no escape through the encircling ring of sea and fire, tales of burning Ilium faded into futility.

When with dawn the Disaster Relief Committee's workers headed their motor cars toward the quay, at times dismounting to clear corpses from the streets leading thither, two-thirds of Smyrna lay blackened and smoldering, an outstretched chaos. From the announcement board of a charred cinema theater, standing stark amid desolated acres, glared like a red-lettered epitaph "The Dance of Death!"

High on Pagos' crests rose the unscathed Turkish quarters' minarets like symbols of victory.

DESTITUTE THOUSANDS LIVE IN CELLARS AND ON THE QUAY

When, three days later, the conflagration had exhausted itself, 100,000 people withdrew from the quay to the cellars, these thronged "abris" recalling wartime Paris under air raid, while outside went on bombardmentlike explosions, with smoke clouds ballooning skyward over the dynamited buildings (see page 538).

For another week the remaining 200,000 continued to live, and die, and bring other beings to birth on that unforgettable quay. With Smyrna's bakeries burned, or idle because of water shortage, they gorged on raw flesh, torn from animals' carcasses, or on the sea biscuit that the American sailors brought ashore in tins.

Burned, too, were all hospitals and their occupants; so within that multitude—so densely packed that one could not lie down without being crushed to death—women gave birth to stillborn babies and sheltered them against their dried-up breasts, for lack of a burial place, until some fresh stampede—perhaps over the arrival of a bucket of water—opened a momentary pathway for them to lay their burdens in the all-receiving sea.

By now the emerald-clear waters showed a bottom strewn with the drowned, and gangs of body fishers were coolly plying hooked lengths of telegraph wire for the

loot of finger-rings and turned-out pockets (see illustration, page 505).

How to escape from a harbor where lay only neutral warships? Yet nightly these vessels lent at least their searchlights' protection; for, from wherever the quay lay black, there wafted seaward a great multitudinous cry, telling of the presence of night gangs among their victims; then, with the searchlights' blinding swerve upon the spot, the moaning would die away.

Only once a civilian craft appeared, and from it stepped red-fezzed officials, who cut twelve rams' throats and knelt by the streaming blood to thank Allah for their nation's victory.

DISASTER COMMITTEE SAVES 60,000 FAMILIES FROM DEPORTATION

Because of a lack of ships to bear them away, 60,000 refugee families, of all classes, from peasants to bankers, were to be "deported," as the dreaded phrase ran, "into the interior."

It was now that the Disaster Committee, whose workers had not removed their clothes for a week, performed a unique service. With the Turks' formal assurances that Greek vessels not flying their national flag or docking at the quay would be exempt from seizure, one of the Committee sped by destroyer to Athens, where, upon written guarantees embodying these assurances, he rounded up a squadron of rescue ships and returned with them to Smyrna.

Meanwhile the Turkish command had notified the Allies of its permission for the removal of all refugees except males from 17 to 45 years (see page 562).

Almost simultaneously revolution burst over Greece. On Mitylene and Chios 75,000 defeated and disaffected troops commandeered warships and merchantmen, then embarked for Athens, displaying mock effigies of royalty and singing republican songs. In the capital the joyous scenes of three years before had been replaced by the spectacle of stunned multitudes upon whom airplanes were showering manifestoes that urged national salvation by revolution.

Over Smyrna's refugees on the eve of the evacuation another manifesto-dropping airplane, a Turkish one, was circling,

The handbills informed this homeless and now governmentless multitude that those not out of the city within a week's time would be deported. This resulted next morning in the mad stampede of 350,000 people toward the quay-traversing barrier that led to several other such barriers on the railroad pier. Anchored in the harbor lay the long-awaited ships—how hopelessly small and few they seemed!—Greek ships flying the American flag.

Uncounted hundreds were crushed to death or pushed over the quayside to drown, on that first day, when eight ships, convoyed by American destroyers, departed with 43,000 souls aboard. For those left behind there remained but six more chances—a chance a day—then the black despair of deportation into the interior (see pages 558 and 562).

Six more days at the barriers, where women's shrieks told of wives being pushed through to liberty and of husbands dragged back for the rope-gang, consisting of male deportees in file between two long wrist-binding ropes; where women so bereft and men so detained went mad and leaped into the sea; where all were searched and the despoiled wealthy were turned back at the final barrier, so that they might reappear to-morrow with a fresh supply of money; where the sudden sighting of a rescue ship brought death by crushing or drowning; where the night patrol sighted secret swimmers—deportable men—passing through the pathway of a destroyer's searchlight, which, while the pursuing shots rang out, suddenly veered elsewhere at some humane commander's order of "Switch it and give the poor devils a chance!"

With the Turks' house-to-house search, 100,000 cellar-hiders were added to the diminishing quay population, this necessitating a time-extension of six days.

THE FLIGHT OF THOUSANDS FROM THRACE

By October 8 the evacuation was complete. Disregarding the great number of deported men and youths, 300,000 people had been evacuated in a fortnight, 180,000 of them under the supervision of the United States Navy and the Disaster Relief Committee, assisted by British naval forces. Estimates of the Smyrna disaster placed the loss of life at 10,000 and

the property destruction at \$300,000,000. And thus this second wave in the great trek passed over into Greece.

By now, addresses before the League of Nations were urging that body to act in the crisis. But though 400,000 refugees were scattered at Athens, Saloniki, Rodosto, and the *Ægean* islands in lots of 50,000 to 100,000, the crisis was not yet. On September 23 an Allied note had retransferred to the victorious Turks East Thrace, which had been annexed by Greece under the Sèvres Treaty. This triangular "backyard of Constantinople" stretched westward from 25 miles behind the city to the Maritza River and contained 600,000 Greek and Turkish farmers, in about equal racial proportions.

Bulletins giving a month's notice of the withdrawal of the Greek troops and the entrance of Turkish gendarmerie were to be posted in order to allay possible panic. But panic was already abroad, as inextinguishable as Smyrna's. Within one week of the quayside evacuation, Thracian Greeks saw Greek troops striking camp and marching westward.

"You're coming back?" the farmers anxiously asked.

"No," was the response.

And within an hour villages were deserted. Household goods and sacks of seed grain were flung into wains, the oxen were hitched, then the little community trekked westward, out of the backyard of Constantinople.

Village by village the sight of the departing soldiers surprised women grinding at handmills, men on the threshing sledges, always with the same instant result—the dropping of tools, the crowding into hastily loaded farm wagons, the departure westward.

Many a local official ran out, protesting: "Turn back! Get your harvest! You've a month yet."

Always the same, dull, fate-ridden response: "No. All is lost. We must move into Old Greece."

Everywhere throughout the plain the word passed, the trek began, the endless caravan lines took form.

Ahead the sky grew dark. Rain fell in torrents, washing out roads and swamping fields, as this Christian hegira into Greece moved slowly, multitudinously on.



THEY MUST BEGIN SCHOOL ALL OVER AGAIN

The tens of thousands of Moslem children, transferred under the Exchange of Populations from Greece, spoke only Greek, though their forefathers spoke only Turkish. Hence, upon landing in Asia Minor they will have to learn a new language.



Autochtones Lumière by Gervais Courtellemont

THE FIRST-BORN IN HIS CRADLE

The first-born son shall, says the Koran, "have the preëminence above women because of all the advantages wherein God has caused the one to excel the other," and therefore he "shall claim a double share of any inheritance." Meanwhile, according to custom, he is lying packed in pulverized sand, and swaddled, and if he cries he will be given a piece of Turkish sweet wrapped in a rag.



THE FORT OF RUMELI HISSAR ON THE EUROPEAN SIDE OF THE BOSPORUS

This castle, built by Mohammed II in 1452, preliminary to the siege of Constantinople, commands the narrowest part of the Bosphorus, only about 800 yards wide. The swift current of the strait is here known as Sheitan Akindisi (Satan's Stream).



Anachronism Lumière by Gervais Courtellemont

IN THE GOLDEN HORN, PORT OF STAMBOUL

Mohammed II brought his fleet to this harbor overland from Rumeli Hissar by means of greased planks, after the Greeks had blocked its entrance with chains. The raïques, in the foreground, are the gondolas of Constantinople and are used in transporting passengers between ships and quays. The tall masts of fishing smacks are seen in the background.



THE SWEET WATERS OF ASIA

Near by rise the towers of Anatoli Hissar (Anatolian Castle) built by Mohammed the Conqueror's great-grandfather, Bayezid I, immediately opposite Rumeli Hissar (see opposite page). A Modern poet describes the Sweet Waters of Asia as surpassing all other beauty spots in Asia.



e.

Antichromes Languère by Germain Courtellemont.
IN STAMBOUL'S RESIDENTIAL QUARTER

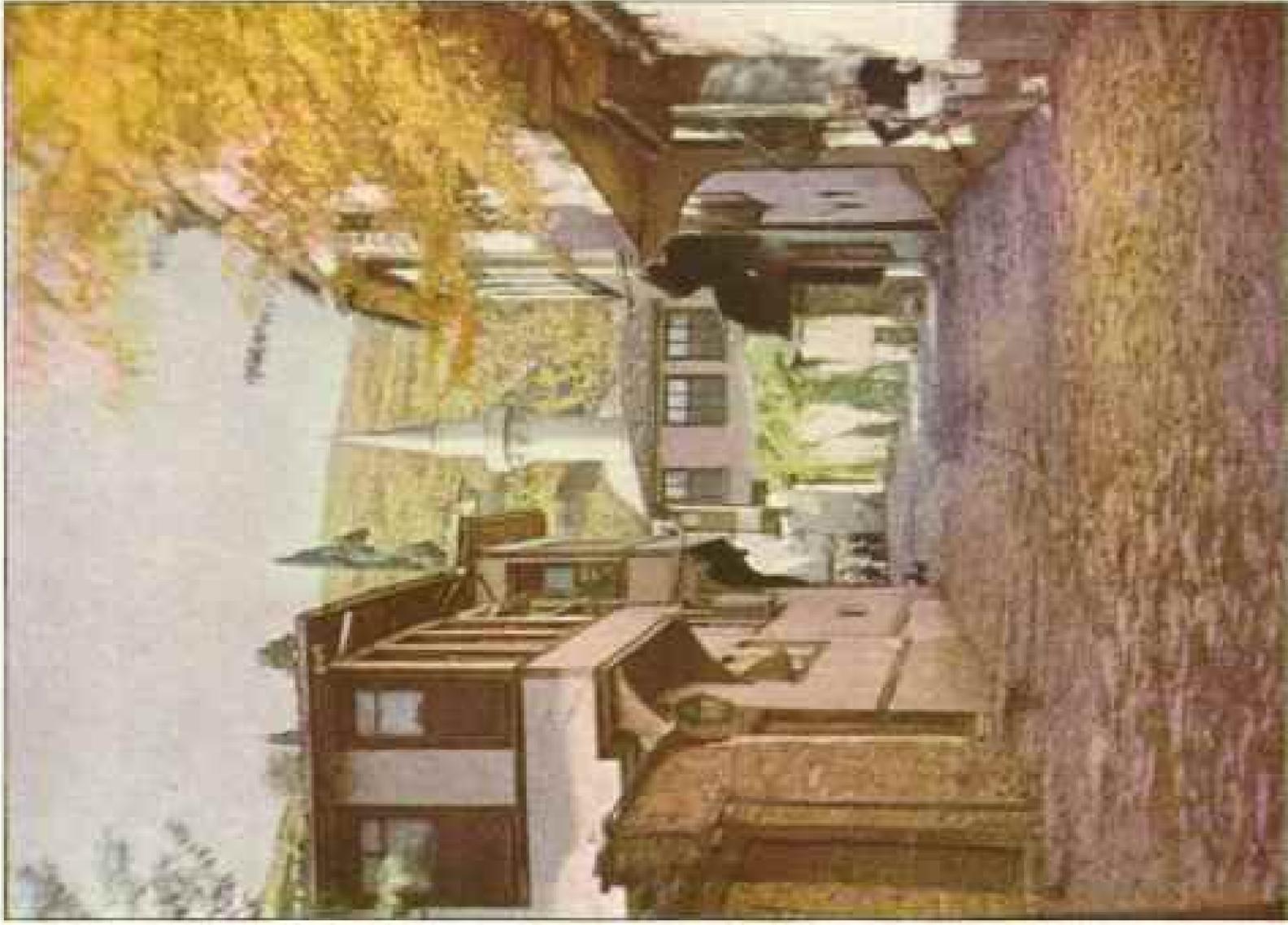
By night the *lekçi* (watchman) on his rounds hangs his hat on these cobbles every few hours, to wake you up and inform you that all's well. Or perhaps he shouts a warning as to where a fire may be, for these wooden houses of Stamboul burn like tinder, and several thousand may be destroyed in a few hours.



Autonomous Lumière by Gervais Courtellemont

THE HOUR OF REST

Not far from this ancient city of Bursa is Kutuin, home of beautiful glazed pottery and tiles. The entire dome of the Yeshil Turben (Green Tomb) at Bursa is covered with tiles of exactly the shade shown here—the color associated with the Prophet and with holy men generally. The medallion set in the tile is a sort of monogram of interlaced Arabic letters meaning "The Possessor of the World" (God).



A STREET SCENE IN BURSA

Here, as in less sanitary municipalities of Asia Minor, the cobbles slant toward the middle of the street, so that the drainage can collect and be flushed away with the first heavy rain. Bursa is one of the few important towns of Anatolia whose winding thoroughfares are lighted at night, the illumination being provided by lanterns hung outside each householder's door.



©

MOSQUES AND MINARETS OF BRUSA

Autoschromes Lumière by Germain Coulaud

There is a saying in the Near East that this historic city of Asia Minor has a mosque and a walk for every day in the year. In the background rises the Asian Olympus, called by the Turks, Keshish Dagh.



THREE LITTLE MAIDS FROM ISLAMLAND

Autoschromes Lumière by Germain Coulaud

Not yet old enough to be concerned with the necessity for veiling their faces from the photographer, they nevertheless have covered their hair as a symbol of modesty.



GALATA QUAY, OPPOSITE SERAGLIO POINT: CONSTANTINOPLE

The grower of these onions is assessed the *ushr*, or tenth of his crop, either in cash or in kind, as a government tax. These vegetables, as well as beets, saffron, pomegranate rinds, and walnut leaves are used for dyes for rug wool. Since the Exchange of Populations began, the commerce of Constantinople has declined woefully.



Antoine-Louis Lumière by Gervais Courtillot-Germond

THE TOMB OF MURAD II AT BURSA

Because the Moslem monarch expressed the wish that his grave be exposed to the elements, like that of any common man, there is a hole in the dome, through which the rain falls. Many of Turkey's early sultans are buried in this city.

SUN-PAINTED SCENES IN THE NEAR EAST



CYPRESS-SENTINELLED BRUSA

For centuries before the Turks began their westward drive across Asia Minor, Greeks had settled here and had given the name of their Home of the Gods to the mountain which towers behind the city. Tradition says that Brusa was founded at the suggestion of Hannibal and was for a long time the seat of the Bithynian kings.



©

Antiochines Lanoire by Gercais Capteffronat

A SHOP IN KONIA

The Turks are expert workers in leather and are especially partial to red-topped boots like those shown here. The shopkeeper has brought his customer a cup of coffee to be sipped while a bargain is being struck and the footwear is being tried on.



THE INNER COURTYARD OF A TURKISH HOME

The inscription over the doorway is a motto taken from the writings of Saadi, the famous Persian poet: "Do not rely on the wealth of the world, as it has elevated many like thee only to destroy them."



©

Autochromes Lumière by Gervais Courtellemont

GIVING HER HOUSEHOLD INSTRUCTIONS FOR THE DAY

The mistress (*hanım*) of this Turkish home is seated on a divan in the courtyard of her house (see above). In the harem of a well-to-do Turk the hanım usually is surrounded by numerous slaves.



A CHILD OF DAMASCUS

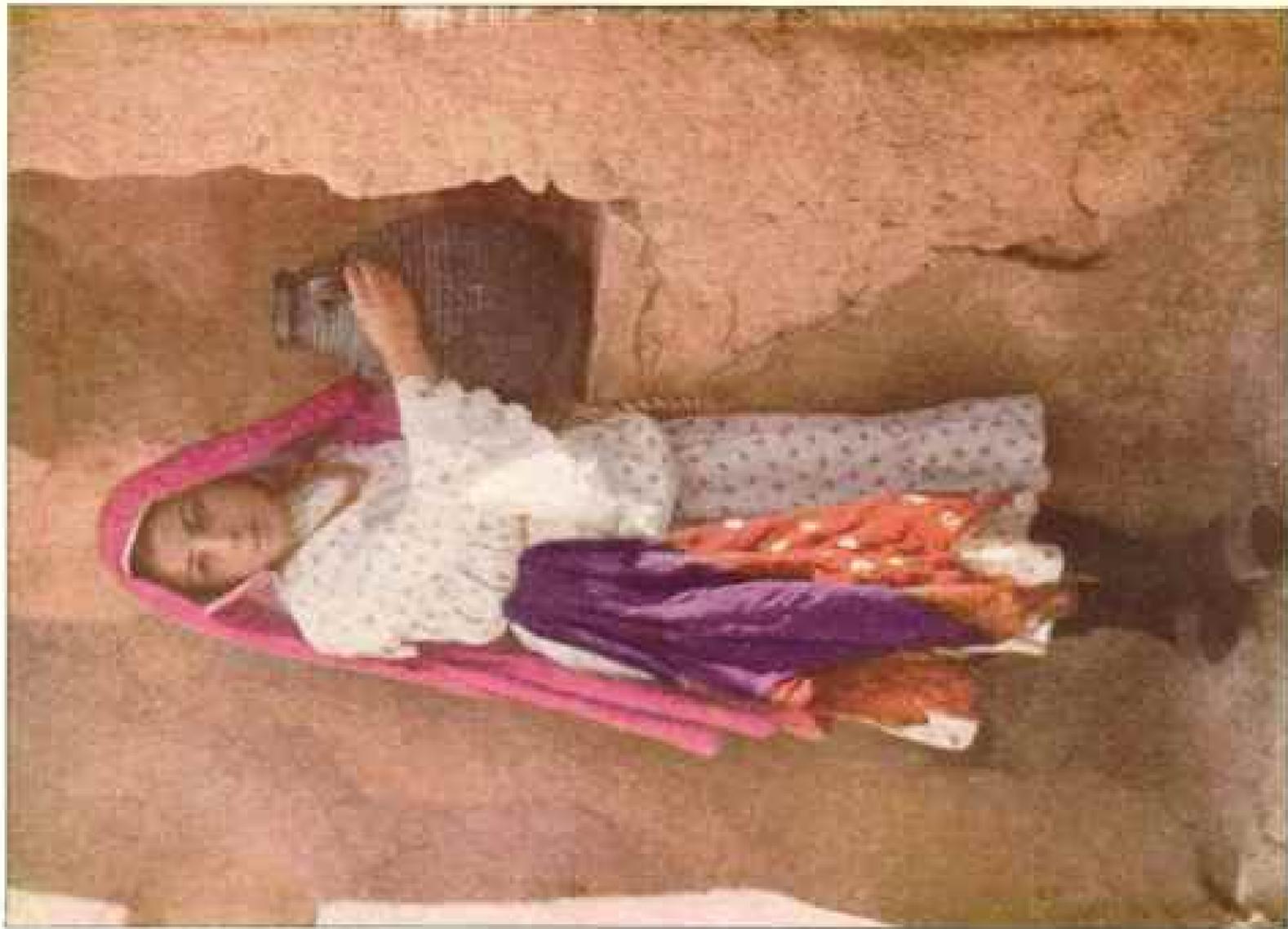
A Moslem girl is not required to assume the *yarimak* (veil) until she is twelve or fourteen years of age. It is fast losing all significance in the Near East except as a national headdress, although the Nationalists have announced that the custom would be restored.



Autochromes Lumière by Gervais Courtellemont

MELONS AND PUMPKINS FOR SALE

The genial old merchants are wearing the long *aba*, familiar throughout Persia, Syria and Asia Minor and called by the Christians of Kaisariye "the coat without a seam." The big whisks are used first for sprinkling the dirt floor with water, then for sweeping it.



Notes: Sources: Lamaliba by Garvada Court (1911/1912)

DISSEMINATING WATER FROM THE FOUNTAIN

The Koran's words, "By water everything lives" are commonly inscribed on Muslim public fountains. Near Eastern water-jars are unglazed and porous, the evaporation keeping the water cool. Fresh-water supply was one of the great problems aboard closely packed ships during the Exchange.



Notes: Sources: Lamaliba by Garvada Court (1911/1912)

THE COFFEE HEATER

With water, Arabian coffee and sugar as the ingredients, "q. r. r." are the proportions (one of sugar and one of pulverized coffee to one demitasse). Thus, with sweetmeats, is offered as the invariable hospitality to guests in Near East homes.



80

Autochromes Lumière by Curvols, Constantinople
 SYRIAN FRUIT VENDERS DISPLAYING GRAPES AND MILLIONS OF HAMA



Both Anatolia and Syria are fruit countries. Much fruit is dried, but canning and preserving industries are practically unknown. The young melon merchants at the railway stations in hot Syria are always well patronized. The boiled-down syrup of the grape, which in this part of the world is regarded as the king of fruits, makes *rebas*, which is used like apple butter.



THE COURT OF A MOSQUE OF A TEKKEH, OR MONASTERY FOR DERVISHES

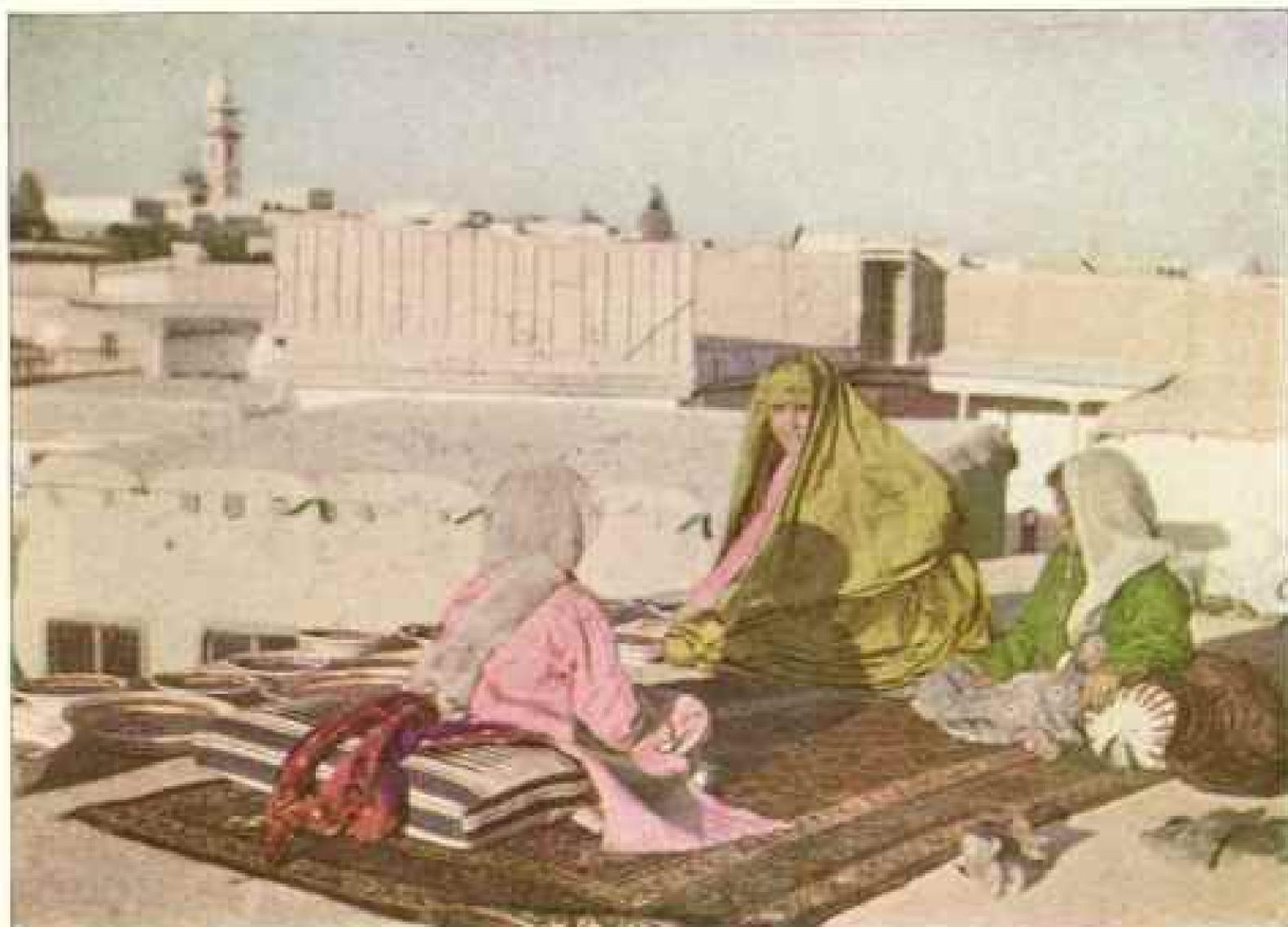


©

Amesbrouss Limited by Gervais Courtellemont

IN THE COURTYARD OF A SYRIAN HOME

The women of this wealthy household find the courtyard refreshingly cool during the day, and frequently repair to it in the evening also, as indicated by the lantern suspended from the branches of the lemon tree.



A SWEETMEAT PARTY ON THE ROOF OF A MUSSULMAN HOME



Autochromes Lumière by Gervais Courtellemont

READY FOR A DESERT JOURNEY

The ass is always the pacemaker for the camel, who is the freight car of the desert. This photograph was made near Damascus, on the caravan route to Hit, on the Euphrates, 70 miles northwest of Bagdad.



©

With the surrender of Syria to French mandate and of Palestine to British mandate, many Christian peoples were relieved of allegiance to a Moslem power. Note the large antique veils in the illustration at the left. These women are all Nazarenes, and their village is Bethlehem, birthplace of Jesus.



Autonomous Lamlah by Geneva Cartellonnat
CHRISTIAN WOMEN OF PALESTINE WHO WERE FORMERLY TURKISH SUBJECTS



Antiquities Louvre by Gerards Courtelbaumont

A YOUNG WOMAN OF BETHLEHEM

©



AN ARABIAN WOMAN OF DAMASCUS



OLIVE DEALERS OF DAMASCUS

Olives are the butter of the poor in the Near East. The green fruit is seldom seen, the natives preferring it ripe and full of oil. If a Turk or a Greek goes on a long journey, as in the case of the Exchange of Populations, he provides himself with a huge disk of bread, a bag of olives, and a few dried fish.



Autochromes Lumière by Gervais Courtellemont

CHRISTIAN WOMEN OF DAMASCUS

At Rodosto 28,000 trekkers descended the cliffs to camp on the wind-swept beach, waiting there for rescue ships until they were on starvation's verge—this while in the deserted interior their harvest mildewed where it lay (see page 577).

Through Adrianople 60,000 poured during the first six days. So fast had action followed upon rumor that those trekking from nearest Constantinople saw throughout the entire line of march only moving caravans and deserted villages where, a few weeks later, starved cats and dogs were devouring each others' carcasses.

Men and women, trudging ahead to lighten the fast-miring wagons, bore shot-guns; for thousands of the *comitadji*—those stormy petrels of the Balkans—were ambushing and raiding the emigrants. Many a wain entered Dedeagatch or Adrianople with the wife leading the oxen and her man's body stretched across the grain sacks.

"AN EPIC OF RAIN"

By day and night, but always through that equinoctial downpour, the self-exiled host, which had mounted to 180,000 in twelve days, plodded on toward the marshlands of the ever-rising Maritza. For a few hours the oxen would be outspanned and families would snatch sleep, lying for warmth against the steaming stomachs of their cattle, while with a shriek and a blaze of lights the luxurious Oriental Express would thunder by. Then the trek, or rather tortoiselike race of mud-caked carts and weary oxen to gain the river before it became impassable, would go drearily, doggedly on.

From the Maritza's banks, where incoming roads converge upon the Karagach bridge, or from the river-commanding rooftops of Adrianople, one could watch the last lap of the flight: by day the desolate prairie, over which, from foreground to skyline, wound the endless, snakelike procession, gray under slanting rain; by night the swaying streak of lanterns across black infinitude, up from which arose confusedly the lowing of cattle, the sharp whip-cracks, the dull rain-drench, the thousandfold scream of wooden wheels rasping on wooden axles.

Watchers who had said of Smyrna's

awful pyrotechnics, "It is an epic of fire!" said of East Thrace's multitudes, bowed under the lashing downpour, as if it were the whips of the Fates, "It is an epic of rain."

And thus 300,000 crossed the swollen Maritza and strewed its western banks; and thus the third wave in the great trek, now mounting to 700,000, passed across the frontiers of Greece (see page 586).

GREEKS FLEE FROM CONSTANTINOPLE

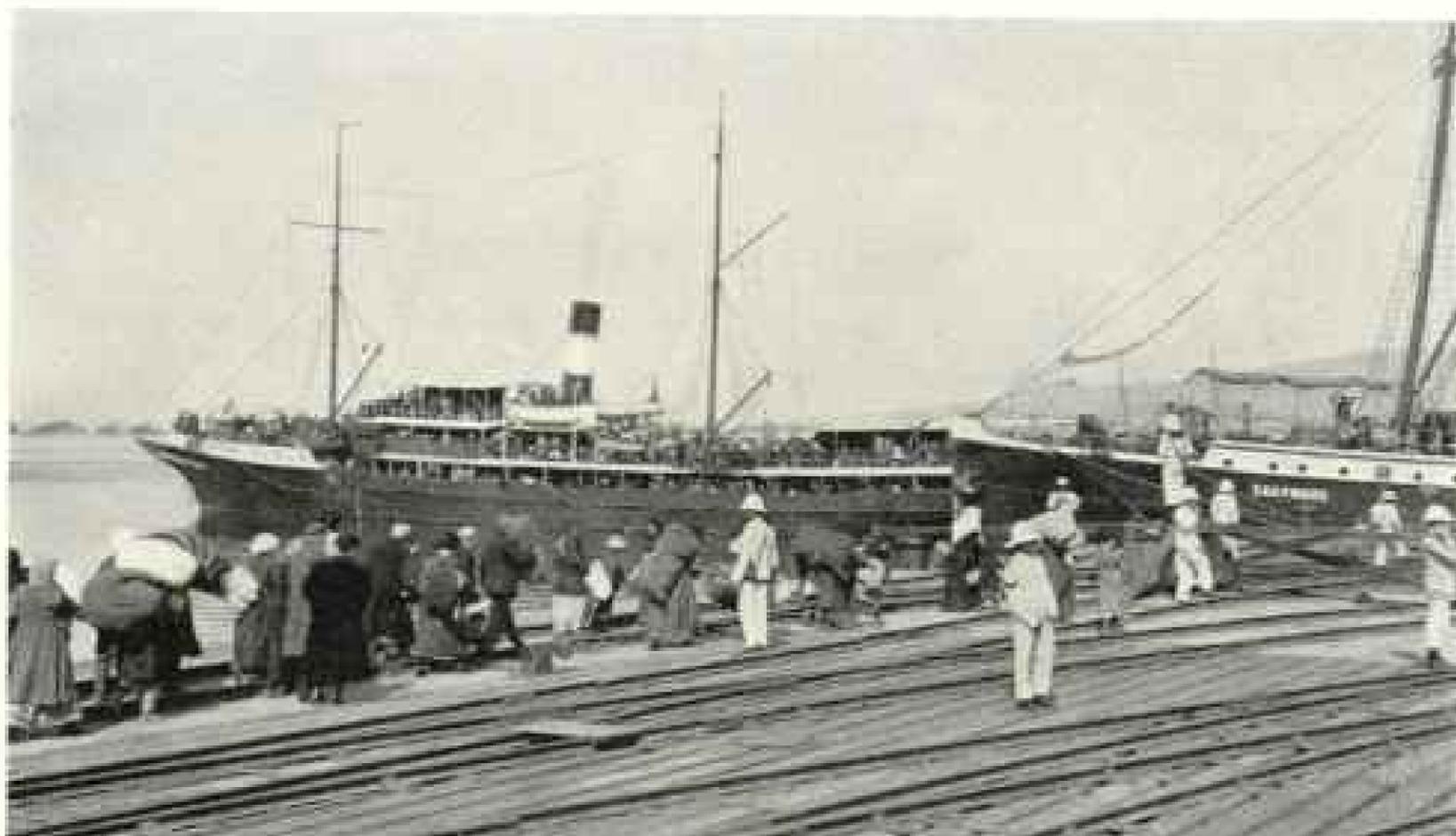
Already another, a mere wavelet of 25,000, had gathered head in Constantinople and along the Dardanelles while the Nationalists' army was wheeling northward from the conquest of Smyrna. Arriving at the capital amid a greeting of green war flags and rams' blood, their Commissioner Extraordinary, after several conferences with the Allied chiefs, had announced, "And, by the way, since noon the city government, in our view, no longer exists. Accordingly I have assumed control."

That night Stamboul's minarets were festally illuminated, while past Pera's foreign embassies thronged Turkish-student crowds, shouting, "Down with the monarchy! Long live new Turkey!" And thereafter whoso among the Greeks could conveniently depart from the capital did so.

When Friday came, with its historic *se-lamluk*—the Sultan's progress to prayer—the waiting crowds were turned away, for overnight Mohammed VI had fled to Malta. And, finally, a Nationalist occupying force entered the city, crossed Galata bridge over flower-strewn cobbles agush with rams' blood, and ascended Galata hill among a sea of red fezzes, while sirens shrilled to Europe and Asia the news that the Turks were back in Constantinople.

Hardly had these events taken place when a Nationalist edict, posted throughout Asia Minor, announced "permission" for all non-Moslems to leave the country before November 30. Upon this notification the remaining Christian population of inner Anatolia arose *en masse* and fled for the Black Sea coast.

Almost immediately 40,000 women, children, and infirm—their men being held as prisoners of war—swamped the



BOAT LOADED WITH REFUGEES LEAVING THE RAILROAD PIER AT SMYRNA
British sailors, in white uniforms, assisted and directed the embarkation; American sailors worked farther back, on land, and at the entrance to the pier.



Photograph by C. D. Morris

AT THE LAST BARRICADE: SMYRNA

The Railroad Pier juts out a quarter mile into the Smyrna harbor, with several lines of track running its entire length. All persons wishing to leave Smyrna were herded on land at the base of the pier, and then passed through a series of four barricades, where Turkish soldiers weeded out those who were not allowed to go (see text, page 549). At each barricade those taken out were grouped as prisoners, at one side, until they could be removed. Here the prisoners are seen at the left, guarded by Turkish soldiers. There is a line of women and children with bundles at the right, passing on to the ships. Those allowed to go to the ships have been four times searched and have four times presented their credentials. A British sailor stands by the telegraph pole in the foreground. An American sailor stands atop the barricade at the gate.



Photograph by C. D. Morris

AMERICAN SAILORS MOVING REFUGEES ON A HAND TRUCK: SMYRNA

seaport of Samsun, and within three weeks 250,000 more were tramping the snowy roads toward Trebizond, Sinope, and Ineboli (see page 537).

"Permission" had been construed as "expulsion," and from as far as 500 miles inland villagers and townsfolk assembled, their backs piled with bedding and cradles, turning for a last glimpse of roof and vineyard, as they set out across the wintry plain.

With ship-deserted quays, as at Smyrna, and with the Black Sea ports glutted with sidewalk-sleeping, disease-breeding paupers, who had been thrifty cottagers a few weeks before, the gap was finally bridged by the arrival of Greek ships flying the Stars and Stripes and convoyed by American destroyers.

By January, 1923, some 80,000 refugees, or about one-tenth of this, the fourth and most formidable wave in the great trek, had reached Greece, where the never-ending influx at last became so insupportable that Athens slammed her official doors, protesting against "further expulsions."

The alternative proved to be disused barracks and barrack stables near Con-

stantinople as the dumping ground for 100,000 Anatolian Greeks, where they died at the rate of 300 a day.

A GLIMPSE AT LIFE IN THE REFUGEE CAMP

Could any eyewitness portray, far less any reader imagine, the miracle of mute heroism, self-respect, and cheer that kenneled in those yellow Selimiye barracks? (see, also, pages 570, 573, and 587).

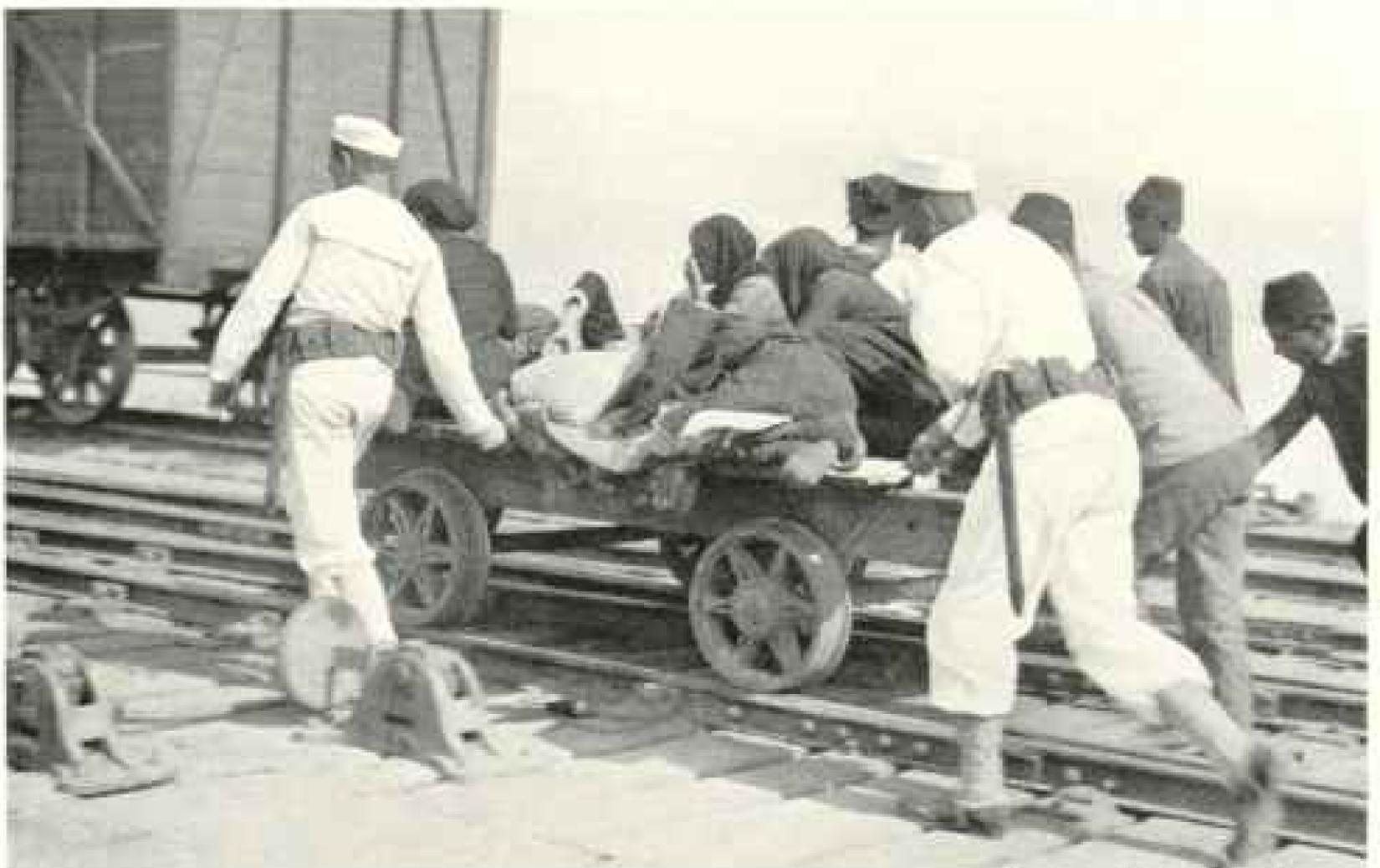
This vast, gloomy space within four walls, once whitewashed, but now grimy as the earthen floor itself—can it serve this impouring, heavily laden multitude of women, children, and old folks as anything more than a morgue? Yet immediately they pile up their boxes and sacks and stretch burlap curtains, thus creating waist-high party-walls, each tiny partition containing a family. The morgue has become at least a kind of cattle-pen.

In each family the mother builds a fireplace out of a few stones; the children heap it with bits of firewood. Soon the copper saucepan bubbles with its few handfuls of maize; the family rug is spread with all the ceremony of laying a communion cloth. The black-eyed baby scrambles about, gurgling. The wrinkled



BRITISH AND AMERICAN SAILORS WORKING SIDE BY SIDE DOING STRETCHER WORK AT SMYRNA

The topce-shaped hat of the Britisher distinguishes him from his American fellow worker with round white cap.



Photographs by C. D. Morris

AMERICAN SAILORS TAKING REFUGEES TO A RELIEF BOAT ON A HAND CAR

This car is running on rails down Railroad Pier (see, also, illustration, page 558). It took ten hours for the refugees to pass the pier barricades, at each of which they were examined, the men of military age being manacled and deported into the interior to make roads.



Photograph by C. D. Merriam

BOATS CARRYING REFUGEES FROM THE BURNING ZONE OF SMYRNA TO A RELIEF SHIP IN THE HARBOR (SEE TEXT, PAGE 540)

grandmother hangs an image of the crucified Christ on a burlap curtain. The cattle-pen has become a home.

They may live or die, according to the typhus' lightninglike preferences; yet while they live you will find among them no mendicant whinings or supplicative palms. The children will forage for wood and for the herbs and roots which compose refugee fodder; the mother will keep the dirt floor sprinkled and do the family washing; the grandmother will lift aside the burlap cradle curtain to show you little Giorgios asleep, and with a patient smile will explain, if you ask, the mystery of how refugees exist. It is, simply, "We all help one another."

And, meanwhile, behind Greece's officially closed doors? A small country of no great natural wealth, she had just emerged from 19 years of continuous mobilization and intermittent wars, culminating in a recent defeat, only to be plunged into refugeeism on a colossal

scale. Without reference to the total results of the Exchange, Greece had received within a year of the fall of Smyrna 1,250,000 exiles. This 25 per cent leap in her population meant that to every four citizens throughout the land one homeless and usually destitute person had been added.

NO PARALLEL FOR GREECE'S FLIGHT

And what of the land itself? In Old Greece, as of 1912, more than three-fifths of the total area was uncultivated and useless. While, largely as a result of the Balkan Wars, her territory has expanded to 53,000 square miles, only one-fifth of this was under cultivation or pasture in 1923.

Because of mountains or swampy land, by far the major portion of Greece lay unredeemable or as yet unredeemed when the inrush of exiles began. She must still depend largely upon other countries for grain, and her total cereal production



WEEDING OUT MEN FOR DEPORTATION: SMYRNA



TURNED BACK

Photographs by C. D. Morris

After the fire these unfortunates, being between the age limits of 17 and 45 years, were not permitted to leave Smyrna with their families, but were sent back to the interior of Anatolia (see text, pages 530 and 540).



Photograph by Lex W. Klatts

GREEK REFUGEES FROM ASIA MINOR ARRIVING IN MITYLENE

The fertile island of Mitylene (Lesbos), the second largest in the Ægean Sea, possesses in the Gulfs of Hiero and Kalouli two of the finest harbors in the world.

for 1923 was scarcely more than one-half the amount needed.

There is no adequate parallel whereby to convey even remotely a picture of Greece's plight in 1923. One may imagine Arkansas or North Carolina, each having about the same area as Greece, as being suddenly swamped by a million and a quarter immigrants; or one may imagine the United States as being overrun by 26,000,000 destitute foreigners. In the latter instance, supposing that they arrived at the highest annual rate in our immigration history, this would take twenty years. But if, as in Greece's case, they arrived within one year—if in New York, Chicago, and San Francisco each two citizens were forced by law to shelter one refugee—the crisis of a 25 per cent increase would become apparent.

By now Athens and Saloniki were surrounded by tented plains and resembled classic engravings of besieged cities. And the besieging hosts were those of Hunger. Daily from out these canvas-covered slums, over which the Acropolis showed golden against a turquoise sky, came

women to sell their trinkets, rugs, sewing machines, until all they had brought out of Asia Minor had gone for handfuls of coarse grain and they had become recruits in the national dole-line of 800,000 people.

TYPHUS AND SMALLPOX THIN THE RANKS OF THE DESTITUTE

Then Nature's terrible correctives appeared. Instead of a birth rate, which had dropped to zero, typhus at 36 centers and smallpox at 60 centers throughout the country's 800 refugee localities yielded by January, 1923, a death rate of 1,000 daily.

To avert the horrors of a plague-swept Greece, a quarantine station for incoming refugee ships was established off the coast at Makronisi Island (see page 576) by an American organization, while other American agencies were in the field with food relief, medical assistance, and orphanage work. For by now the world had been stirred by this cataclysm of peoples, and seven American and five European organizations were cooperating variously with the Greek Government.

The Greek Government itself, up to



Photograph by C. D. Morris

ARRIVAL OF AMERICAN FLOUR AT THE QUAY IN SMYRNA TO SUCCOR THE DISTRESSED POPULATION OF THE BURNED AND FAMISHING CITY

November, 1923, when the League of Nations assumed the problem, had semiestablished 72,000 families in Macedonia, providing them with draft animals and seed grain. Meanwhile the remaining three-quarters of Greece's mushroomlike increase continued to carry on, as somehow refugees mysteriously can, by helping one another.

From being parked in tents, schools, churches, and theaters, the exiles actually advanced in some cases to constructing suburbs for themselves. At Athens, upon learning that some near-by mud flats could be squatted upon, 3,000 women, children, and old folks emerged from their parking corners in and about the Theseion and other classical ruins and swarmed off to build themselves a village (see page 572).

Now, every Anatolian born knows the use of clay, and here was plenty of it. The old folks gathered chaff, the women mixed it with the clay and cut this into bricks, the children played hod-carrier, the walls were erected on the refugee principle of helping one another, and the baking sun did the rest (see page 583).

Soon miniature shops were selling nuts

and dried figs, cobblers were working at rough benches, and girls were knotting and clipping at rug-frames. In a few short months this trek from classic temples to mud tenements was accomplished, while from afar there gazed down upon this squalid hut settlement the imperishable lineaments of the Parthenon.

ORDERLY EXCHANGE WELCOMED BY BOTH COUNTRIES

And now Lausanne came to the relief with a document, signed on January 30, 1923, entitled, "A Convention concerning the exchange of Greek and Turkish populations." It had come about by Greece's insistence that Turkey must accept the 450,000 Moslems resident in the Hellenic Kingdom in order to make room for the former's million or more refugees.

Further argument stressed the point that the hardships attendant upon such an exchange would be far less than would result in the way of postwar bitterness against the respective minorities if nothing were done.

Greece welcomed the Exchange as an economic necessity,



Photograph by C. D. Morris

GHOULS FISHING FOR BODIES AFTER THE SMYRNA DISASTER (SEE TEXT, PAGE 539)

Due to panic and enormous pressure, many people on the quay were either pushed overboard or committed suicide. Hundreds of corpses could be seen through the remarkably clear water of Smyrna Gulf, and youthful Turks fished them up with pieces of wire, for the purpose of loot.



© E. J. Hardcastle

RUINED SMYRNA: A PHOTOGRAPH TAKEN ONE YEAR AFTER THE DISASTER

Under the Turkish occupation of Smyrna no cameras were permitted to be carried ashore; hence the photographer made the snapshot from shipboard.



Photograph by C. D. Morris

THE TYPE OF FIRE-FIGHTING EQUIPMENT WHICH WAS CALLED UPON TO COPE WITH
THE SMYRNA CONFLAGRATION

This is the kind of outfit which may be seen in Constantinople to-day.



Photograph by Lex W. Klatts

REFUGEES ARRIVING AT PIRÆUS, PORT OF ATHENS, FROM SMYRNA



Photograph by C. D. Morris

A GREEK GRANDMOTHER AND BABY

A familiar sight among the transferred peoples was that of the old grandmother looking after the babies, the parents having died either in the Smyrna fire or from hardships connected with the long trip through Asia Minor.

Turkey also welcomed the Exchange as an economic necessity, though in quite a different sense. For two and a half centuries her Crescent had been diminishing toward eclipse. During the last hundred years she had relinquished rule over the peoples of twenty wide-flung territories. Within the last thirty years her area had shrunk from 1,500,000 to less than 350,000 square miles, and her population from 38,750,000 to 5,000,000. Yet she favored, and had in great part enforced, the complete withdrawal of non-Moslems from Asia Minor. Why was this?

It meant that the old régime, whereby foreign races had lived within her borders under religious toleration, accumulating much of the wealth, yet never becoming part of the social organism, had failed. So Turkey would clean house. She would apply the radical remedy of eliminating several millions, representing her wealth and commerce, and would build up from her own people corresponding elements wherewith to form a Turkish middle class

as the center of a homogeneous Turkish nation.

In this sense the Exchange was for her, as for Greece, an economic necessity. Here is an historical milestone on Turkey-in-Europe's long road of 1453-1923.

No less is the Exchange Convention an international milestone. It has its predecessors in population exchanges between the Turks and Bulgars in 1913, and between the Bulgars and Greeks in 1919, but differs from these in being compulsory and, moreover, in being conducted under the auspices of the League of Nations. Its essential clauses provide:

As from May 1st, 1923, a compulsory exchange of Turkish nationals of the Greek Orthodox religion, with Greek nationals of the Moslem religion--this to be retroactively inclusive of all Greeks and Moslems who had already emigrated at any time since October, 1912.

Movable property in their homes, mosques, churches, schools, convents or hospitals to be taken away tax-free by the emigrants; their immovable and abandoned property to be inventoried, valued and liquidated by the Mixed Commis-



Photograph by Len W. Klutts

ARRIVAL OF REFUGEES AT SALONIKI AFTER THE SMYRNA FIRE

Four and a half months after the Smyrna holocaust there were 110,000 refugees in Saloniki, thus nearly doubling its population. There was a crisscross movement of refugees here, one group coming from western Thrace, the other from Anatolia (see page 587, and text, page 590).



Photograph by C. D. Morris

SAMSUN REFUGEES AT PATRAS, GREECE, STARTING FOR THE INTERIOR

Many of these Asia Minor refugees from the Black Sea port have found work among the currant vineyards and olive groves of the Peloponnesus, of which Patras, fourth city of Greece, is the chief seaport.



Photograph by G. L. Berry

REFUGEES FROM ASIA MINOR AND THRACE AT THE PORTALS OF THE OLD PALACE;
ATHENS

Those who were registered received here, prior to January 1, 1923, the government's daily dole of two drachmas (about three cents).

sion—this liquidation process to be retroactive in respect to the property of Greeks and Moslems who had already emigrated at any time since October, 1912.

The Mixed Commission to consist of two Turks, two Greeks, and three nationals of countries neutral in the World War, the three to be chosen by the League of Nations;

Each emigrant to receive, in principle, property equi-valuable to that relinquished; the total value of relinquished properties to form government debts as between Turkey and Greece; the creditor country—a final balance having been struck—to receive from the other a settlement in part cash, in part interest-bearing certificates;

No obstacles to be raised or adverse pressure exercised or taxes imposed in respect to the emigrant; exempted peoples to be free to emigrate if they so wish;

Exempted peoples to include (a) Greeks established at Constantinople prior to October 30th, 1918, and (b) the Moslem inhabitants of West Thrace.

The exemption clause, which renders the Exchange incomplete to the extent of 635,000 people, sprang out of the liquida-

tion difficulties which would be involved in the case of the Constantinople Greeks, whose abandoned properties would have amounted to many millions of dollars; hence the compromise permitting these and the West Thracian Moslems to remain undisturbed.

In practice, the temporary crisis which arose from differing constructions of the phrase "established at Constantinople" seems on the way of solution by the voluntary departure of large numbers of Greeks from the Turkish capital.

STROKE OF THE PEN EXILES 3,000,000
PEOPLE

It is safe to say that history does not contain a more extraordinary document. Never before in the world's long pageant of folk-wanderings have 2,000,000 people—and certainly no less than 3,000,000 if the retroactive clause is possible of complete application—been exiled and re-adopted by a stroke of the pen.



Photograph by Harry Drucker.

A REFUGEE WOMAN AT HER MAKESHIFT DRESSING TABLE: ATHENS

Note the whitewashed "balustrade" and the scrubbing brush, which now does duty as a hairbrush.

Even if regarded as a voluntary trek instead of a compulsory exchange, the movement would be without parallel in the history of emigration. The Klondike gold-rush peaked to only 22,000 in the year 1900, while that in California drew no more than 370,000 thither in 12 years. Dealing with immigrant masses of about 1,500,000 each, the Irish movement took 7 years, the Polish movement 10 years, and the Jewish movement 10 years, to land that number of their respective nationals in the United States. The highest human tide that ever reached our shores in one year (1907) was less than the Greek-Turkish shift by 750,000 people.

One might perhaps add that history has never produced a document more difficult of execution. It was to lessen these difficulties that exchangeability was based on religion and not race.

Due to five centuries of Turkish domination in Greece, the complexities in determining an individual's racial status are often such as would make a census taker weep. Here, for example, is a little prob-

lem which the Red Queen would have relished putting to Alice:

If certain Moslems in the Province of Epirus were descended from Greek Epirotes; if they embraced Islam in the 17th century; if they speak Albanian, yet are politically sympathetic toward Greece except in Albanian-Turkish difficulties, when they invariably side with the Turks, then what's the answer?

We would not blame anyone who might reply, with Alicelike meekness, "I'm sure I don't know."

Of the machinery which was to handle these 2,000,000 people, one arm was the Mixed Commission, with 11 subcommissions presided over by 4 Danes, 3 Hollanders, 2 Swiss, 1 Norwegian, and 1 Swede; the Commission to sit at Constantinople, its subcommissions to function in Macedonia, West Thrace, Crete, and Asia Minor, in their work of handling 450,000 Moslems and the 150,000 Greeks still left in Anatolia.

The other arm, the Refugee Settlement Commission, with representatives at Saloniki and Athens, was charged with



CROWDS STUDYING THE BULLETIN BOARDS POSTED ON THE PALACE WALLS; ATHENS. Here distracted relatives sought for news of their loved ones, from whom they had been separated at the time of the debacle from Smyrna (see, also, illustration below).



Photographs by C. D. Murrin

SEEKING THE NAMES OF HER LOST LOVED ONES: ATHENS

As a result of the destruction of Smyrna and the confusion of moving vast masses of people from Anatolia to Greece, a great number of families became separated. These bulletins, covering the lost and found, were posted daily at Athens.



Photograph by C. D. Morris

REFUGEES' TENTS IN THE FOREGROUND OF THE THESEION (SEE TEXT, PAGE 564): ATHENS

This magnificent temple, completed probably during the fifth century B. C., is the best-preserved edifice of the ancient Greek world.

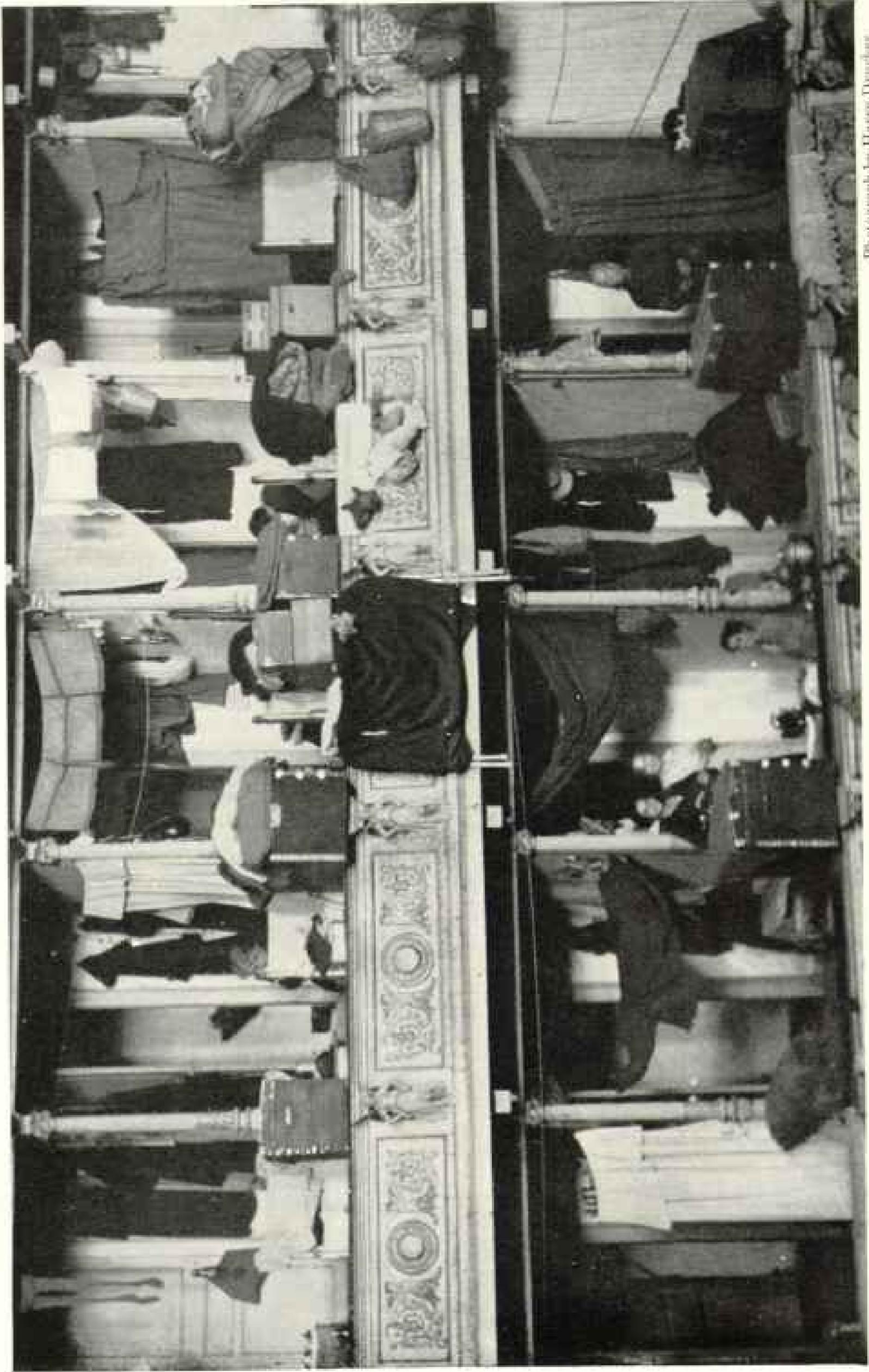
settling all Greek refugees, including the 150,000 yet to arrive, upon lands assigned by the Greek Government, or otherwise in productive occupation.

HARMONY PREVAILS DURING FIRST EXCHANGE

The Lausanne Treaty was not ratified until July, 1923. Two months later, with the official machinery not yet functioning and with a general cessation of agriculture pending the Exchange, both interested governments welcomed initiative action by Americans. During the week of October 15-21, under committees composed of Greek and Turkish officials, with field workers of the Near East Relief acting as neutral members, 8,000 Moslems were evacuated from Mitylene to Aivali, in Asia Minor, in exchange for the same number of Greeks, transported in Greek vessels from Samsun to Saloniki.

To everyone's surprise, this opening of the Exchange was effected with perfect harmony. The Moslem families, with their flocks and household goods, trekked to Mitylene's various ports, where small Turkish steamers were waiting. Taxes and passports were waived; minor offenders were released from prison; the women were even permitted to take with them their strings of gold coins (see Color Plate XV).

Believers in a traditional Hellenophobia-Turkophobia would have stared at the sight of the Mitylene Greeks spreading farewell meals for their departing



Photograph by Harry Doudart

THE GOLDEN HORSESHOE AT THE ROYAL OPERA HOUSE IN ATHENS AFTER THE SMYRNA DISASTER.

The "box-holders" are refugees, who have set up housekeeping with all the goods and chattels which they could bring with them from the stricken metropolis of Asia Minor. Each box accommodates a family. (See text, page 564).



Photograph by C. D. Morris

HER PLAYFELLOW IS ONE OF THE PALACE GUARDS IN ATHENS
This is one of the *Evzones*, highland troops of Greece, accounted the bravest among her soldiers.

neighbors, and later accompanying them to the quay, where Christians and Mohammedans, who for a lifetime had been plowing adjacently and even sharing occasional backgammon games at village cafés, embraced and parted with tears. Then, seated on their heaped-up baggage, with their flocks around them—the women weeping, the children hugging their pets, the graybearded *babas* all dignity, as is their wont—the Mitylene Moslems set forth for unknown Turkey.

At Aivali, their "Ellis Island" of entry, interpreters speaking the familiar Greek and the unfamiliar Turkish installed them temporarily in waiting houses. Later

they were distributed throughout the country according to trades and subject to a Turkish regulation limiting any village's increase, under the Exchange, to one-fifth of the population. While the family unit was preserved, the Mitylene communities were dissolved forever.

MOSLEMS CAMP FOR TWO MONTHS AT SALONIKI

In November the Refugee Settlement Commission began its program in Greece. A month later the Mixed Commission's branches were preparing lists of exchangeable Moslems, filling out their declarations of property values, and supervising their transportation; for by agreement, in consequence of Greece's glut of refugees, evacuation of the Moslems was to precede by six months that of the Anatolian Greeks.

The principle of first-come-first-served did not advantage the initial rush of Macedonian Moslems for the seaboard. Surrounded by their household goods, they camped on Saloniki's bleak quay for two months while waiting for the Turkish exchange ships to arrive. There were no schedules, and delays of a mere month or so counted as nothing on these voyages into the unknown.

Not until Greece's shores had faded into a blue blur would the skipper open his sealed orders and announce the port of destination. It might be anywhere along 2,000 miles of Asian coast. Whether one liked that particular port or

not was of no consequence; and while one's passage was free, there were no return tickets on this voyage, which so aptly realized the poet's line, "What, without asking, whither hurried hence?"

Throughout a year Saloniki's long quay beheld the mournful pageant of departing Moslems. Had the shade of Mr. Gladstone been present to witness his fiat of half a century ago being realized, he must have softened at that picture of dignity in misfortune, the Turks going "out of Europe, bag and baggage."

Notwithstanding their new government's preparations to receive and care for them, many of the Moslems arriving in Asia Minor suffered even more than the exchanged Greeks. Some of the former found themselves in a war-devastated region, others in villages whose best houses had been preempted and whose poorer ones had been dismembered for firewood by those who had remained behind after the flight of the Greeks.

Unreckoned tens of thousands died by malaria or exposure, while multitudes of disillusioned families declined the second-hand pick of farms offered them and became wanderers. To the question, "Where are you bound for?" addressed to ox-drawn caravans roaming through the land, the answer would be, "We are looking for a tobacco field as good as ours at Drama," or, perhaps, "an olive grove like our old one on Mitylena."



Photograph by S. R. Vinton

A GREEK MOTHER AND HER BABY

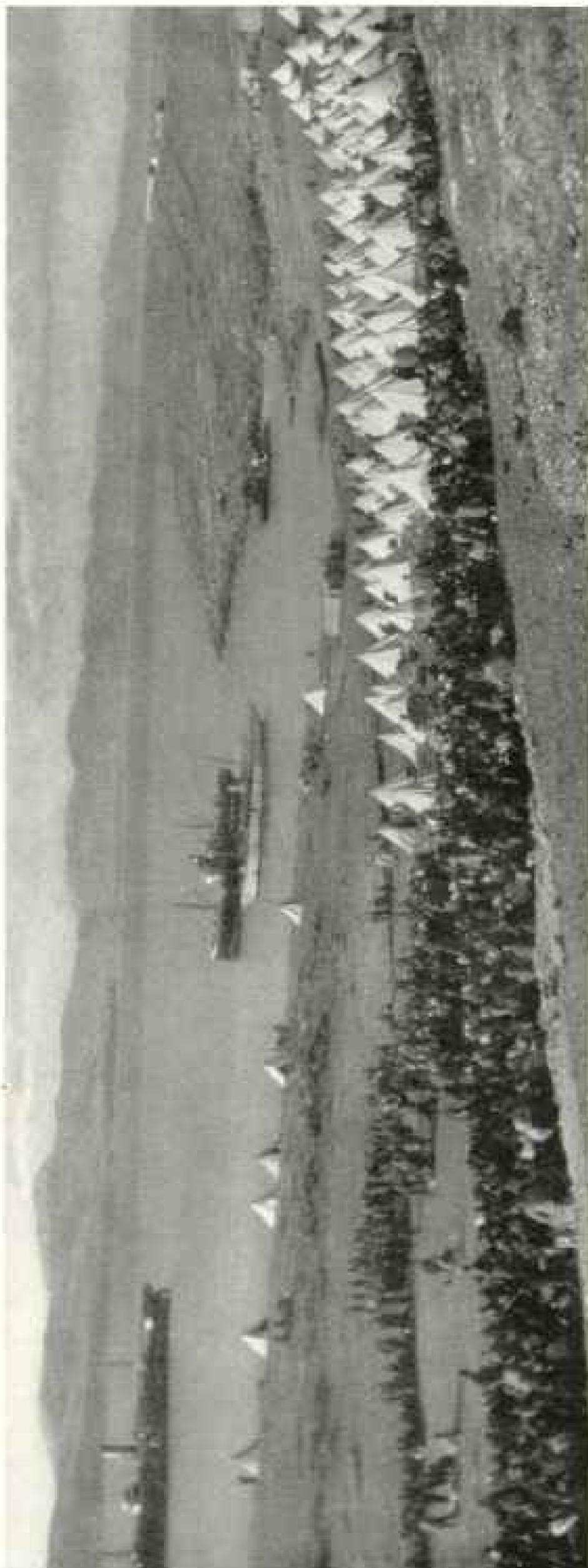
Among the Macedonian refugees, hammocks were very commonly used instead of cribs.

By May 1, 1924, 250,000 Moslems had been evacuated; then the westbound flow of 150,000 Greeks set in, these moving simultaneously with the remaining 200,000 Moslems until, eight months later, the Exchange was complete.

LIFE MUST START AFRESH FOR 600,000

In this mechanized exiling of 600,000 souls the individual heartbreak was lost in the all-embracing swirl of things. Only here and there a glance, a gesture, a fragment of talk, revealed the undercurrents of this great Christian-Moslem drama.

Many a grayhaired shopkeeper beheld his lifelong customers dispersed, himself



Photograph by C. D. Morris

THE AMERICAN QUARANTINE STATION ON MAKRONESI ISLAND, GREECE, FEEDING 6,000 GREEK REFUGEES FROM TRIZONIA, BLACK SEA PORT, WHO HAVE JUST ARRIVED BY STEAMER. (SEE TEXT, PAGE 563)

starting life afresh. And the old and honored public scribe—what use now his little writing box and literary flourishes, since his mother tongue would be as naught in yonder land of an alien speech?

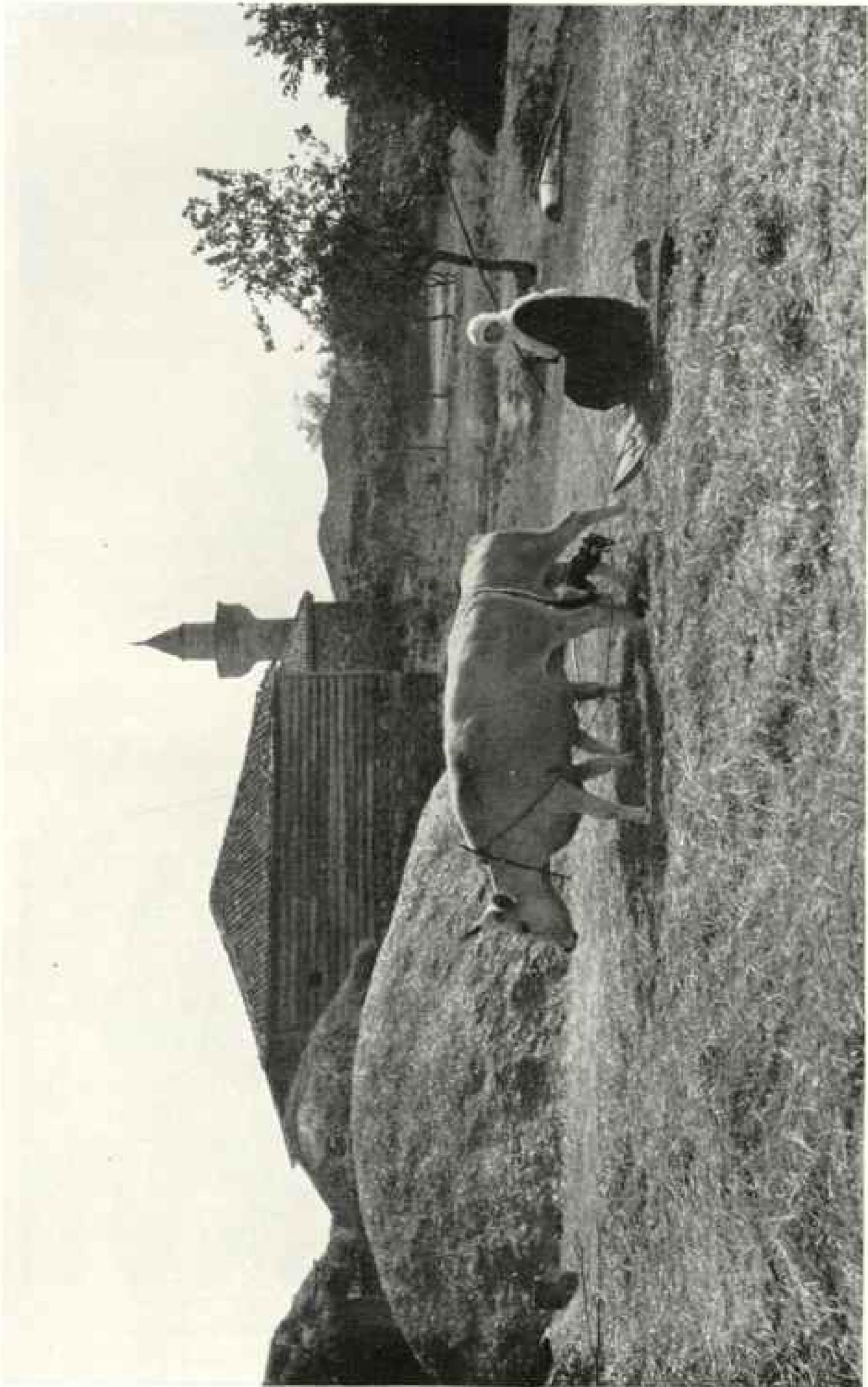
Many a village Evangeline and her parted lover would vainly seek each other in Greece's mountain-barr'd valleys or in widespread Anatolia.

Here a child sobbed for a lost pet, and there a grandmother wept at the thought of some tiny hill-topping cemetery henceforth abandoned to weeds and forgetfulness.

And few were the congregations who listened dry-eyed to their pastor's last sermon, or who without deep emotion fell in line outside the door of their dismantled church to follow in the wake of priest and sacred emblems down to the waiting ships.

COMMISSION IS ADOPTED
FATHER OF 1,136,600
IMMIGRANTS

Striking a fresh balance sheet early in 1924 and including therein the exchanged Greeks still to come, the Refugee Settlement Commission found itself to be the officially adoptive father of 1,136,600 immigrants, of whom three-fifths were agriculturists. Against this tremendous debit the Commission held in Macedonia and West Thrace state-transferred lands totaling 1,250,000 acres, for colonization purposes and as loan guarantees.



Photograph by C. D. Morris

A WOMAN OF THE ENVIRONS OF CONSTANTINOPLE THRESHING GRAIN

When news spread of the withdrawal of Greek troops from the "backyard" of Constantinople (Thrace), Greek farmers were seized with panic and fled precipitately, leaving their ripening harvests ungathered in the fields (see text, page 540).



Photograph by Thomas Mills

THE GUARDED BREAD LINE, SOURCE OF SUPPLY IN CONSTANTINOPLE



Photograph by S. R. Vinton

REFUGEES HOLDING UP TICKETS ENTITLING THEM TO PARTICIPATE IN THE
DISTRIBUTION OF OLD CLOTHES

A scene at the headquarters of one of the American relief organizations at Saloniki,



Photograph by C. D. Morris

A STREET SCENE IN A THRACIAN VILLAGE

According to a Moslem superstition, oxhorns bring good luck (see the upper right corner of the illustration).

These were pledged as against temporary financial advances until the Refugee Settlement Loan, subscribed at Athens, London, and New York, placed \$50,000,000 at the Commission's disposal.

If Hellas could call back her ancient gods and press them into service, Hercules of the Twelve Labors would certainly balk at the Commission's yet-unfinished task of integrating a million or more of Greece's distant kinsfolk into her economic fabric. Colonization had to start from the ground up, with surveying and motor plowing, for neither land maps nor boundaries existed in Macedonia, and the soil had been so long untilled that animal power was insufficient to break it. Whether it was a question of houses, plows, draft animals, or grain, the Commission, when supplying its gigantic fam-

ily, had to think in terms of hundreds of thousands. Often when houses were not forthcoming from abandoned Moslem properties, the colonists, as artisans on the Commission's payroll, erected their own dwellings out of stone, brick, or mud-plastered wattles, according to what the land offered (see page 583).

The undrained, mosquito-breeding marshes brought malaria, and the Gargantuan family had to be dosed with 15 tons of quinine. Drought came, and 50,000 cultivators must be rehabilitated with a \$1,000,000 worth of grain and forage. Any misfortune always struck wholesale—a thousandfold magnification of how measles will run through an entire household of children.

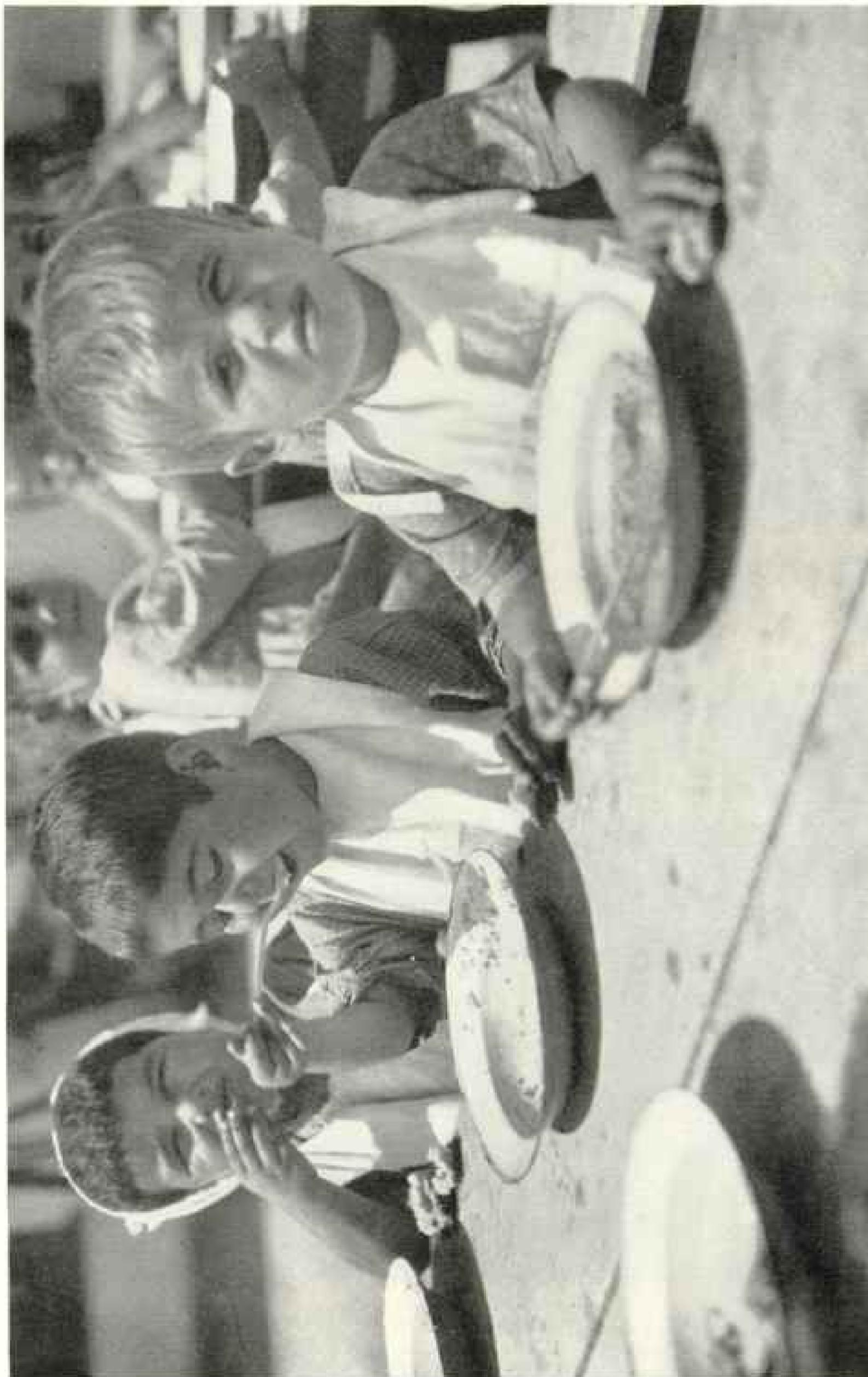
Meantime the Commission's civic work of settling the city dwellers, on the basis



Photograph by C. D. Morris.

"BREAD! BREAD! BREAD!"

These are Greek civilian prisoners, released by the Turks after more than a year. During the war there had been taking of hostages on a large scale by both sides. The situation remained at a deadlock for a year after hostilities had been concluded. Then American organizations undertook an unofficial negotiation of exchange of prisoners, this being afterward followed by the appointment of committees by the League of Nations for that purpose (see text, page 504).



Photograph by Harry Dreyfus

READY FOR A SECOND HELPING

Refugee children on the Island of Syra, the commercial center of the Cyclades. The capital of the island, Hermopolis, owes its founding to an earlier influx of refugees—those from Chios and Ipsara, who settled here after the devastation of their island homes, in 1821-22.



Photograph by Carrie E. Mills

A CARAVAN OF CHRISTIAN REFUGEES TRAVELING TO A RELIEF FARM NEAR RODOSTO



Photograph by S. R. Vinton

A CAMP SCHOOL FOR CHILDREN OF REFUGEES AT SALONIKI

The Anatolian Greeks, exiles for many centuries from their native land, spoke a tongue different from that spoken by the Greek proper. Therefore the first duty of the Greek Government was to teach Anatolian Greeks to speak Greek.



Photograph by H. C. Jaquith.

THE TYPE OF REFUGEE HOMES BUILT BY THE GREEK GOVERNMENT IN THRACE.



Photograph by C. D. Morris.

CHILDREN MAKING BRICKS AT BODOSTO, ON THE SEA OF MARMORA.

Immediately upon emerging from tent life (see illustration, page 586), the transferred peoples began to utilize the local clay and build themselves houses (see text, page 594).



Photograph by C. D. Morris

AN OPEN-AIR BARBER SHOP FOR REFUGEES IN RODOSTO

of two rooms to a family, went on in those stucco suburbs, which eventually will change the appearance of every major city in Greece. The urbans, with their racial instinct for trade, performed wonders in the way of self-rehabilitation, and before long they were paying nominal room rentals and bidding competitively on shop rentals, with the Commission as landlord.

The Commission will continue in its part-paternal, part-directorial, part-creditor function—accepting debit slips against agricultural supplies, occasionally financing some new trade, and always with permanent colonization as its goal—until such a time as the final settling up occurs between the two governments, several million people, and itself, and the books of the Exchange are closed with a red line.

GREECE, WITH ONE-FIFTH TURKEY'S AREA,
HAS 1,500,000 MORE PEOPLE

Meanwhile, one may perhaps strike a trial balance of results. Turkey, now about one-fourth larger than Texas, is left with a population of 5,000,000, of whom four-fifths are Turks. Her natu-

rally rich, but undeveloped, territory contains only 15 people to the square mile, yet at last she has a national homogeneity upon which to base her future. Except for the Constantinople Greeks, whose fate lies with the League of Nations, her religious and racial minority problems have been wiped out; she herself has sponged the slate.

Greece, with less than one-fifth of Turkey's area, emerges with a population exceeding the latter's for the first time by 1,500,000 people and averaging 123 to the square mile.

HISTORY'S GREATEST TREK HAS COST
300,000 LIVES

If the last traces of classic Ionia have vanished from Asia, the motherland, in receiving back the descendants of her Pilgrim Fathers after three thousand years, acquires a sturdy, invigorating stock of grain producers and, moreover, of industry transplanters, who have brought with them the crafts of silk-weaving, rug-making, and ceramics.

As to the cost of history's greatest trek, conservative estimates place it at 300,000 lives lost by disease and expo-



COPYING A RUG DESIGN

Among other results of the transfer of Greeks from Asia Minor to Greece is that the traditional arts and crafts of these people, such as rug-weaving, are now taking root for the first time on the mainland of Greece.



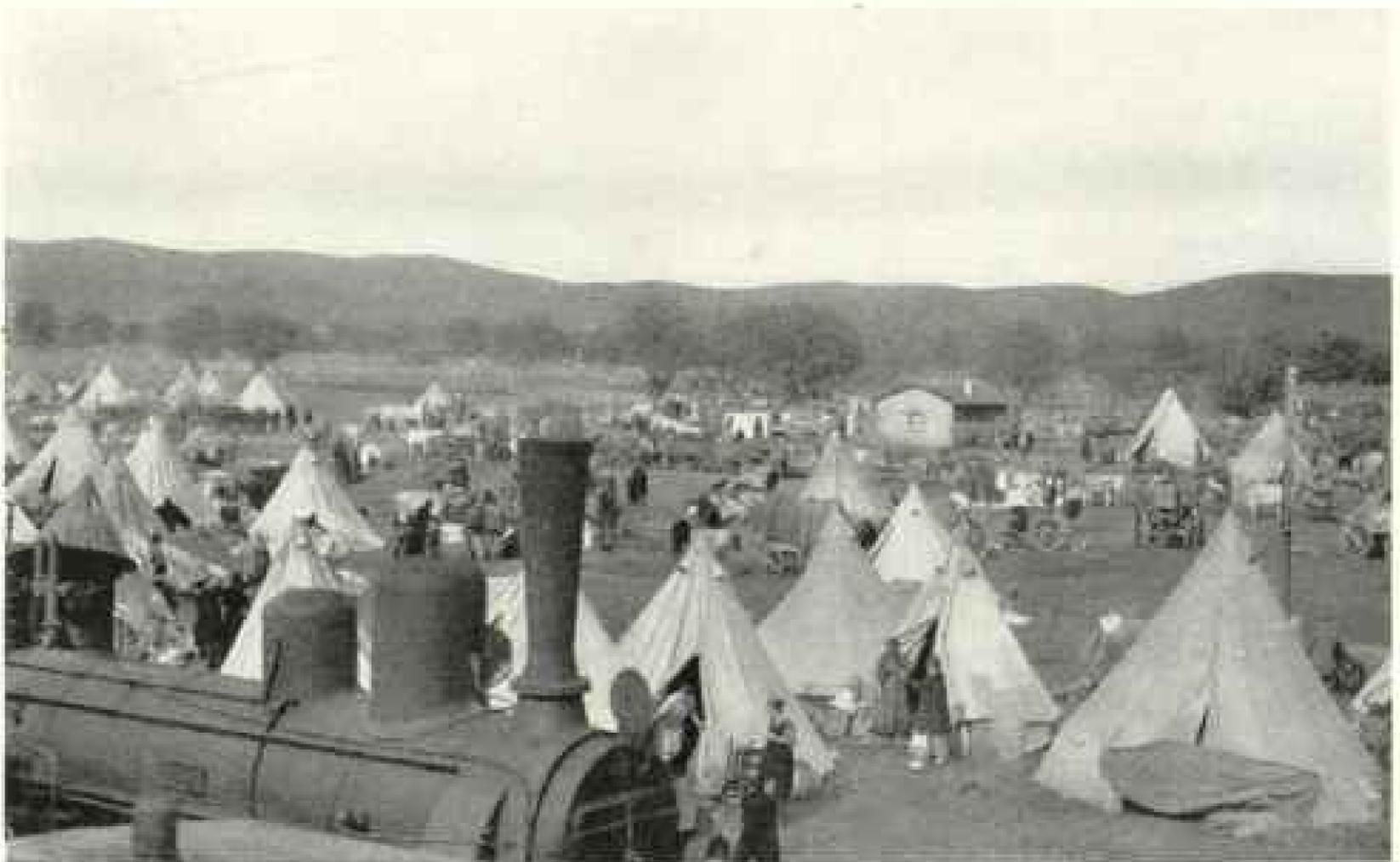
Photographs by Harry Drucker

GREEK GIRLS WEAVING RUGS

This is one of the trades that is now being imported into Greece from Asia Minor as a result of the transfer of populations (see text, pages 564 and 584).



REFUGEES CROSSING THE MARITZA ON A RAFT PULLED BY ROPES



Photographs by Frank America

A TENTED CITY ON THE MARITZA RIVER

Here tens of thousands of Greeks camped after having fled from Thrace before the incoming Turks (see text, page 557).



HOUSEKEEPING IN THE REFUGEE BARBACKS AT SALONIKI



Photographs by S. R. Vinton

INTERIOR OF A GREEK REFUGEE CAMP IN MACEDONIA

The refugees themselves partition off the extremely limited space by building low walls around each family (see, also, text, page 550).



Photograph by Lea W. Klitta

THE LOSS OF THREE SONS IS WRITTEN IN HIS FURROWED FACE

He is one of the deportees from Greece, his former home being Mytilene, his present abiding place Adalia.



Photograph by S. B. Vlastou

AN ANATOLIAN GREEK REFUGEE GIRL

Her eyes show that she has seen horrors more awful than even the imagination of ancient Greek dramatists could conjure up.



Photograph by Frank Armetino

THEY HAVE NOT WHERE TO LAY THEIR HEADS

These exiled mothers and their babies are Anatolian Greeks. The photograph of the mother at the left was taken before her departure from eastern Asia Minor; those at the right, after their arrival in Thrace.

sure and at an expenditure mounting beyond \$100,000,000.

By the winter of 1924 the human tidal waves of two years' duration had subsided. One could walk along the Near East's sea frontages, as after some great storm, and note the changes wrought. There was Saloniki, its quay lined with crescent-curved sailing craft, archaic as Troy, with their final quotas of exchangees; the last-arriving Greek boys staring broadly at the last-departing Moslem boys, speech between them being impossible, since the Greeks spoke only Turkish and the Turks spoke only Greek; the ramshackle, burned-out city already sprouting into cement suburbs for housing 25,000 Greeks, and the business-as-usual proclivities of Giorgios or Demetrius being everywhere visible, even though it be only nuts and oranges atop a packing box on the dingy midway of tented refugeedom.

And there was Kavala, its tangled streets haunted by the white ghosts of deserted minarets; its tobacco warehouses unloading their glut of temporarily sheltered immigrants in exchange for the crop of 40,000 farmer colonists. The latest arrivals camped in wild valleys pierced by the ancient Roman road. Here, with tents, bedding, grain, frost, and fresh air as the extent of their mixed blessings, they seemed marvelously cheery and progressive, with their bake ovens consisting of rock-paved holes in the hillside, a grocery store created out of mud-plastered reeds and a case of spaghetti, and even a hand-carpentered bench with a coffee machine and a bottle of *douzicko* on top of a dry-goods box, as the makings of an embryo café.

CONSTANTINOPLE, STILL GLORIOUS BUT
FADED

And Constantinople—still glorious, yet a bit faded and shorn; her harbor almost

deserted, her Greek quarter fast diminishing, her foreign embassies preparing for transference to Angora, and, above all, her Sultanate and Caliphate abolished by Republicanism, and her last royal seraglio gone, like the poisoned cup and secret bowstring, down the dusty centuries. For so long the peerless mistress of conquerors and poets, to-day she seems wondering if she hadn't better remove the rouge, let out the lacings, and grow old gracefully into a museum.

And Athens—somewhat out at the heels from financial overstrain, somewhat bare, as after the passage of locusts; her port swarming with commerce as are her suburbs with 60,000 immigrant citizens housed in stucco settlements; her English poet sympathizer memorialized in the Byron Settlement, where Missolonghi Square leads one to Anatolian Greeks weaving in Tom Moore Street or rug-knotting in Maid of Athens Street; her sky-framed Parthenon looking down on these by-products of the 1922-1924 drama, a drama so strange, so moving, that only Greece's classic poets could have interpreted it—Sophocles, perhaps, querying the enigma of human suffering in a tragedy called "The Exchanged."

The solution to that enigma, as it relates to the Exchange, was, perhaps, personified in an ancient, grizzled, square-capped Greek fisherman who knelt one morning on the shore of a little Peloponnesian harbor, painting a name on the stern of a boat. He had abandoned his own craft in some Asian village during the Exchange, and a storm had beached this rudderless, fish-smearred derelict near his hut. He had wiped out the old bloodstains and refitted her for his fresh start in life.

The name that he painted, while kneeling there on the seashore under the Ægean's glowing dawn, was *The New Hope*.

Notice of change of address of your GEOGRAPHIC MAGAZINE should be received in the office of the National Geographic Society by the first of the month to affect the following month's issue. For instance, if you desire the address changed for your January number, the Society should be notified of your new address not later than December first.

NATIONAL GEOGRAPHIC SOCIETY

GEOGRAPHIC ADMINISTRATION BUILDINGS

SIXTEENTH AND M STREETS NORTHWEST, WASHINGTON, D. C.

GILBERT GROSVENOR, President
JOHN OLIVER LA GORCE, Vice-President
JOHN JOY EDSON, Treasurer
BOYD TAYLOR, Assistant Treasurer
HENRY WHITE, Vice-President
O. P. AUSTIN, Secretary
GEO. W. HUTCHISON, Associate Secretary
EDWIN P. GROSVENOR, General Counsel
FREDERICK V. COVILLE, Chairman Committee on Research

EXECUTIVE STAFF OF THE NATIONAL GEOGRAPHIC MAGAZINE

GILBERT GROSVENOR, EDITOR
JOHN OLIVER LA GORCE, Associate Editor
WILLIAM J. SHOWALTER, Assistant Editor
RALPH A. GRAVES, Assistant Editor
FRANKLIN L. FISHER, Chief of Illustrations Division
J. R. HILDEBRAND, Chief of School Service

BOARD OF TRUSTEES

CHARLES I. BELL President American Security and Trust Company	WILLIAM HOWARD TAFT Chief Justice of the United States	CHARLES G. DAWES Vice-President of the United States
JOHN JOY EDSON Chairman of the Board, Washington Loan & Trust Company	GRANT SQUIRES Military Intelligence Division, General Staff, New York	JOHN BARTON PAYNE Chairman American Red Cross
DAVID FAIRCHILD In charge of Agricultural Explorations, U. S. Department of Agriculture	C. M. CHESTER Rear Admiral U. S. Navy, Formerly Supt. U. S. Naval Observatory	A. W. GREELY Arctic Explorer, Major General U. S. Army
C. HART MERRIAM Member National Academy of Sciences	J. HOWARD CORE Prof. Emeritus Mathematics, The George Washington University	GILBERT GROSVENOR Editor of National Geographic Magazine
O. P. AUSTIN Statistician	FREDERICK V. COVILLE Botanist, U. S. Department of Agriculture	GEORGE OTIS SMITH Director U. S. Geological Survey
GEORGE R. PUTNAM Commissioner U. S. Bureau of Lighthouses	RUDOLPH KAUFFMANN Managing Editor The Evening Star	O. H. TYTSMANN Formerly Superintendent U. S. Coast and Geodetic Survey
GEORGE SHIRAS, Jr. Formerly Member U. S. Congress, Faunal Naturalist, and Wild-game Photographer	JOHN FOOTE, M. D. Professor of Pediatrics, Georgetown University	HENRY WHITE Member American Peace Commission, Formerly U. S. Ambassador to France, Italy, etc.
E. LESTER JONES Director U. S. Coast and Geodetic Survey	JOHN OLIVER LA GORCE Associate Editor National Geographic Magazine	STEPHEN T. MATHER Director National Park Service

ORGANIZED FOR "THE INCREASE AND DIFFUSION OF GEOGRAPHIC KNOWLEDGE"

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

ARTICLES and photographs are desired. For material which the Magazine can use, generous remuneration is made. Contributions should be accompanied by an addressed return envelope and postage.

IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, sprouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over \$50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their

discoveries form a large share of our knowledge of a civilization waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole.

NOT long ago The Society granted \$25,000, and in addition \$75,000 was given by individual members to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people.

THE Society is conducting extensive explorations and excavations in northwestern New Mexico, which was one of the most densely populated areas in North America before Columbus came, a region where prehistoric peoples lived in vast communal dwellings and whose customs, ceremonies, and name have been engulfed in an oblivion.

THE Society also is maintaining expeditions in the unknown area adjacent to the San Juan River in southeastern Utah, and in Yunnan, Kweichow, and Kansu, China—all regions virgin to scientific study.

This Accurate Watch Keeps America's Crack Trains on Schedule

Why the fastest trains in the world
are timed with this watch.

"WHAT TIME HAVE YOU?" Ask this question of a group of business men. Out come their watches. One watch is three minutes slow, another five minutes fast, and so on. But ask this question of a group of railroad men. If there is any variation it is usually only a matter of seconds.

Yet it is so very easy for every business and professional man to have a watch as unfailingly accurate as the railroad man's. When you buy a watch get the make he uses. For thirty years there has been one watch that has been generally favored on America's railroads, a watch that has earned the unique distinction of being called "The Railroad Timekeeper of America."

This watch of accuracy fame is the Hamilton. It rides in cab and coach of such famous fliers as the Twentieth Century, the California Limited, the Broadway Limited and the Olympian. When you buy a Hamilton, accuracy is assured.

The secret of Hamilton's accuracy is capacity to take infinite pains. With us every watch is an individual piece of fine mechanism, tested and re-tested until final accuracy is obtained.

No Hamilton leaves our factory until it has proved itself worthy of the Hamilton name, and is ready to serve you as an accurate timekeeper. This insures the quality of the Hamilton Watch that you pur-



The watch above is the new Frodsham design. Hamilton Watches may be had in yellow, white or green gold—*top or filled, plain or engraved.* Prices \$48 to \$250. You can choose from a wide variety of cases and dials.



The Twentieth Century Limited speeding along the shores of the Hudson River. This is one of the famous fliers timed by the Hamilton. (Picture reproduced from an oil painting, copyright, 1923, by the New York Central Railroad Co.)



Above is the new woman's Timotea model wrist watch. *Milady's Hamilton comes in silk ribbon models, detachable bracelet models and strap models. Cases are plain or engraved in yellow, white or green gold, top and filled.* Prices \$46, \$48, and \$60.

chase and enables us to give a broad guarantee of satisfaction.

A Hamilton Watch to suit your individual preference may be selected from a number of beautiful cases and dials. Some are simple, graceful, and chaste. Some are beautifully engraved and ornamented. All have an intrinsic beauty that will keep them fashionable after years of service.

Ask your jeweler to show you a Hamilton today. He can show you Hamilton pocket and strap watches for men and charming wrist watches for women. Send for a copy of our new illustrated booklet, "The Timekeeper." Address Dept. 1-C1, Hamilton Watch Company, on the Lincoln Highway, Lancaster, Pa., U.S.A.

Hamilton Watch

The Watch of Railroad Accuracy

The New Cadillac Emerges Triumphant in Every Contrast

Paraphrasing Kipling:—"A Six is a Six and an Eight is an Eight, and never these twain shall meet."

You cannot get Six riding and driving qualities in a Four; nor Eight riding and driving qualities in a Six.

Nor, by the same token, can you secure Cadillac Eight riding and driving qualities in any other car but the new 90-degree Cadillac.

Is this mere say-so or braggadocio?

As you well know, Cadillac has never indulged in either.

The evidence is overwhelmingly yours whenever you care to make comparison.

Whether you drive the new Cadillac first and the others afterward, or vice versa, is of little consequence.

The contrast in favor of the new Cadillac will be equally striking in either case.

Standard Line

Five-Passenger Brougham, \$2995; Two-Passenger Coupe, \$3045; Four-Passenger Victoria, \$3095; Five-Passenger Sedan, \$3195; Seven-Passenger Sedan, \$3295; Seven-Passenger Imperial, \$3435.

Custom Line

Roadster, \$3250; Touring Car, \$3250; Phaeton, \$3350; Five-Passenger Coupe, \$4300; Five-Passenger Sedan, \$4450; Seven-Passenger Suburban, \$4285; Seven-Passenger Imperial, \$4485.

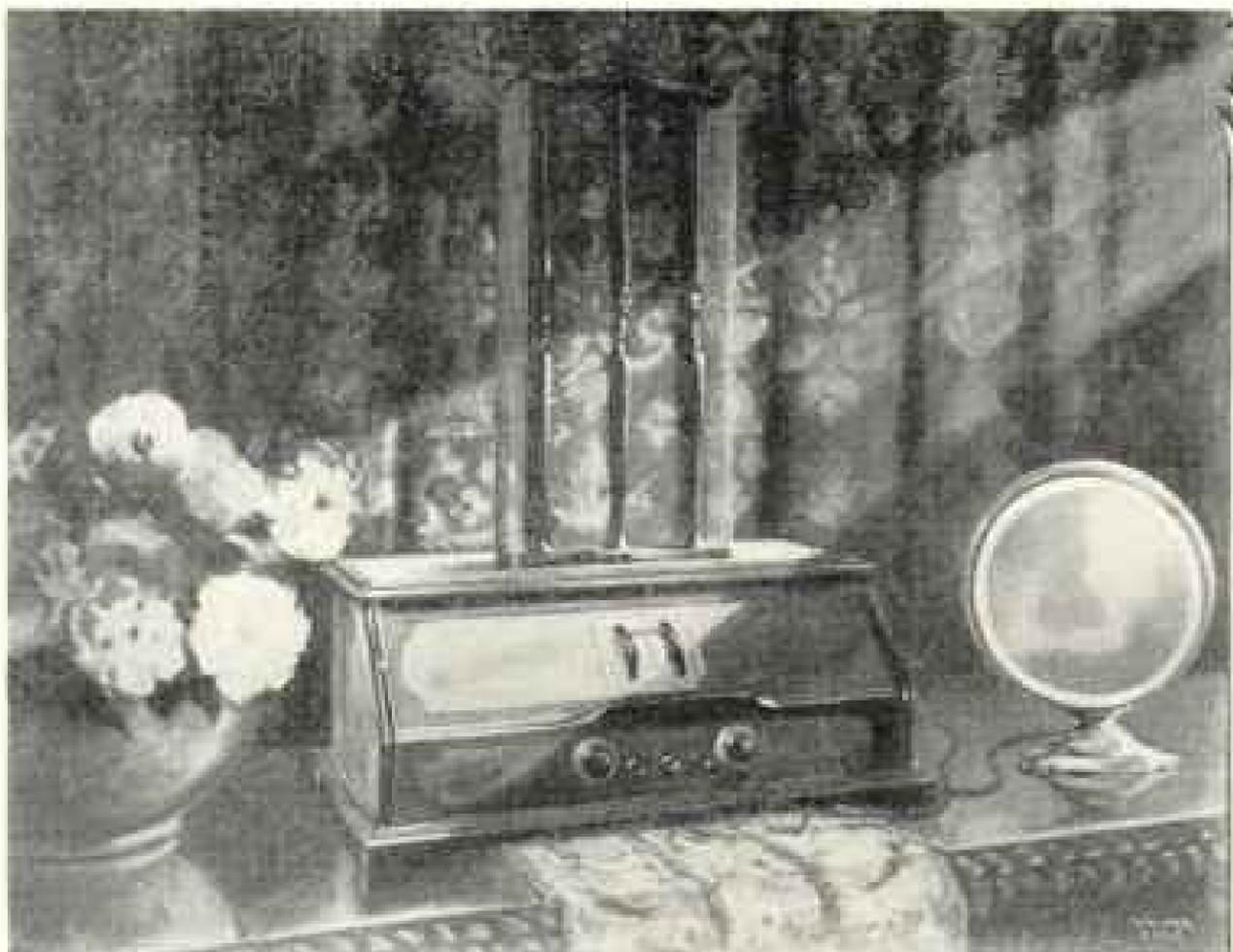
All prices quoted F. O. B. Detroit. Tax to be added.
The privilege of deferred payment, over a twelve months' period, is gladly given on any Cadillac car.



C A D I L L A C



DESIGNED BY
GENERAL MOTORS
CORPORATION

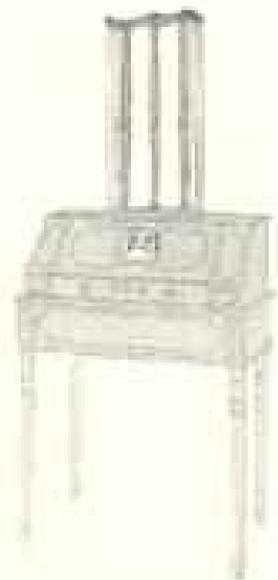


New principles in radio developed by RCA

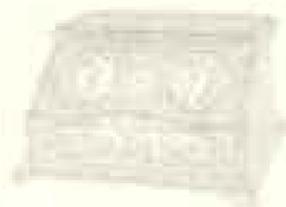
The new Radiolas, embodying new principles of radio reception, are not only the product of RCA, but have behind them as well, the research facilities, the engineering and manufacturing skill of General Electric and Westinghouse. They meet, with new standards of achievement, *all the fundamentals of good radio reception.*

1. *Quality of tone*—New Radiotrons and new RCA Loudspeakers mean perfection of tone never before achieved.
2. *Volume of tone*—The new Radiotrons make possible tremendously greater volume of tone.
3. *Selectivity*—The Super-Heterodyne is known to be the most selective set on the market, and this selectivity has been carried to an even greater degree of exactness.
4. *Range*—Power amplification has brought *improved distance reception.*
5. *Simplicity*—The new uni-control system at last brings single control operation to complete, practical success. And some of the new Radiolas can be operated entirely on the house current without batteries—a final step in a series of achievements that put radio today many strides ahead.

Radiola 25 (pictured above) with Loudspeaker Model 100, a six-tube unicontrol Super-Heterodyne, that uses the new power tube. It has space in the cabinet for dry batteries, but can be used with Loudspeaker 104 without batteries. With 6 Radiotrons but without loudspeaker . . . \$165



Radiola 28, eight-tube unicontrol Super-Heterodyne, extremely selective. It gives great volume on dry batteries, or if used with the Model 104 Loudspeaker, all batteries can be replaced by 110 volt, 60 cycle A. C. lighting current. With 8 Radiotrons . . . \$260



Radiola 20, an entirely new five-tube, tuned radio-frequency set, with regeneration Antenna type, with the new dry battery power Radiotron. Without accessories . . . \$102.50
With 4 Radiotrons . . . \$115



Radiola Loudspeaker, Model 100, RCA Cone type, achieving new clarity and far wider tone range. Can be used with any radio receiver \$35

Be sure to see the new Radiolas and hear them demonstrated. Write today to the nearest RCA district office for the booklet that describes the entire line in detail.



RCA-Radiola

MADE BY THE MAKERS OF RADIOTRONS

RADIO CORPORATION OF AMERICA
New York Chicago
San Francisco

Raymond-Whitcomb

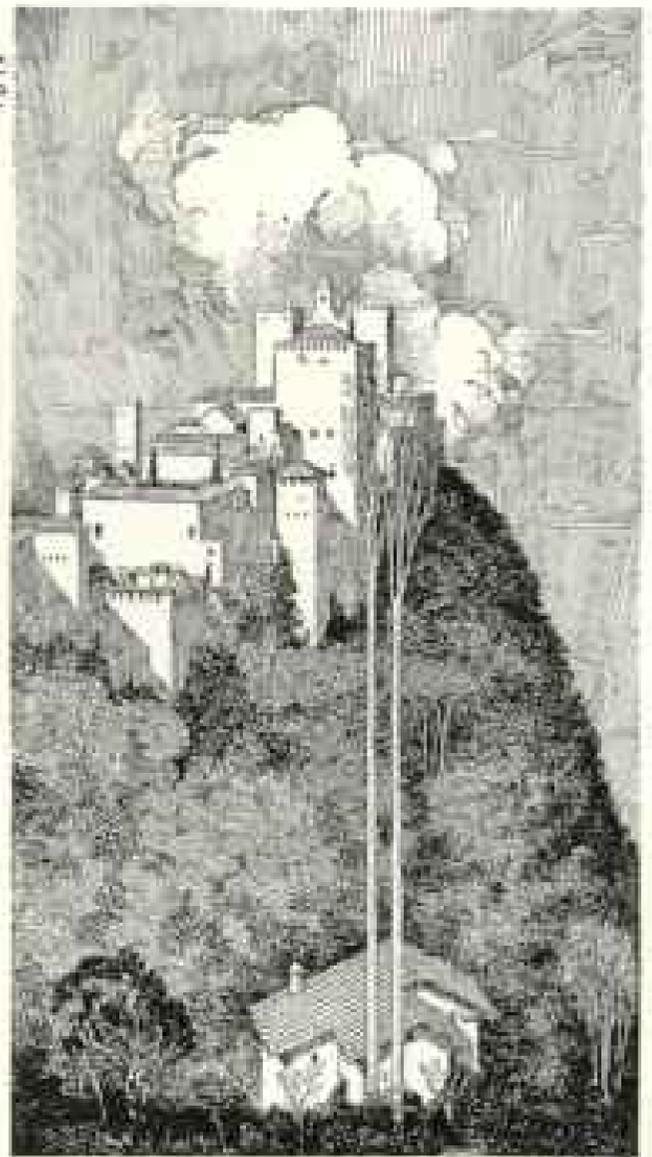
MEDITERRANEAN CRUISE

Sailing on the Cunarder "Samaria"

January 28, 1926 — \$925 upward

The Route: Visits Madeira, Gibraltar, Spain, Algiers, the Riviera, Tunis, Sicily, Egypt, the Holy Land, Turkey, Greece, the Aegean Islands, Jugo-Slavia, Italy, France, and England. 66 days of ideal cruising. 20 stops. Membership limited to 385 persons, insuring uncrowded shore parties.

Features: The only cruise including (at no extra cost) a trip to the Alhambra at Granada, Spain; the only cruise to visit the Riviera in Carnival week; the only cruise to visit Cattaro, Jugo-Slavia and the Greek Islands; also calling at Venice, and at Syracuse, Sicily, in addition to all the Mediterranean ports usually visited.



The Red City—
Alhambra

TWO WEST INDIES CRUISES

January 30 and February 25, 1926 — \$375 and upward

The Ship: The sumptuous new S.S. "Columbus", 32,000 tons—the largest, fastest and most luxurious vessel ever to make the West Indies Cruise. Unusually large rooms, making for great cruising comfort. Beautiful, airy and spacious public rooms.

The Route: Each cruise is of 24 days, visiting San Juan, Porto Rico; St. Thomas, Virgin Islands; Martinique; Barbadoes; Trinidad; Venezuela (including train trip to Caracas); Panama; Jamaica; and Havana. All shore excursions included in Cruise rates.

SPRING MEDITERRANEAN CRUISE: A short cruise on the newest and finest Cunarder, "Carinthia"—sailing from New York, April 3, 1926 in time to catch the Mediterranean countries at their best. 41 days. Limited to 400 passengers. \$625 upward.

SOUTH AMERICA: Two tours down the East Coast and up the West Coast and two tours in the reverse direction. Leaving New York, Jan. 7, Jan. 16, Jan. 30, and Feb. 4, 1926.

OTHER TOURS: ROUND THE WORLD, JAPAN-CHINA, EUROPE, CALIFORNIA AND THE SOUTHWEST

Booklets describing these cruises and tours sent on request

Raymond & Whitcomb Co.

26 Beacon St., Boston

New York

Philadelphia

Chicago

San Francisco

Los Angeles



I could not find a watch that agreed with me until I secured an Elgin



JOHN DREW

Painted from life by JAMES MONTGOMERY FLAUG

One of a series of little biographies of Elgin Watches

WRITTEN BY EMINENT ELGINIERS

· · ·

It was Oscar Wilde who wrote that "a man will kill the thing he loves," and while I would not care to confess to being a time-killer, I must admit that I have submitted my watches, for which I had a real affection, to many punishments, including the water test.

For in my younger days, I served as coxswain of an eight-oared shell, and in one dramatic practice spin on the Schuylkill, the boat was swamped and the crew made a most inglorious exit from the water. I swam ashore,

but the watch that went overboard with me—my father's and a fine English make—was never quite the same.

My second watch was a gift from my mother on my twenty-first birthday. It served me faithfully for several years and then for reasons best known to itself, suddenly lost its reputation for unerring accuracy.

With no little reluctance I discarded it, and purchased an Elgin which, decade in and out, has never miscounted a minute that I've been aware of. It has won my regard as a true friend, on which I can rely almost to the second.

by JOHN DREW

ELGIN

THE WATCH WORD FOR ELEGANCE & EFFICIENCY

ELGIN NATIONAL WATCH COMPANY, ELGIN, U. S. A.

G. E. N. W. Co.

A wonderful two years' trip at full pay— but only men with imagination can take it!

ABOUT one man in ten will be appealed to by this page. The other nine will be hard workers, earnest, ambitious in their way, but to them a coupon is a coupon; a book is a book; a course is a course. The one man in ten has imagination.

And imagination rules the world.

Let us put it this way. An automobile is at your door; you are invited to pack your bag and step in. You will travel by limited train to New York. You will go directly to the office of the president of one of the biggest banks. You will spend hours with him, and with other bank presidents.

Each one will take you personally thru his institution. He will explain clearly the operations of his bank; he will answer any question that comes to your mind. In intimate personal conversation he will tell you what he has learned from his own experience. He will give you at first hand the things you need to know about the financial side of business. You will not leave these bankers until you have a thoro understanding of our great banking system.

When you have finished with them the car will be waiting. It will take you to the offices of men who direct great selling organizations. They will be waiting for you; their time will be at your disposal—all the time you want until you know all you can learn about marketing, selling, and advertising.

Again you will travel. You will visit the principal industries of the country. The men who have devoted their lives to production will be your guides thru these plants in Detroit, Cleveland, Chicago, and in every great industrial center.

Thru other days the heads of accounting departments will guide you. On others, men who have made their mark in office management; on others, traffic experts, and authorities in commercial law and credits. Great economists and teachers and business leaders will be your companions.



The whole journey will occupy two years. It will cost you nothing in income, for your salary will go right along. Every single day you will be in contact with men whose authority is proved by incomes of \$50,000, \$100,000, or even more.

Do you think that any man with imagination could spend two years like that without being bigger at the end? Is it humanly possible for a mind to come in contact with the biggest minds in business without growing more self-reliant, more active, more able?

Is it worth a few pennies a day to have such an experience? Do you wonder that the men who have had it—who have made this two years' journey—are holding positions of executive responsibility in business everywhere?

This wonderful two years' trip is what the Alexander Hamilton Institute offers you.

Not merely a set of books (tho you do receive a business library which will be a source of guidance and inspiration throught your business life). Not merely a set of lectures (tho the lectures parallel what is offered in the leading university schools of business). Not merely business problems which you solve, and from which you gain definite practical experience and self-confidence.

All these—books, lectures, problems, reports, bulletins—come to you, but they are not the real Course. The real Course is the experience of the most successful business men in the country. For two years you live with them. In two years you gain what they have had to work out for themselves thru a lifetime of practical effort.

Send for This Famous Book

If you are the one man in ten to whom this page is directed, there is a book which you will be glad to own. It is called "Forging Ahead in Business." It costs you nothing, yet it is permanently valuable.

This book is a wonderful stimulus to men of imagination. If you have read this far, and if you are at least 21 years of age, you are one of the men who ought to clip the coupon and receive it with our compliments.



ALEXANDER HAMILTON INSTITUTE
419 Astor Place New York City

Send me the book, "Forging Ahead in Business," which I may keep without obligation.

Name.....
Please write plainly.

Business Address.....

Business Position.....





Packard Six Owners Are Loyal

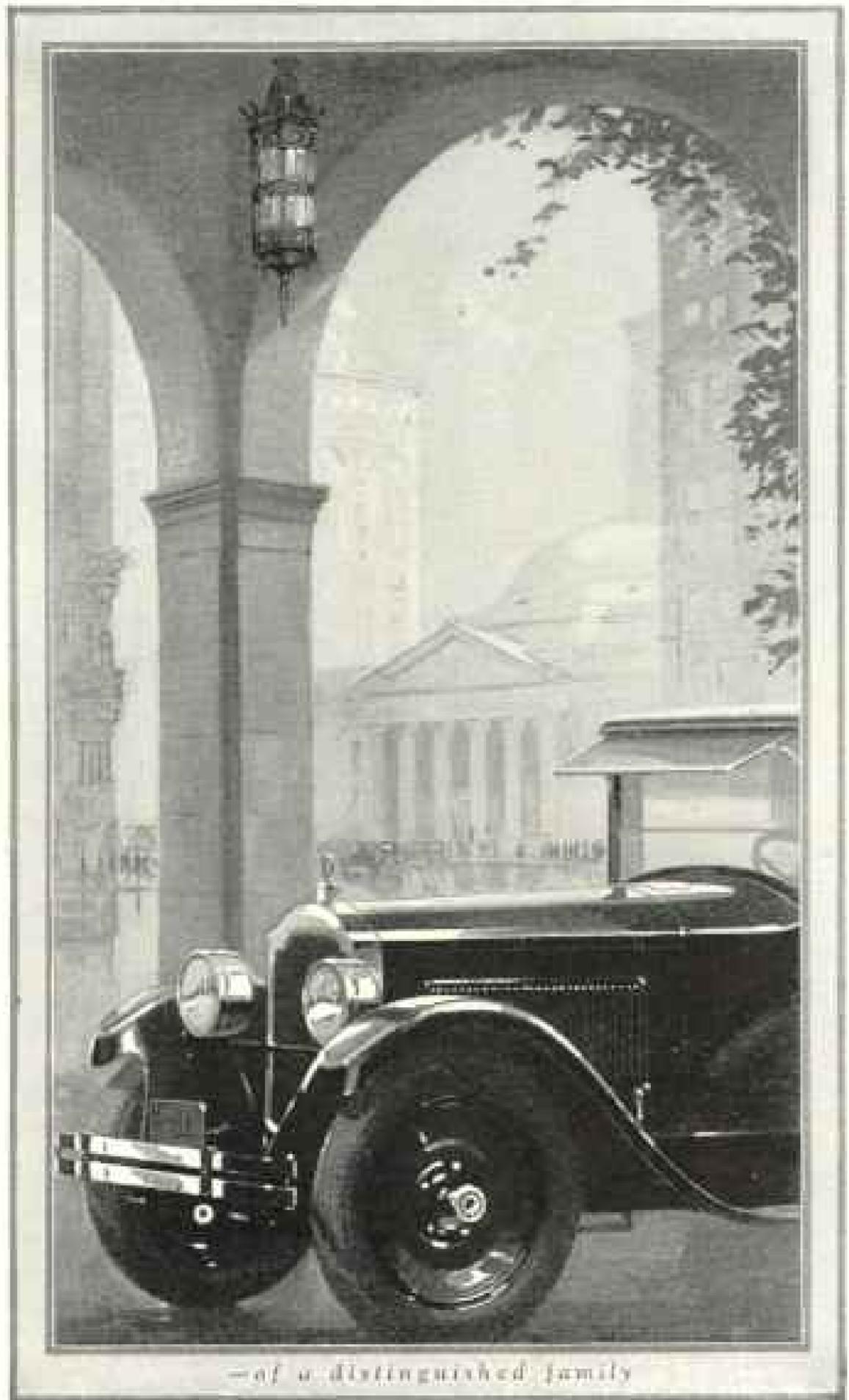
PERHAPS you have wondered why so few Packard Six cars are offered for sale by used car dealers.

The reason—98 out of every 100 Packard Six owners remain loyal to Packard, never giving up their cars for any other make.

For example—of the Packard Six cars sold during the last five years in the cities listed on this page (51 of the 873 in which Packard cars are sold and serviced) only 2 out of every 100 have been replaced. And these generally for reasons having nothing to do with car or service.

Evidently, the chances are really 100 to 1 that you too will be satisfied if you buy a Packard Six.

Packard Six and Packard Eight both are furnished in ten body types, four open and six enclosed. Packard distributors and dealers welcome the buyer who prefers to purchase his car out of income instead of capital.



Is your city here?

Atlantic City
Aurora
Baltimore
Boston
Bridgeport
Brooklyn
Buffalo
Camden
Charlottesville
Cincinnati
Cleveland
Columbus

Davenport
Dayton
Denver
Duluth
Easton
Evansville
Grand Rapids
Hartford
Houston
Indianapolis
Jacksonville
Jersey City
Kansas City

Louisville
Milwaukee
Minneapolis
Montreal
New Orleans
Omaha
Oshkosh
Peoria
Philadelphia
Pittsburgh
Portland
Rochester
Rockford

St. Paul
Salt Lake City
Savannah
Seattle
South Bend
Stamford
Toledo
Toronto
Trenton
Washington
Williamsgate
Wilmington
Worcester

PACKARD

ASK THE MAN WHO OWNS ONE



The Enduring Beauty of Rock of Ages Barre Granite

TIME and the elements can no more change a memorial built of Rock of Ages Barre Granite than they can change the rock-bound Vermont hills from which it is quarried.

The memory of loved ones will be preserved for all time if your family memorial is fashioned in Rock of Ages Barre Granite. It takes a brilliant polish—or in hammered finish its natural blue-gray color makes it distinctive.

Mark Every Grave

With Rock of Ages Barre Granite

Request our Certificate of Perfection when ordering from your local memorial dealer. It protects you against inferior materials.

Write for Booklet "E"

BOUTWELL, MILNE & VARNUM
CORPORATION
MONTPELIER, VERMONT

Quarries Rock of Ages Barre Granite — Quarries at Barre, Vermont

The Instrument of the Immortals

TO THE great pianists the factor of durability in a piano is of first importance. It must withstand day after day and year after year of the hardest practice. It must not require attention. It must keep its tone not only pure, but constant. And so completely does the Steinway meet the most drastic requirements, that Paderewski, Hofmann, Rachmaninoff and a long roll of the most notable pianists regard the durability of the Steinway as one of its most admirable characteristics.

Yet the Steinway is not designed or built primarily for the concert pianist. It gives to you exactly what it gives to the most celebrated figures in the world of music—a miraculous singing tone, a sure response to your most subtle emotion or your most exultant mood, *and the definite gift of permanence.*

For the Steinway endures through generation after generation. The Steinway piano that won first prize at the Philadelphia Centennial in 1876 is still in use in that city. Everywhere children are practicing exercises on the same instrument that sounded their grandmothers' wedding march. In every community you will find old Steinway pianos in homes that have long been known as centers of musical activity.

It is this extraordinary durability that transforms the purchase of a Steinway into an investment that pays dividends in pleasure and delight to each generation in turn. And year after year people who must carefully consider the family budget make this investment in ever-increasing numbers. For the Steinway is never beyond the reach of the true lover of music. It has always been sold at the lowest possible price, and upon the most convenient terms. Some one of the various



MISCHA LEVITZKI
uses the Steinway exclusively

models designed to fit all acoustic conditions may easily be yours. Each brings the golden Steinway tone to fill your home with beauty. Each brings its delicate, exquisite response to your hand and spirit. And year after year, decade after decade, the Steinway makes its unfailing return. You need never buy another piano.

*There is a Steinway dealer in your community or near you through whom you may purchase a new Steinway piano with a small cash deposit, and the balance will be extended over a period of two years. *Used pianos accepted in partial exchange.*

Prices: \$875 and up plus transportation
STEINWAY & SONS, STEINWAY HALL
109 W. 57th Street, New York

STEINWAY

THE INSTRUMENT OF THE IMMORTALS

ESSEX COACH

\$795



World's Greatest Values

Everyone Says It—Sales Prove It

This is the greatest Essex value in history. It is the finest Essex ever built. The price is the lowest at which Essex ever sold. The largest production of 6-cylinder cars in the world, giving economies in purchase of materials, manufacture and distribution exclusive to that position, makes this value possible alone to Hudson-Essex.

The new low price places within reach of all the brilliant performance, reliability, riding ease and fine appearance for which Essex is famous. No wonder this Essex value is everywhere regarded for outstanding quality and distinction.

HUDSON COACH \$1195

HUDSON BROUGHAM \$1495

HUDSON (7-PASS.) SEDAN \$1695

All Prices Freight and Tax Extra

Hudson-Essex World's Largest Selling 6-Cylinder Cars

*All the world's knowledge
can now be YOURS*

Encyclopaedia Britannica

in a New Form

at a saving of 46%

THE publication of the Britannica in the New Form brings the price of this famous library of knowledge below the price of a typewriter, a phonograph, or a good radio set.

The low price, together with the increasing popular demand for this great work, has made the Britannica in the New Form a "best seller." It has created a sensation!

More than 35,000 people have bought the Britannica in the New Form since the first printing was offered. Of the present printing less than 5,200 sets remain and you must act promptly to acquire one of these.

Why the price of this famous book is so low

The Britannica in the New Form is a remarkable publishing achievement—an innovation by experts making possible a sweeping reduction in price. Costs were cut almost in two by

- Binding the complete Britannica in 16 double volumes instead of 32 single volumes.
- Using the thin, durable Britannica Opacity Paper—2400 tons purchased at a favorable price.
- Printing the New Form from the plates of the latest revised, large type plates of the famous Cambridge issue, thereby saving the cost of setting up 33,000 pages of type.

These savings are shared with you. "I consider it a great bargain—I have never had so much value for the money." is the general comment of those who

have recently purchased this valuable set of books.

Now you can buy the Britannica in the New Form for 46 per cent less than the cost of the famous Cambridge issue . . . for the lowest price at which the large page, latest revised, large type complete Britannica has ever been sold to the public. And you get this beautiful mahogany-finish bookcase free.

The Britannica contains all worth-while knowledge—science, art, literature, biography, history, invention, the World War and the momentous times that have followed, also the latest developments in all fields of endeavor.

It contains 49,000,000 words, 33,000 pages and 15,600 illustrations—as much material as 476 books of average size printed on ordinary paper.

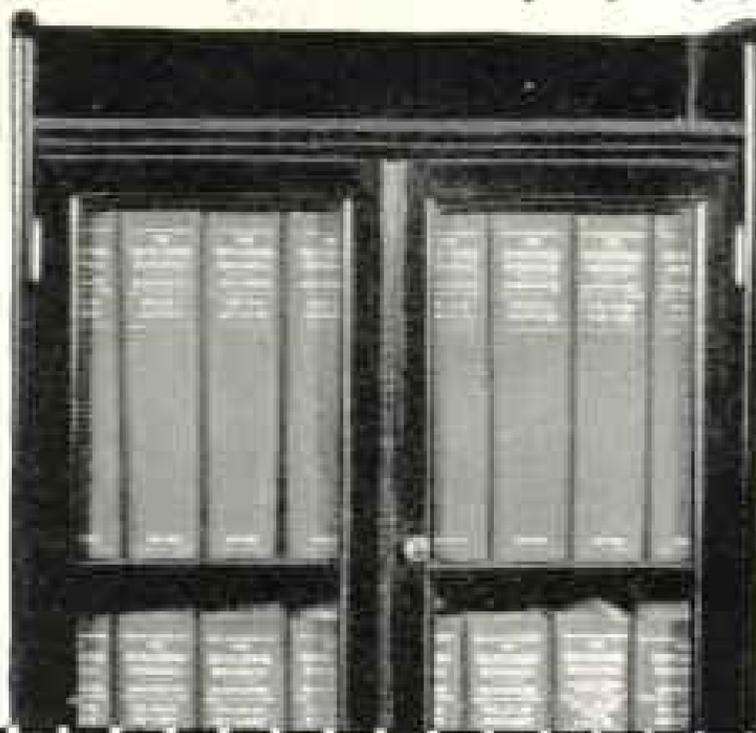
Easy Payments

A small first payment puts the complete 16 double volumes and the handsome free bookcase in your home. The balance is payable in monthly payments so small they will never be missed. But don't put off sending for information. You owe it to yourself to find out about the

Britannica in the New Form—its practical value to you.

Write for interesting 56-page book—free

It tells all about the Britannica in the New Form, reproduces a number of specimen pages (many in color), explains the easy terms of payments, tells the fascinating story of how our experts made possible such an amazing reduction in price. 56 pages of interesting reading. Free on request if you mail the coupon promptly.



THE ENCYCLOPEDIA BRITANNICA, INC.
342 Madison Avenue, New York NGM 5-1-C

Please send me complete information about the Encyclopaedia Britannica in the New Form. Also send me the illustrated

56-page Specimen Book—Free!

full details of your present low-price offer and your easy plan of small monthly payments. This does not obligate me in any way.

Name.....

Address.....

Beautiful mahogany-finish bookcase free while this offer lasts!

The **CRUISES SUPREME 1926**

On the famous Cunarder
"FRANCONIA"
Sailing Eastward
from New York January 14th

Around the World

By sea and by land—30,000 miles—
133 days—a wonderful world panorama;
each country is visited at a time of the
year when climatic as well as other con-
ditions offer their greatest attraction.

*An exceedingly complete World Cruise Guide Book, depicting the full
itinerary is now ready; let us send you a copy.*

Fares are fully inclusive and cover all shore excursions.

On the White Star "Ship of Splendor"
"HOMERIC"

the largest, most modern, most replete
and most luxurious steamer sailing to
the Mediterranean.

From New York January 23rd

Mediterranean

The itinerary covers the widest field
of worth-while points, including sixteen
days in Egypt and Holy Land; optional
visits to Paris and London on the home-
ward trip; also stop-over privileges.

*Supreme in every detail: in the superb specially chartered ship; in the
cruise management and in the entertainments aboard and ashore.*

Cook's Fleet of Nile Steamers and Dahabeahs stands foremost on that river.

THOS. COOK & SON

585 Fifth Avenue

NEW YORK

253 Broadway

Philadelphia Boston Chicago St. Louis San Francisco Los Angeles Toronto Montreal Vancouver



Again—the BUICK promise is Fulfilled!



WHEN BETTER AUTOMOBILES ARE BUILT,
... BUICK WILL BUILD THEM ...

Buick has been building better and better motor cars for more than twenty-one years!

And in all those years, no Buick car ever has more fully represented the Buick ideal or made the Buick promise mean more than today's Better Buick.

This is the car with 75 horsepower performance; with a finer Buick Valve-in-Head engine, now "Triple Sealed," to protect it from dirt, wear and upkeep expense. The Better Buick is the car with the charming new body profiles and striking new color combinations in

Duco, some in Duotone; with Control-lable Beam headlights; and many other important chassis and body refinements.

And this is the car that establishes a new standard of motor car value. It is the same sturdy, reliable, desirable Buick you always have known, but better in every way. At its present prices, it stands alone as today's most attractive motor car investment.

Drive the Better Buick and you will be convinced that Buick again has fulfilled the Buick promise—and built a better automobile!

B U I C K M O T O R C O M P A N Y

Flint

Division of General Motors Corporation

Michigan

Canadian Factory: McLAUGHLIN-BUICK, Oshawa, Ontario

Branches in all Principal
Cities—Dealers Everywhere

Pioneer Builders of
Valve-in-Head Motor Cars

The Better Buick





"The voice of the people"

IF you are confused about Radio—
 If the din of conflicting claims and
 statements has left you more puzzled
 than ever—turn to the one infallible
 test—

the consistent preference of the public.

Choose wisely by analyzing the judgment of the multitude who have already made a careful selection. Their choice is summarized in the circle above. Study it! It shows by official figures that to an overwhelming degree Freed-Eisemann is the largest manufacturer of Neutrodyne Radio Receivers in the world.

Freed-Eisemann pre-eminence is founded on ACCOMPLISHMENT.

Back in the very beginning of the

Radio industry, even before the days of general broadcasting, Freed-Eisemann engineers were already perfecting tone, simplicity and selectivity.

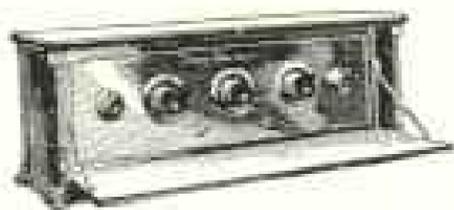
The new Freed-Eisemann sets mark the furthest advances in Radio engineering.

Without cost or obligation—

A home trial for a liberal period.

Our dealers are so sure of the performance of the Freed-Eisemann that this week they will gladly install a set in your home without obligation—so that you may learn the joys it will give you. Telephone the Freed-Eisemann dealer today for your set.

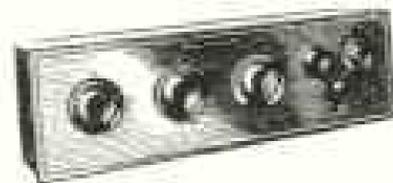
Freed-Eisemann Radio Corporation
 MANHATTAN BRIDGE PLAZA, BROOKLYN, N. Y.



NEW! NR-43 \$100.00
 A de luxe slotted Neutrodyne * receiver, remarkably selective, in handsome cabinet



NEW! FE-18 \$50.00
 A new five-tube city call receiver, space for batteries in cabinet



NEW! NR-7 \$110.00
 A six-tube licensed Neutrodyne * receiver embodying an improved method of audio-frequency amplification

* Licensed and manufactured under a group of Latour patents.
 * Licensed by Independent Radio Mfrs., Inc., under Hazeltine patts. Nos. 1450090, 1459128, 1533058.

FREED-EISEMANN

Mastery in Radio

"Our Oil-O-Matic"

Two words define the well-ordered warmth in the modern home of today. "Our Oil-O-Matic!" Little is left to say. And nothing to do. Why, then, do owners like to talk of their Oil-O-Matic? For the same reason they discuss their yachts, or motor cars. Or any perfect piece of mechanism in which there is pride of possession.

How it works, or why, is soon forgotten—if, indeed, the family ever knew! But let them hear an icy blast at the windows, or distant footsteps crunch cold, and someone always murmurs gratefully, "Our Oil-O-Matic!" It isn't human to forget the faithful, silent servant in the basement.

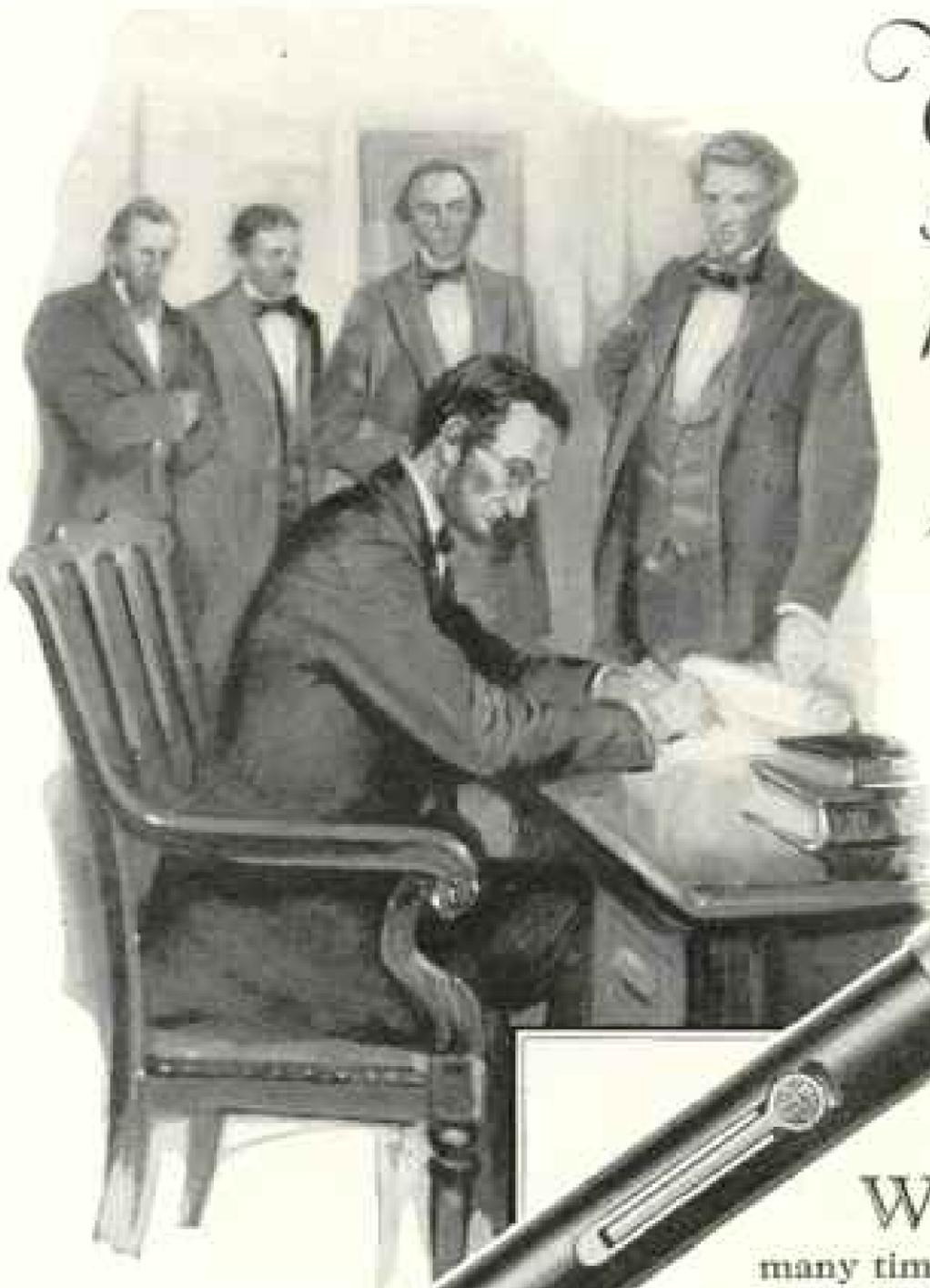
Guests come, and stay late. They feel no chill. No shovel gives ringing reminder of time to go. Formality is forgotten: "You have oilomatic heat, too!" And everyone is talking at once about the times when the finest residences burned—*coal*.

There's an Oil-O-Matic dealer in your town. He will act in time, if you do. Oil heat is economical. Terms of payment for equipment are easy. There is no excuse for another Winter spent like last! Shall we send BASEMENT PLANS and OIL HEATED HOMES? A book for your library *free*.

Williams Oil-O-Matic Heating Corp.
202 Washington St., Bloomington, Ill.



WILLIAMS OIL-O-MATIC HEATING



*With a few
strokes of a
pen
LINCOLN
freed the
slaves —*



WITH one filling a Waterman's pen would have written many times the entire Emancipation Proclamation Lincoln signed.

A Waterman's can be filled in 10 seconds and will write ten thousand words. Easy to fill; it holds an abundance of ink.

Waterman's Ideal Fountain Pen

satisfies every pen need perfectly

Different sized holders to fit different sized hands; with pen points to suit every style of writing.

The LIP-GUARD, the CLIP-CAP, the SPECIAL FILLING DEVICE and the SPOON-FEED are four outstanding features.

Ask any one of 50,000 merchants to show you style illustrated; with cardinal, black or mottled holders. Make your selection at \$4.00, or in larger sizes at \$5.50 or \$6.50

W. L. Waterman Company

191 Broadway, New York

Chicago

Boston

San Francisco

Montreal

Illustration is exact size of \$4.00 model. Made with cardinal, black or mottled holders.

Because a Scottish Printer Loved Shakespeare

This amazing bargain is possible!

EVERY lover of good books owes a debt of gratitude to William Collins, Glasgow printer. It was he who made possible the extraordinary book pictured on this page—and this unparalleled opportunity for you.

Here in one beautiful volume are the complete works of Shakespeare—every word, every line the great master ever wrote. The story of its creation is a romance of love and devotion to an ideal. Collins had two great devotions in life: his craft—and Shakespeare. He had become famous for the making of beautiful books.

But, like every great artist, he cherished a particular ambition. It was to create, through the medium of his craft, a fitting tribute to the greatest master of our language. This was to be Collins' masterpiece.

All of Shakespeare in One Volume

The result startled the publishing world. He produced the complete works of Shakespeare in ONE single, beautiful volume—plays, poems and sonnets; every one complete and unabridged. The book was hailed as the greatest work of its kind ever made.

But Collins had not yet completed his work. He continued to refine and perfect his masterpiece. And here is the crowning triumph of his efforts. This new volume is bound in sumptuous soft brown leather, titled in gold. The pages are gold-edged. A thumb index affords instant access to titles. The type used is large and clear; the paper of such exquisitely fine weave that 1,352 pages are contained in the thickness of only an inch and a half.

A de luxe volume for a millionaire's library? No, Collins wanted his masterpiece to be within reach of all. He has actually reduced the price from that of his former edition. You can own this wonderful book for only \$4.98. Here are the entire works of Shakespeare—a complete set of books in one volume—at a ridiculously low cost. It is a bargain that can never come again, for these books were ordered when the rate of exchange was far below par.

Examine it FREE

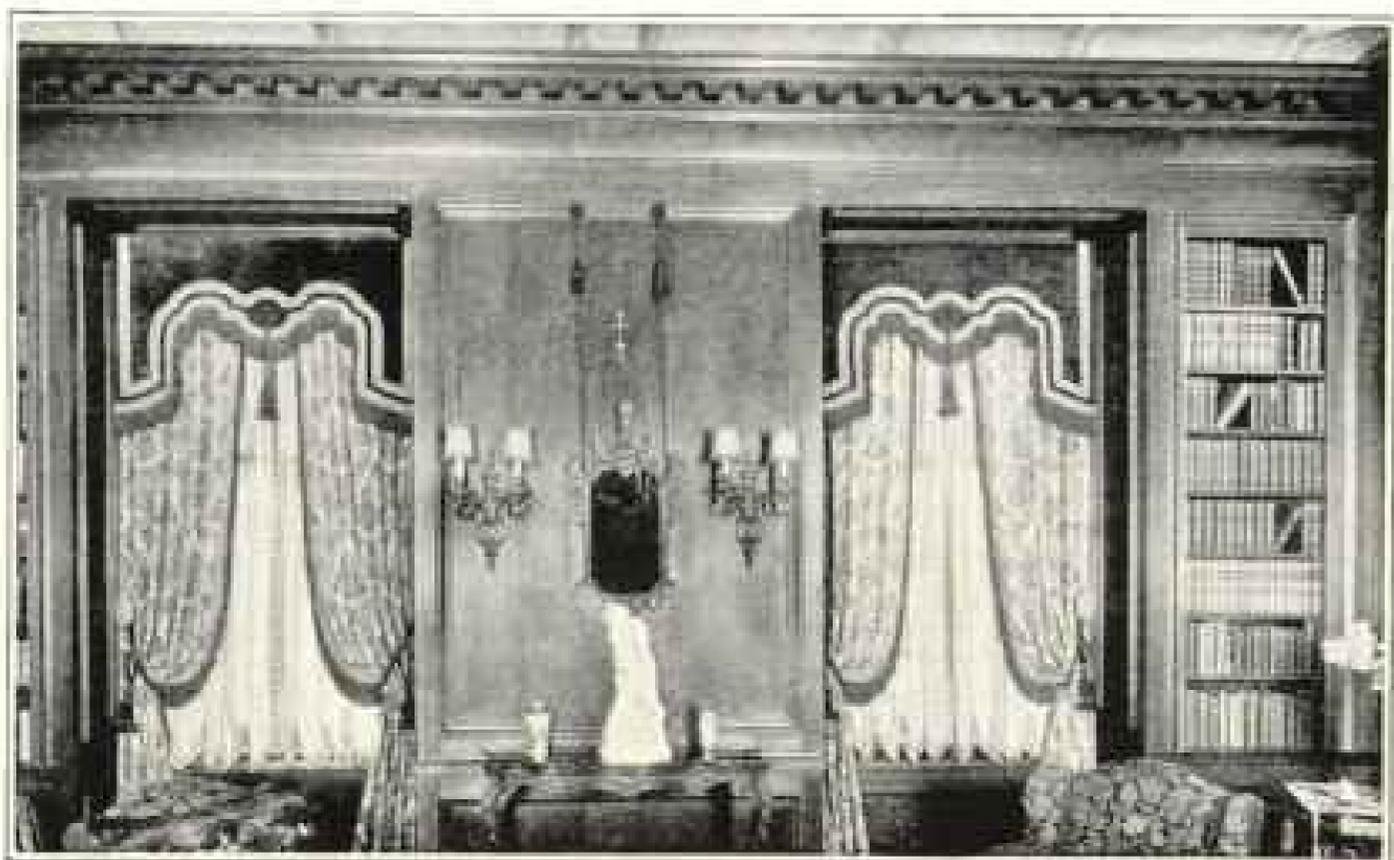
We will gladly send this complete Shakespeare, imported from the Collins Clear Type Press, to the readers of the NATIONAL GEOGRAPHIC for free examination. Keep it for a full week, then decide. No cost or obligation. Simply mail the coupon NOW.


WALTER J. BLACK CO.
7 West 42 Street
NEW YORK CITY, N.Y.

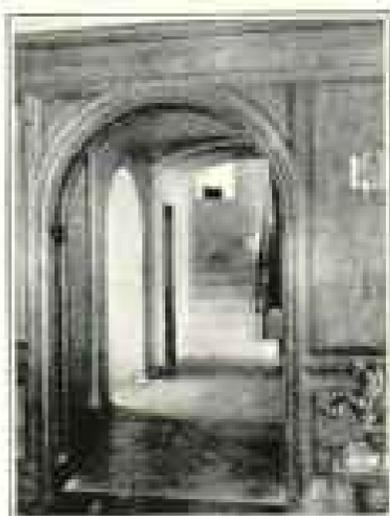
Gentlemen:—
Send me for free examination one of the impudic copies of your ONE-Volume edition of Shakespeare's Complete Works, printed at Collins Clear Type Press and bound in genuine leather, gold-edged pages, thumb index. If I agree that this is one of the most remarkable books ever published I will send you \$4.98 in full payment. Otherwise I will return the book at your expense.



Name.....
Address.....
City..... State.....



You may hunt the wide world for a wood which combines all these qualities of American Walnut



color. Some have resistance to wear and some endure the climatic changes so fatal to most woods. Some have the ability to outlast the ages. But walnut combines all these gifts in a superlative degree.

The finest examples of classic furniture-making, descended to us from the golden age of the Renaissance, are of walnut, exquisitely wrought by master craftsmen. Time seems only to have mellowed and enriched these priceless treasures.

THERE are many fine woods, each characterized by some outstanding qualities, but you'll find no cabinet wood that combines *all* the attributes as does our own lovely American Walnut.

Some have strength, some have beauty of

Today leading architects and decorators turn to walnut when they seek to obtain the utmost of luxurious beauty in paneled walls.

And the best furniture makers are using American Walnut more than ever before. They know it gives satisfaction. The good furniture merchants are selling more walnut. They know they are building good will for their stores by so doing.

The public wants walnut because it recognizes its charm and practical merits. From this universal acceptance of walnut has grown a vogue such as no other wood ever has enjoyed.

Important—Naturally with such a vogue there have grown many imitations. Insist that your dealer guarantee the furniture you buy is real walnut, or, at least, that all exposed parts are of real walnut. You'll gain lasting satisfaction and service if you take this precaution.

**AMERICAN
WALNUT**

"THIS IS THE WALNUT AGE"

Our book, "The Story of American Walnut," is now in its fifth edition. You'll find it full of fascinating information, beautifully illustrated. One chapter on how to recognize real walnut will aid you in making purchases.

AMERICAN WALNUT MANUFACTURERS' ASSOCIATION
Room 936, 616 South Michigan Avenue, Chicago, Illinois

**"Let's not have
the Millers—
he's such a bore!"**



IT WAS a week before their wedding anniversary. They sat down to draw up a list of friends for the party.

Many names went down on the list without question. The Robinsons—Clark and May. Harry Parker, who from small beginnings had made himself into the best known architect in the State. The Browns—Mary Brown can always be relied upon to be the life of any party, and Bob Brown is being prominently mentioned for Congress.

Yes, it was an easy list to draw up; until it neared its end. And then, she suggested Joe Miller and his wife.

"You went to school with Joe," she said, "and he was at our wedding. Of course, I know he'll be a drag—but I think we ought to have him."

Her husband frowned. "We've given many a party for people we ought to invite," he said. "But this is our own party. Let's make it a real success. Let's not have the Millers—he's such a bore!"

In how many homes in America is this conversation repeated, whenever a party is planned! How many men go through life like Joe Miller—boring their friends, keeping their wives out of interesting invitations, and getting nowhere in particular in a business way?

And the tragedy of it is that there's no necessity for it. Any man—if he can spare even fifteen minutes a day and knows what to do with them—can make himself interesting and successful.

Why should Bob Brown be considered for Congress, while his schoolmate Joe Miller is not even considered for assistant office manager in the company that employs him?

Why does one architect go far, while another—with just as much professional talent—has to scrape his pennies together to live at all?

Every successful man in America knows the answer.

You will know it, when you have spent an interesting evening in reading the wonderful little free book illustrated on this page. Your copy is waiting for you. It is called "Fifteen Minutes a Day," and it gives the plan, scope, and purpose of

DR. ELIOT'S FIVE-FOOT SHELF OF BOOKS

—the famous home library that is an open sesame to real social and business success.

Every well-informed man and woman should at least know something about this famous library.

The free book tells about it—how Dr. Eliot has put into the Harvard Classics "the essentials of a liberal education," and how he has so arranged them that in pleasant moments of spare time you can get the knowledge of literature and life, the culture, the broad viewpoint that every university strives to give.

"For me," wrote one man who had sent in the coupon, "your little free book meant a big step forward, and it showed me besides the way to a vast new world of pleasure."

Every reader of this magazine is invited to have a copy of this handsome and entertaining little book. It is free, and will be sent by mail, and involves no obligations of any sort. Merely clip the coupon and mail it today.



P. F. COLLIER & SON COMPANY
250 Park Ave., New York City

By mail, free, send me the little guide-book to the most famous books in the world, describing Dr. Eliot's Five-Foot Shelf of Books (Harvard Classics), and containing the plan of reading recommended by Dr. Eliot of Harvard. Also please tell me how I may secure the books by small monthly payments.

NAME { Mr.
 { Mrs.
 { Miss

ADDRESS

The publishers cannot undertake to send the booklet free to children. 3527HCY L.

[Advertisement]

"William Willoughby!"

The newspaper came down to a level with the coffee cups, and Bill Willoughby's gaze traveled over to where Paula manipulated the toast rack.

"Now this must be serious, my dear," he bantered. "You never call me 'William' unless there's something important. If you ever 'Mister' me, I'll know it's divorce. What is it, Paula—just discourtesy—I apologize—but this item about Jock Hutchinson caught my eye and—"

"No, it's nothing you've done, guilty conscience," Paula broke in. "It's something you ought to do, and I know of course you'll be glad to do it."

"H'm, not so sure," from Bill.

"Bill, dear, it's that you must be sure to be home for dinner tonight, and a little earlier than usual, please."

"I'll be here, all right, sweet, but the early part—well, I had promised Barclay eighteen holes at Sunset this aft., and you know how short the days are growing."

"You and 'Barc' will just have to be content with nine, unless you want to go out earlier, because I'll be here promptly on time for you."

"Why, what's tonight, what gives this evening its glow? Is this some saint's festival?"

"No saint's, I'm afraid, but yours, you old goose—yesterday!"

"Gosh! Another mistake? I plumb forgot it. Make your returns, etc. What have you got for me?"

"Never mind, it's here'll be one of Laura's birthday candles on it—and your Mother's written you a special love letter, and I've—well, you be here."

"Better drop it in the office and we'll go to lunch, Paula. I suppose you'll be down to buy the present."

"Your suggestions are based on your own way of doing things, William Willoughby. I have already got

A Large Wahl Pen, \$8.00

your present. No; you don't get it till tonight. I'm proof against teasing. This is my secret. You shan't have it out of me. And if you're going to make the 7:37, you'd better be going."

The day was long enough in passing, but with its close came Bill. Over Paula's shoulder he could see the birthday candles flickering merrily on that woodruss confection on the sideboard.

"Will you unhand me, villain," she said, "and let me take your pencil for a moment. I must inscribe this little package, and I cannot find even the stub we mark the milk card with."

The villain fished, and then ruefully said: "Here, too. Not a sign of one."

"Then lend me a fountain pen?" "Fountain pen?" said Bill. "You know I have a fountain pen for years. Never use the things, any way."

"Then I must accept one with just a little," said Paula.

Willoughby opened the neat packet, and out of the green velvet and the velvet-lined case he showed a cylindrical fountain pen of an elegant design and a Wahl

pen. He stood in his hand and it was all foreknowledge of the result. Paula asked:

"Bill?"

"Bill?" he echoed. "They're beautiful. That I want is exactly what I want."

But just then a beautiful fountain pen, the dandiest writing tool any man could own. How did you come to think of them! You're a

—and I'm for you. Which he wanted Paula produced against his shoulder that dinner needed the personal attention.

Every so often during dinner, his hand strayed to the presents from Paula, and he would pretend to be reading from a book that Barclay had lent him, she saw him balancing on the other of those gifts, and he gave an appreciative glance along the engraved barrel, and he was holding himself with little cluck of satisfaction.

"Oh, all," she said. "You really don't know how nice they are. Let me show you, as the salesman showed me. And perched on the arm of his machine easy chair, she "demonstrated" the Eversharp, to Bill's infinite delight and, it must be admitted,

his education too.

A little tug at the cap, and a plump new eraser offered its service against any slip of the hand—surely, here's the easiest way out of an error.

Then see how easy it is to re- This little magazine in the top is posed the moment you draw the mechanism out of the barrel. Lift the cap a couple of turns, and tap on the palm of your hand one of these loose leads out, all ready for use.

Just set the new lead in the top of the magazine, slip the barrel down over it, turn up the cap a few times—presto! There's your new lead peeping out at the end.

A Favorite Wahl Pen, \$6.00

Notice, now, how firmly that lead is gripped in the tip—"the Eversharp rifled tip." Nary a wobble, just straight and true and firm, no matter how long or short the point you use, nor from whatever slant you write.

"Another thing, Bill," said Paula, "and I think this really decided me to

get you these for a present: the jeweler told me it was one of the finest pieces of jewelry design he knew, done with a jeweler's precision, and manufactured by him last a lifetime. There now, have I said too much?"

"You've just made me see more value in your gift, my love," said Bill. "And I want to thank you for the extra thoughtfulness you showed in having my name engraved in the neat little panel along the side. And now, sweet salesman, how about the pen?"

"Oh, the Wahl Pen is a dear! First thing, it holds more ink than that paunchy one you throw away. You wouldn't think so, to see its slim, cylindrical grace. But they proved it to me, right on the Eversharp and Wahl Pen counter at the store. You have more words at your command—less need to refill—dependability."

Paula had already shown how strong the Wahl Pen is. The salesman took the pen, and threw it on the floor—hard! Then he picked it up, and held it on—hard—no break! It was exactly the way Willoughby had broken another fountain pen. He appreciated Paula's demonstration, the demonstration. Not that can happen to a Wahl Pen, made, like the Eversharp, to last a lifetime—guaranteed.

"And so many more!" Paula asked. "Ever so many pen possibilities—every style—writing, fine, coarse, anything, anything of them. I remember of them—Colonel's, Gracian, and anything you wanted in terms of price—solid, gold-filled, or silver-filled—and a style of your own. The price I felt

one of them. The price I felt was just what I needed."

Paula asked. "Ever so many pen possibilities—every style—writing, fine, coarse, anything, anything of them. I remember of them—Colonel's, Gracian, and anything you wanted in terms of price—solid, gold-filled, or silver-filled—and a style of your own. The price I felt

one of them. The price I felt was just what I needed."

Paula asked. "Ever so many pen possibilities—every style—writing, fine, coarse, anything, anything of them. I remember of them—Colonel's, Gracian, and anything you wanted in terms of price—solid, gold-filled, or silver-filled—and a style of your own. The price I felt

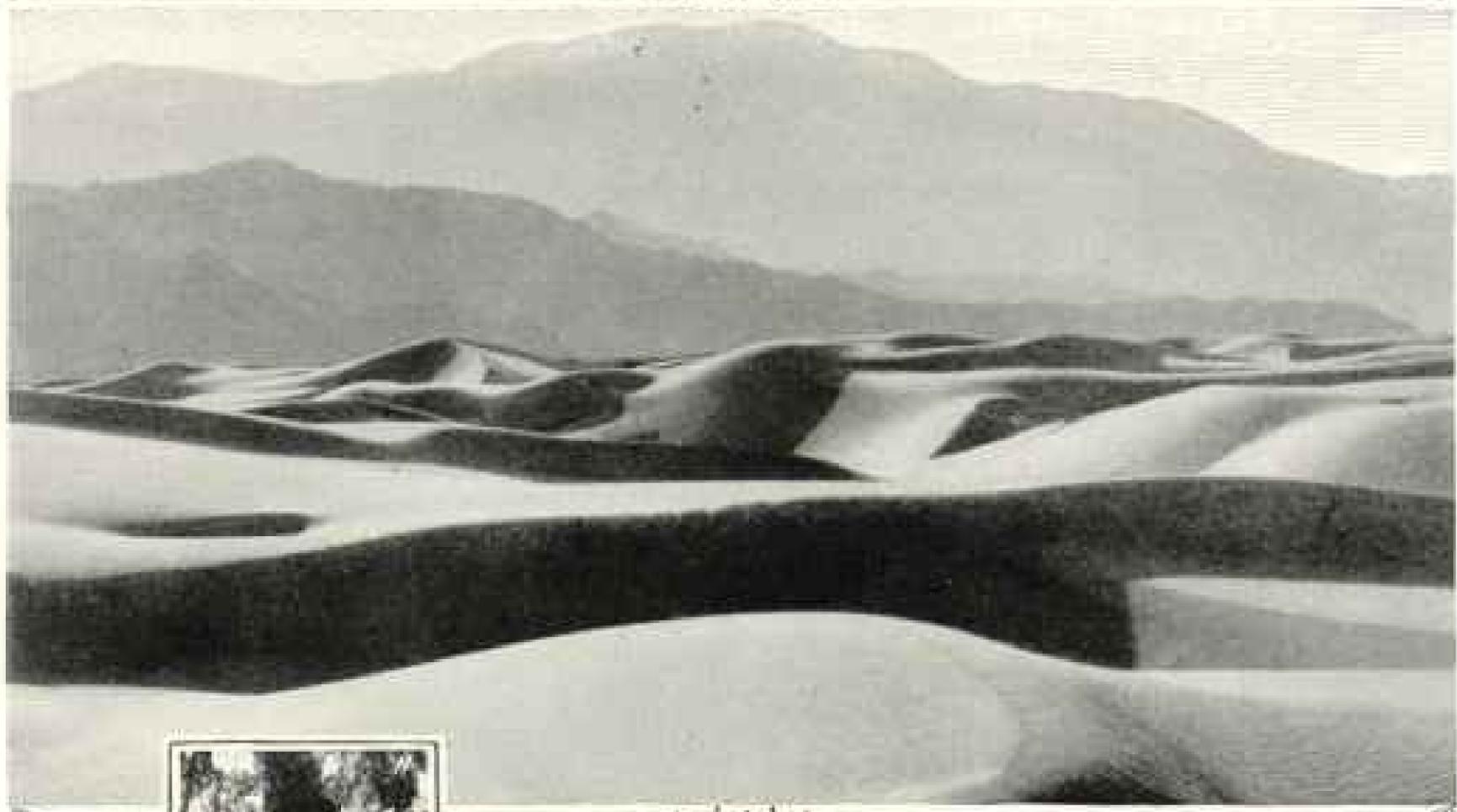
one of them. The price I felt was just what I needed."

Paula asked. "Ever so many pen possibilities—every style—writing, fine, coarse, anything, anything of them. I remember of them—Colonel's, Gracian, and anything you wanted in terms of price—solid, gold-filled, or silver-filled—and a style of your own. The price I felt

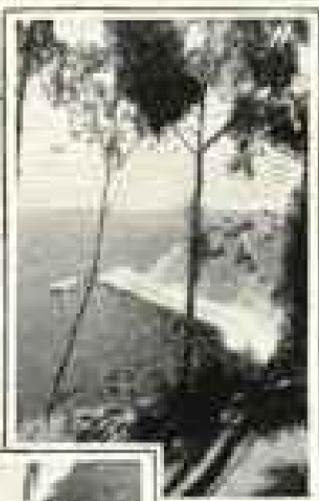
one of them. The price I felt was just what I needed."

Paula asked. "Ever so many pen possibilities—every style—writing, fine, coarse, anything, anything of them. I remember of them—Colonel's, Gracian, and anything you wanted in terms of price—solid, gold-filled, or silver-filled—and a style of your own. The price I felt

one of them. The price I felt was just what I needed."



Copyright, 1922
Avery Edwin
Field



The charm of Southern California lies in its great variety of scenery and strange sights. Above is a glimpse of sand dunes that rival Sahara in weird coloring.

The Great Fun of Southern California

A Springlike climate—away from snow and ice—plus a great variety of unique diversions. Bask in this warm sunshine. But have this all-inclusive diversity of pleasures, too, to entertain you.

THE broad stretches of the beaches, the inspiring heights of snow-capped mountain tops, the beauty of an orange grove in bearing, the lure of a gigantic desert resembling Sahara. A great city close by. Campers passing through it, their cars packed with tents, guns and fishing tackle.

And, everywhere, golf courses, tennis courts and polo fields—the outdoors every day.

A strange-looking crew appears in fancy costume—a moving-picture troupe. A little farther down the road, an old Spanish Mission built in 1774.

You have a notion to do this or that today—you jump into a motor car and go and do it—riding, on the way, on a paved boulevard as smooth

as a city street—a hundred miles in three hours, and rare scenery on every side.

Fields of flowers, varicolored hills, unusual trees.

A strange enchantment, complete change, absorbing interest, GREAT FUN.

That is Southern California—these are the Southern California pleasures which are added to the climate to make it fun as well as pleasant to be here—the favorite pastimes of all men, all women and all children to make whole families happy. Do you know of any other place to equal it?

Hotels, bungalows and boarding houses. Living costs and rates are low. Buy your ticket to Los Angeles and San Diego, returning via Santa Barbara, San Francisco, Portland and Seattle, and See the Great West in One Trip.

Ask your nearest railroad ticket agent to tell you more about it, or mail coupon below. Plan it now—the most interesting winter that you've ever spent.



The growth and wealth of Southern California are indicated by the following figures pertaining to the County of Los Angeles alone:

Assessed valuation (1921) \$1,319,071,000
Agricultural production (1924), \$82,364,000
Bank deposits (1925), more than \$1,000,000,000
Oil production (1924), 120,000,000 barrels

Southern California

Year 'Round Vacation Land Supreme

ALL-YEAR CLUB OF SOUTHERN CALIFORNIA,
Dept. D-11, Chamber of Commerce Bldg., Los Angeles, California.

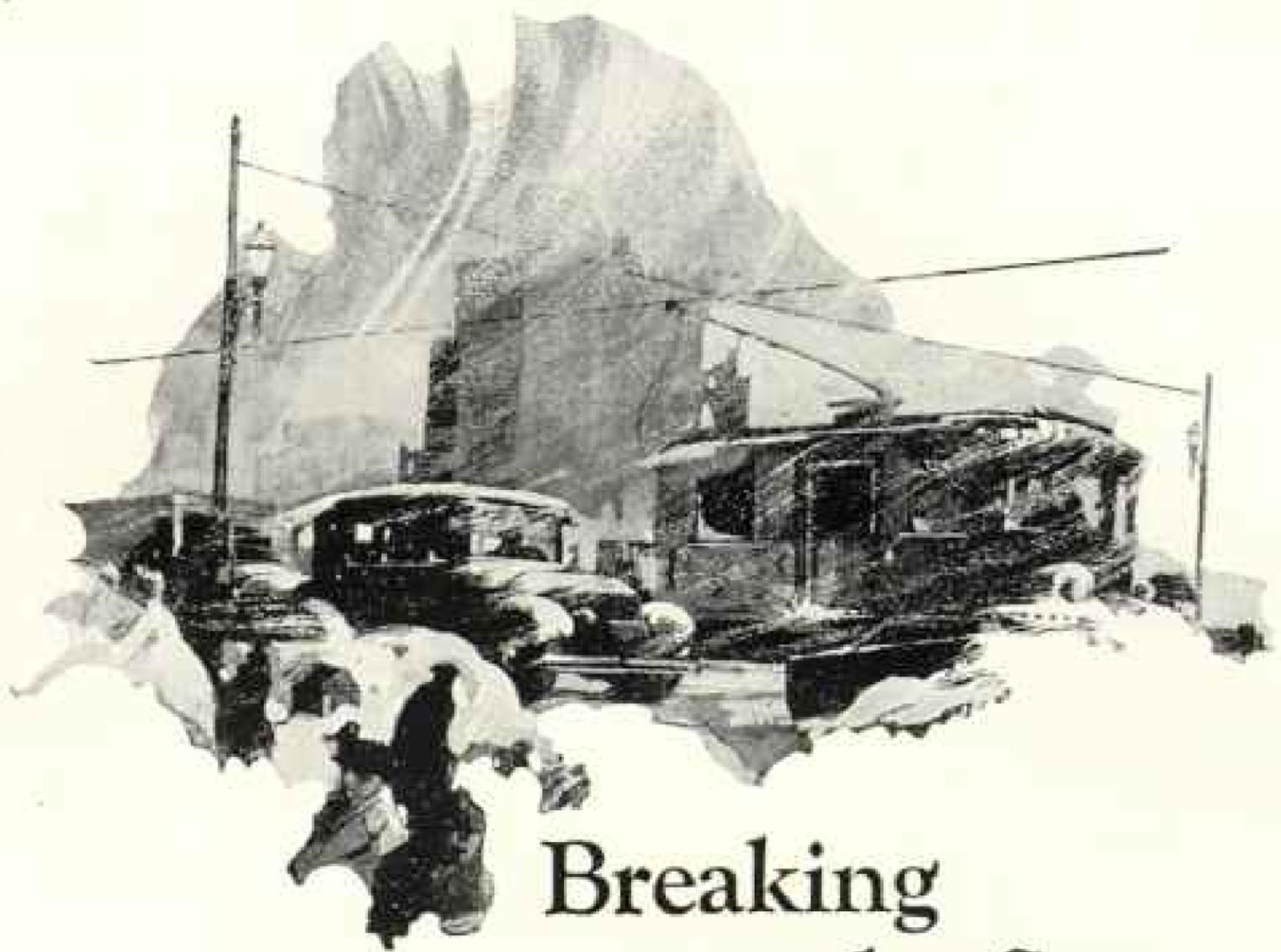
I am planning to visit Southern California this winter. Please send me your free booklet about Southern California vacations. Also booklets telling especially of the attractions and opportunities in the counties which I have checked.

- Los Angeles
- Orange
- Riverside
- San Bernardino
- Santa Barbara
- Ventura

NAME

STREET

CITY STATE



Breaking the Storm

The first counter-attack on a blizzard usually comes from big snow plows like this one, which your electric railway company sends down the main highways.

And, in summer, street sweepers and sprinklers take up the work of public service.

Though seldom used, these great electrical machines represent a substantial investment to the company and a real necessity to the community.



You will find this monogram on little motors that run vacuum cleaners, as well as on the 40 h.p. motors of street sweepers and the 400 h.p. motors that handle heavy trans-continental trains. For every service the General Electric Company makes a suitable motor and control.

11-11
GENERAL ELECTRIC

She thought her teeth were clean

Her pride in their beauty was perfectly natural

Then an unpleasant discovery

SHE sat down before her looking glass and placed a little mirror inside her mouth, to look behind her teeth. Horror! At the gum-line she saw a suspicious gray-white deposit, Tartar. Here and there were small dark spots; and the spaces between the teeth had a discolored look.

She must go to her dentist. A brief examination, then the announcement: "Four cavities. A considerable amount of tartar."

"Must be my own fault, I suppose," she asked.

"Why, No," was the answer. "You take better care of your teeth than most of my patients. The trouble is, people don't realize how far they are from really cleansing the parts far back and the spaces between the teeth. Then they are surprised when troubles develop!"

"But how can a person get at such places?" she insisted. "Goodness knows I try hard enough!"

"You'd find a *liquid* cleanser would be a great help," the dentist suggested, "for it will reach the inaccessible places as readily as the visible outer surfaces. Lately, I have been testing such a preparation—the first real dentifrice in liquid form that I ever heard of—not a mere antiseptic wash but an efficient tooth cleanser. If you would use it regularly, you'd soon be aware of the benefit."

That is how she came to use Mu-Sol-Dent.

Discovered at Mellon Institute, University of Pittsburgh, after experts had tried for thirty years to find an "efficient solvent of mucin"—certified as such by this institution—Mu-Sol-Dent cleanses teeth in a new scientific way: It *dissolves* the sticky mucin film from the surfaces of the teeth.

Thus is removed the medium in which decay germs breed and in which are built up tartar crusts, to cause irritation and pyorrhea. Actual, practical experience, borne out by the willing testimonials of 4,000 dentists, shows that Mu-Sol-Dent does thus actually help to prevent decay and tartar.

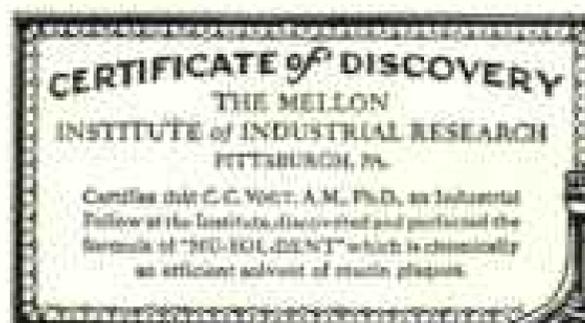
Mu-Sol-Dent is, moreover, a gargle and mouth wash of unequalled healing qualities. It does the work of a tooth paste, gargle, and antiseptic wash combined, in a safer, easier, more effective way.

At all leading drug stores. Get a bottle today or use coupon for sample.

Mu-Sol-Dent



"She * * * placed a little mirror inside her mouth, to look behind her teeth." Try it yourself! Look especially behind your lower front teeth. You, too, may be surprised at what you see.



A Liquid!

Only a liquid can reach and clean the hidden spaces where trouble starts.



Mail with 10c for Postage

The V. B. Corporation
916-N Forbes St., Pittsburgh, Pa.
Please send Free Sample Bottle of
Mu-Sol-Dent to

Name _____

Address _____

Sunshine

all
the
way



to **California**

VIA THE SUNSET LIMITED

IT'S summer right now on the "Open Window Route" to California. Romance—Scenery—Adventure—all in a delightful, balmy climate. Superb service and equipment, taking you through the heart of the great storied Southwest.

Stop over at New Orleans, Houston, San Antonio, El Paso. Fine hotels, country clubs, splendid automobile roads, golf, tennis and many other features to make your visit enjoyable.

Convenient service for the 120-mile motor side trip over the famous *Apache Trail Highway*. Also to San Diego via California's marvelous *Carrizo Gorge*.

THE SUNSET LIMITED

An all-steel, de luxe train operated *daily* from New Orleans to Los Angeles, San Diego, and San Francisco, with Club Car, Observation Car and latest type Dining and Sleeping Cars.

Sunset Route

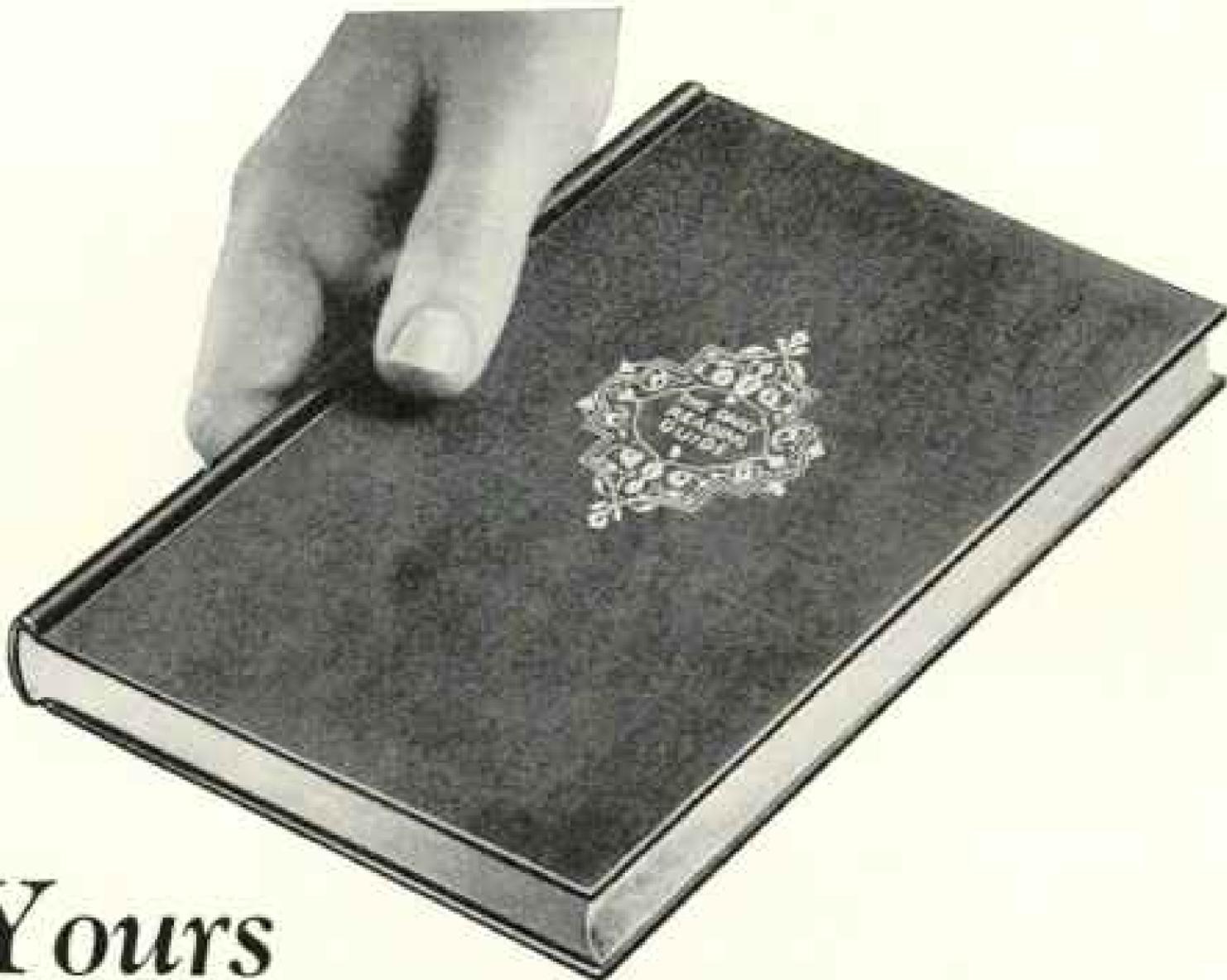
For information and descriptive booklets address any of the following offices:

New York
46 Broadway
Chicago
35 W. Jackson Bldg.
Houston
Southern Pacific Bldg.
Los Angeles
Pacific Electric Bldg.
New Orleans
Pan Am. Bank Bldg.
San Francisco
Southern Pacific Bldg.

S O U T H E R N P A C I F I C L I N E S



A thrilling experience is waiting for all who send for this book



Yours for the mailing of the coupon

"NO, I don't read many good books. I'd like to, but after a hard day at the office, I don't feel inclined for heavy reading."

The man who was talking had expressed surprise at his host's extensive library, where they were sitting over their cigars.

"There's nothing heavy about good literature if you read it in the right way," replied the host. "I like it best of all. Perhaps you've made hard work of it—tried to plough through the complete works of one author.

"What you need is variety—a short time with one author today—with another tomorrow. I wouldn't miss my few minutes a day of good reading for anything. It's done wonders for me. I can discuss books with anybody now."

How many times have you resolved to read the world's great masterpieces? Good reading is of the greatest value, giving broad culture, a more interesting personality, a keener mind, greater power of expression.

But there are so many good books! Which should we read? Where shall we begin? How can we avoid monotony and get daily variety?

What is this new idea?

Like a flash of inspiration came the answer to these questions. A group of the most famous men of letters created a new plan of reading, so that the very busiest person can become familiar with the greatest writings of all time. It actually makes good reading a *thrilling experience*.

"Just what I have always wanted!"

—thousands say of this new reading plan, based on a remarkable Daily Reading Guide, that schedules an entertaining variety of the world's very greatest prose and poetry on all subjects, for each day of a whole year. *And you need read for only twenty minutes a day!*

The selections fall on appropriate dates—an account of a great historic event on its anniversary—a reading from a favorite author, Lincoln, Washington, Byron, on his birthday.

A year's reading brings you broad culture. The Daily Reading Guide is acclaimed by thousands—millionaires, students, business men and women, all who are ambitious.

Simply mail the coupon

In the interest of good reading, the publishers are now distributing a limited edition of the Daily Reading Guide. You are asked only to help defray the expenses of handling and mailing by enclosing 25c. with the coupon. The Daily Reading Guide, bound in rich blue cloth with gold decorations, containing nearly 200 pages, with introductory articles and essays by the famous authors, will be sent to you entirely free of all other costs or any obligation, present or future.

Nelson Doubleday, Inc.
Dept. Y 6211
Garden City
New York

Nelson
Doubleday, Inc.
Dept. Y 6211
Garden City, New York

Gentlemen: In accordance with your special offer in extending the new plan of essential reading, send me a copy of the "Daily Reading Guide," handsomely bound in blue cloth and containing the program of daily reading for each day of the year, which embraces the essentials of the world's literature. I enclose 25c. (in stamps or currency) to defray cost of handling and postage. There is to be no further payment.

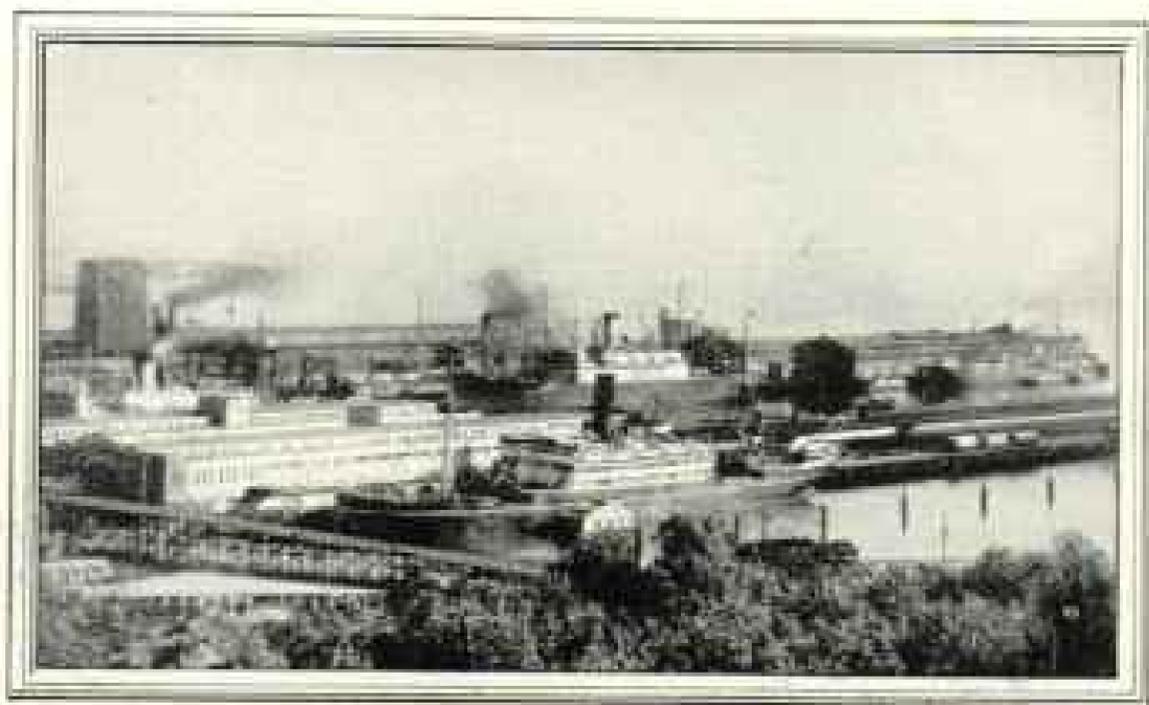
Name.....

Address.....

City..... State.....

CLIP, FILL IN AND MAIL AT ONCE

PACIFIC NORTHWEST



Shippers save from two to ten days and thousands of dollars by routing their trans-Pacific shipments through the great ports of Washington and Oregon.

The door to America's fastest growing market

The spectacular increase in our Oriental trade is the most striking feature of our foreign commerce in recent years.

While Europe's share of our total exports has fallen off greatly since the war, our exports to Eastern Asia were five times greater in 1924 than before the war.

Asia now absorbs one-eighth of our exports—\$665,600,000 worth. She sends us one-fourth of our total imports—\$985,000,000 worth.

To the Pacific Northwest this rapid growth in Far East commerce is of particular significance.

For the ports of Washington and Oregon are the natural gateway to the Orient with its tremendous, almost unlimited consuming market.

They are the nearest American ports to the Orient—from two to ten days nearer. Shippers to and from the Orient save substantially in time,

insurance and interest charges by using the Pacific Northwest route. They are able to meet better the requirements of Oriental buyers who almost invariably demand quick delivery of products they import.

The Pacific Northwest ports are also nearer by rail to the Atlantic seaboard. Their natural harbors and harbor facilities are unsurpassed.

With "the immutable law of the short haul" in their favor, the Pacific Northwest ports have established dominance in foreign trade on the Pacific Coast.

Yet, their present foreign commerce of half a billion dollars annually is but a foretaste of the future. As the curve of Oriental shipping sweeps steadily upwards, the ports of Washington and Oregon look westward, across a busy Pacific, to tremendous things beyond.

The Chicago Burlington & Quincy R.R.

The Northern Pacific Ry.

The Great Northern Ry.





ELBERT HUBBARD'S SCRAP BOOK

Actual size of book
8 1/4 x 10 1/4

Only
\$2.90

Elbert Hubbard's Source Book of Ideas - Now Yours!

His Private Scrap Book Published at Last!

IT is now possible for you to have the Scrap Book prepared by Elbert Hubbard for his personal use—the remarkable Scrap Book that helped him become America's most versatile orator and most prolific writer.

Between these two covers is the fruit of a lifetime's study and reading. Here are the thoughts that inspired Elbert Hubbard, the ideas that give him vision, the bits of wisdom that made him such a successful business man, the rare snatches of brilliance that made him so powerful an orator.

All here—as they were clipped and used by Elbert Hubbard himself. Choice selections from more than 500 master thinkers and writers.

This amazing Scrap Book is not only a source of lifelong inspiration, but a liberal education condensed into one beautiful and unique volume!

His Tremendous Output Traced to This Scrap Book

The enormous output and the unexampled versatility of Elbert Hubbard amazed everyone. He was editor and publisher, philosopher and business man, craftsman and executive, writer and orator. How did this self-taught man make himself a master in so many fields?

The answer is to be found in the Scrap Book, which he kept through the years and to which he turned constantly for ideas and for inspiration. In this Scrap Book he preserved the best of whatever he read—the rarest and choicest selections from the world's great masters.

A wide range of subjects found their way into its pages. Art, poetry, finance, economics, philosophy, history, conduct of life, ethics of business. Through the most painstaking research and study Elbert Hubbard finally pro-

duced a Scrap Book that is a whole glorious library in itself!

For Your Daily Use!

You cannot imagine what it will mean to you to own this extraordinary Scrap Book. You have only to glance through this storehouse of beautiful thoughts and sound wisdom to understand how Elbert Hubbard became so versatile and prolific, why he was able to talk and write so well on so many subjects.

Why search the world's vast storehouse of books to find the thoughts, ideas, and inspiration that are already gathered into this great Scrap Book—collected and preserved by one of the ablest minds of modern times?

Not An Ordinary Book—Unique and Beautiful

The Elbert Hubbard Scrap Book is a fine example of Roycroft bookmaking. The type is set Venetian style—that

is, a page within a page—and printed in two colors on fine tinted book paper. It is bound in scrap-book style and tied with linen tape. The covers are made of cloth-lined butcher paper, reproducing the binding of Elbert Hubbard's famous magazine, the *Philistine*.

We would like to have you see this Scrap Book, examine it, read it—judge it for yourself. May we send it to you on our special five-day approval plan?

Send No Money Now—Five Days' Free Examination

Just clip and mail the coupon today. It will bring to you immediately Elbert Hubbard's Scrap Book for five days' free examination. If you are stimulated and inspired, keep it for your own and send \$2.90, plus a few cents postage, in full payment. If you are not delighted, return the book to us and owe us nothing.

Clip off this coupon and mail it at once. Wm. H. Wise & Co., Roycroft Distributors, Dept. 1711, 50 West 47th Street, New York City.

Choice Bits From These Great Writers:

- H. G. Wells
 - Nachtlicht
 - George Eliot
 - Dante
 - Oscar Wilde
 - Shakespeare
 - Dickens
 - Aristotle
 - Daniel Webster
 - Huxley
 - Francis Bacon
 - John Ruskin
 - Charles Darwin
 - Confucius
 - Bierce
 - Benjamin Franklin
- and hundreds of other great minds from every age, every country, writing on almost every subject of general interest.

Wm. H. Wise & Co., Roycroft Distributors, Dept. 1711, 50 West 47th Street, N. Y. C.:

You may send to me for five days' free examination a copy of Elbert Hubbard's Scrap Book in the cloth-lined butcher paper binding. Within the five-day period I will either return the Scrap Book without obligation, or keep it for my own, sending you \$2.90, plus a few cents postage, in full payment.

Name
Address
City..... State.....

A few copies are available in a de luxe binding of semi-flexible basket-weave buckram for only \$1 additional. Please check in the square at the left if you want this de luxe binding, with the same return privilege.



springtime
begins~ the moment you board the
California Limited

-always exclusively first-class
Santa Fe "all the way"
the shortest route, Chicago to California

The journey there is a real pleasure through a sunny, scenic wonderland—and you can go via Grand Canyon National Park without change of Pullman. Fred Harvey dining service, another exclusive feature, is supreme in the transportation world. Five daily California trains on the Santa Fe.

Just mail
this

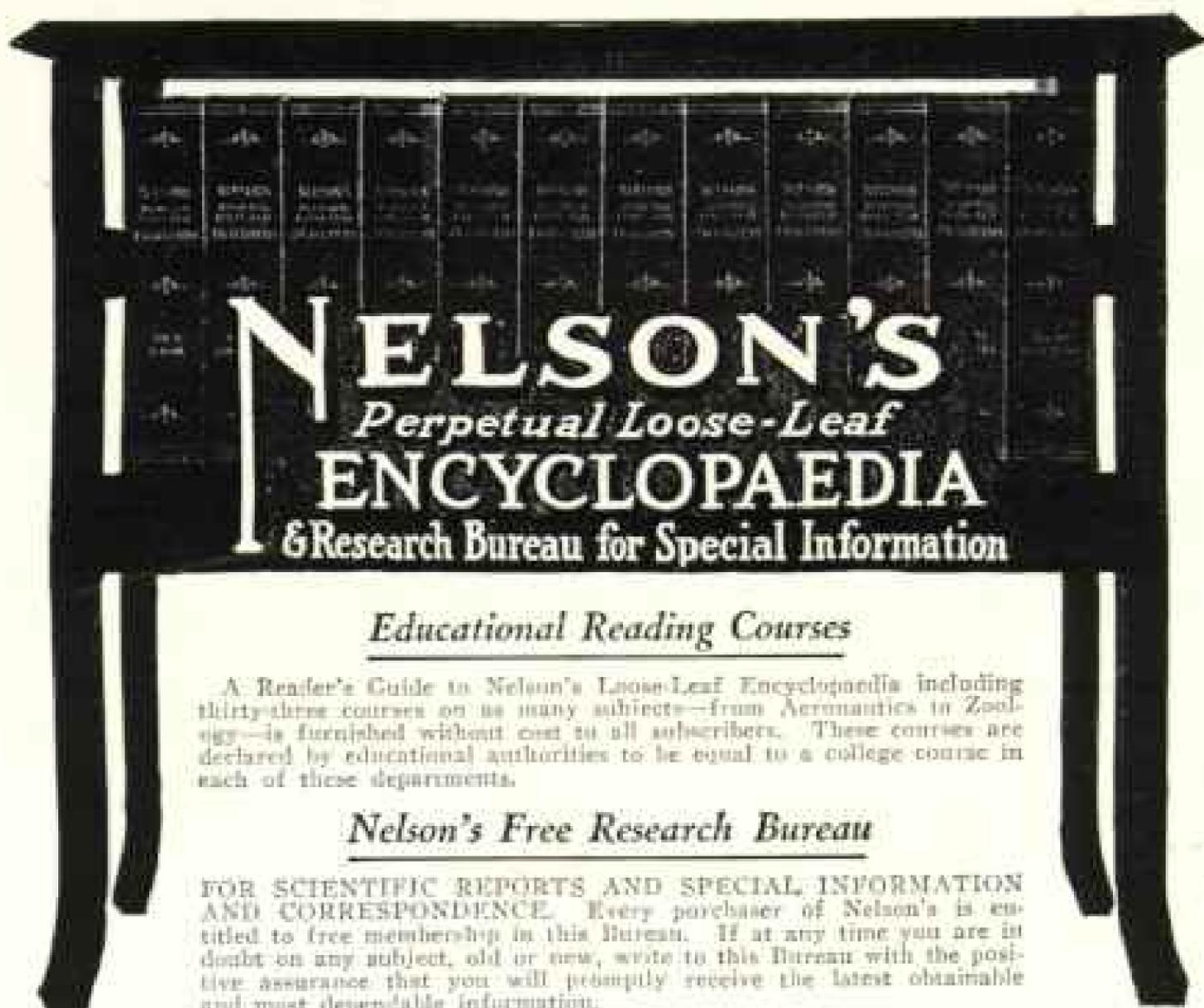
W. J. Black, Passenger Traffic Manager, Santa Fe System Lines, 1251 Railway Exchange, Chicago, Illinois.
Send me Santa Fe picture-folders of winter trip to California.

"I Wonder How He Knows So Much!"

How many men do you know who surprise you by the wealth of their general information and the breadth of their knowledge? If you were to inquire, you would find that nine out of ten of these men make a daily habit of consulting an up-to-date Encyclopaedia. Here they have the knowledge of the centuries—accessible, concisely and plainly stated, easy to grasp and to remember.

Get Your Facts From Nelson's

Every subject on which man would be informed is changing constantly. Nine times out of ten, the information you want is of current issue—a topic of to-day. All Encyclopaedias except Nelson's are deficient in this important and essential thing. The information which is obsolete is worse than none at all. You do not use a City Directory that is two years old. Why use an Encyclopaedia that is five or ten years old? Nelson's treats upwards of 1,000,000 topics, has 500 maps in color and black and white, and 7,000 illustrations to clarify the text, including text cuts, colored plates, photographs, charts, etc.



NELSON'S

Perpetual Loose-Leaf

ENCYCLOPAEDIA

& Research Bureau for Special Information

Educational Reading Courses

A Reader's Guide to Nelson's Loose-Leaf Encyclopaedia including thirty-three courses on as many subjects—from Aeronautics to Zoology—is furnished without cost to all subscribers. These courses are declared by educational authorities to be equal to a college course in each of these departments.

Nelson's Free Research Bureau

FOR SCIENTIFIC REPORTS AND SPECIAL INFORMATION AND CORRESPONDENCE. Every purchaser of Nelson's is entitled to free membership in this Bureau. If at any time you are in doubt on any subject, old or new, write to this Bureau with the positive assurance that you will promptly receive the latest obtainable and most dependable information.

An International Editorial Staff

NELSON'S PERPETUAL LOOSE-LEAF ENCYCLOPAEDIA—the Great American Reference Work—is published by one of the oldest and largest International Publishing Houses. The Editor-in-Chief is John H. Finley, LL.D., LL.H.D., Editor, New York Times; the Canadian Editor is Sir Robert Falconer, K.C.M.G., D.Litt., LL.D., President of the University of Toronto; the European Editor is Sir Henry Newbolt. Its staff of contributors includes men and women foremost in scientific, professional and public life, who are themselves making history.

THOMAS NELSON & SONS

Publishers for 127 Years

Originators of the Loose-Leaf Reference System

N. Geo.-II 351 Fourth Ave., New York City
77 Wellington St., W., Toronto, Canada

Please send me your portfolio of sample pages, beautifully illustrated, containing color plates, maps, and photographs, and full information how, by easy monthly payments, I can own Nelson's Perpetual Loose-Leaf Encyclopaedia and receive FREE Bookcase and membership in Nelson's Research Service Bureau for Special Information. This must incur no obligation whatever on my part.

Name.....

Address.....

City..... State.....

(Adv. Copyright, 1935, by Thomas Nelson & Sons.)



"Hat Weavers"

Hawaii

Palm leaf hats
in December

Cast off winter's chains this year for a ginger-flower lei! Wear a bathing suit and Hawaiian hat and let Waikiki's warm sands thaw the chill from your bones.

An Adventure—in comfort

Sailing with the sun, you turn off the steam in your stateroom. Luxurious ships, these that voyage the smooth seas direct to Honolulu from Los Angeles, San Francisco, Seattle, Vancouver and Victoria, B. C.

In 5 to 6 days you're sitting under a monkey-pod tree rubbing your eyes, wondering if you can make the folks back home understand how different Hawaii is!

Costs so little!

Linger a while in Uncle Sam's exotic mid-Pacific territory; you may do so at little extra cost. Hotel, apartment and cottage rates are moderate; you'll be surrounded by all accustomed comforts and conveniences. Or, if your time is limited, make round trip from the Pacific Coast in 3 or 4 weeks for as little as \$300 or \$400, including first-class travel and all incidentals, allowing a week or two in Hawaii. Book through your local railway, steamship or travel agent direct to Honolulu.

Golf courses on all larger islands. Swimming, surfing, deep-sea fishing, motoring, mountain hiking—all outdoor sports the year around. See volcanic wonderland of Hawaii National Park. Hawaiian music and dancing in its native locale. Write now—

HAWAII TOURIST BUREAU

212 MONADNOCK BUILDING, SAN FRANCISCO
141 FORT STREET, HONOLULU, HAWAII, U. S. A.

The Best Test of Safety

The best test of the safety of a bond is the record of the investment House which offers it to the public. Straus Bonds, yielding 6% for most maturities, and backed by our record of 43 years without loss to any investor, meet this and every other test the shrewd bond buyer can apply. Investigate. Write for

BOOKLET K-1508

S. W. STRAUS & CO.

Established 1882 • Investment Bonds • Incorporated

STRAUS BUILDING
365 Fifth Avenue
at 26th St.
New York

STRAUS BUILDING
Michigan Avenue
at Jackson Blvd.
Chicago

43 YEARS WITHOUT LOSS TO
ANY INVESTOR

© 1925—S. W. S. & Co., Inc.

The NILE

is Egypt!

The meaning of Egypt, its greatness, its romance, its magic and beauty cannot be appreciated or understood except by voyaging on its wonderful water-way.

Our Nile steamers and Dahabeahs offer the utmost in comfort and luxury for just such a voyage.

Regular sailings from Cairo to the First and Second Cataracts.

THOS. COOK & SON

First—Last—Always!

MEN have been known to go for months without shelter, for weeks without food and for days without water, but no one can live for more than a few minutes without air.

Breathing is the first necessity of life—yet few of us know how to breathe to develop our bodies and to improve our health. If we could be always in fresh air taking plenty of exercise, our usual undirected, instinctive breathing would naturally develop to give us better health. Nature would take care of us. But the conditions in which we live, the stress of present day life, cause us to accumulate an excess of poisonous waste products in our bodies. To help dispose of these we should go beyond instinctive breathing and at frequent times during the day mentally direct the breaths we take.

Count Your Breaths—

How many breaths a minute do you take? Stop now with your watch in hand and for 60 seconds count them. Fifteen to twenty short, top-of-your-lungs breaths? You are not breathing deeply. Occasionally you should take six or eight long, leisurely breaths a minute—so deep that the diaphragm is expanded and the ribs are barreled out. Several times a day stop what you are doing, stand straight with head up, shoulders back and breathe—always through the nose.

Try it this way—inhale, one, two, three, four; hold, five; exhale, six, seven, eight, nine; relax,



Baby's first cry! However it may sound to grandmother's ears, it is music to the baby's mother. Under the spell of her eager imagination that thin little cry is a call for her. But what he really is crying for is air. In the land of Unborn Babies he had no need to use his lungs. But here, in the great wide world, his first need is air and through every moment of his life he will demand air.

ten. This will give you six breaths a minute—quiet, unhurried breathing. After a time your unconscious breathing may become deeper and you will begin to feel a new and delightful sense of buoyant power.

Deep breathing exercises should be taken night and morning. Empty the lungs with each breath. This is important because fresh air removes harmful waste matter in the blood.

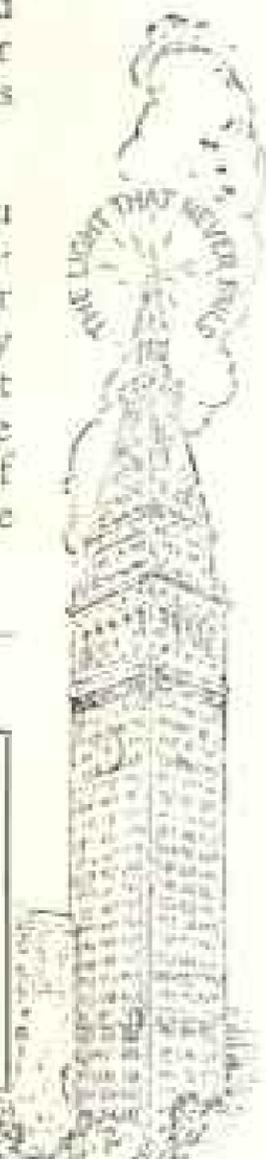
That "Stitch in the side"—

Have you ever felt a stitch in the side when running? This is a warning—not always that your heart is weak, or that you have indigestion, but sometimes that your lungs are unaccustomed to

being filled to their full capacity. One-third of the lung cells of the average person is unused. These cells tend to collapse and stick together. When the air is forced into them, it sometimes causes pain.

Your health demands that you should breathe properly. Without deep breathing of fresh air there cannot be an ample supply of oxygen. Without sufficient oxygen there cannot be adequate growth or repair of any part of the body, nor vigorous warfare against disease.

Begin today to breathe deeply—breathe for health.



About one out of six of the total number of deaths in the United States each year is caused by diseases which affect the lungs. Pulmonary tuberculosis and pneumonia claim more than 210,000 victims annually. Ten years ago the death-rate from tuberculosis was sixty per cent higher than it is today. Only a short time ago it was thought that fresh air must be kept away from patients suffering from lung trouble. Today it is known that fresh air is one of the main aids in getting well—and this knowledge has

helped to produce the marked decrease in tuberculosis death-rate.

The Metropolitan Life Insurance Company has prepared a booklet giving simple and interesting health rules, including scientific advice about fresh air and proper breathing. These rules, with the simple breathing exercise given above, can be followed by anybody who wishes better health. Send for a copy of "How to Live Long". It will be mailed free.

HALEY FISKE, President.

Published by

METROPOLITAN LIFE INSURANCE COMPANY—NEW YORK
Biggest in the World, More Assets, More Policyholders, More Insurance in force, More new Insurance each year



CANDY FOR CHILDREN should be simple, pure and attractive. WONDERBOX has become a household word because it delights both the sweets-loving child and the careful parent. In a colorful, picture package are clear barley sugar sticks and shapes, sweet chocolate moulded into animals, birds and butterflies.

Whitman's Wonderbox - for Children

An ideal gift for each little guest to carry home from the children's party. Sold singly, or packed in cartons of twelve, with twelve different designs. Supplied by the nearby store that is the agency for Whitman's.

STEPHEN F. WHITMAN & SON, Inc., PHILADELPHIA
NEW YORK CHICAGO SAN FRANCISCO

DO THE WORLD'S GREATEST SOUP CHEFS MAKE YOUR SOUPS?



Have you ever considered the obvious advantages of having your soups made by our famous French chefs who have devoted practically their entire lives to soup blending.

Certainly it is a reasonable supposition that such "specialists in soups" produce superior blends. And certainly, again, the soups prove it!

Let Campbell's Tomato Soup demonstrate to your discriminating taste what fineness of flavor, what perfect proportioning of splendid ingredients can achieve in a soup.

Only such tomatoes as you would consider choice for your table are used in making this soup. Only the puree of rich tomato juices and luscious tomato meat with the added nourishment of fresh country butter. And the palate always responds to its tempting taste!

The Cream of Tomato!

It's prepared with Campbell's Tomato Soup according to the simple directions on the label. You will agree that this most appealing and satisfying of soups could not be more deliciously prepared than with Campbell's—and it's so convenient.

21 kinds

12 cents a can

Look for the Red-and-White Label





Service cannot stop

The telephone, like the human heart, must repair itself while it works. The telephone system never rests, yet the ramifications of its wires, the reach of its cables and the terminals on its switchboards must ever increase. Like an airplane that has started on a journey across the sea, the telephone must repair and extend itself while work is going on.

To cut communication for a single moment would interrupt the endless stream of calls and jeopardize the well-being and safety of the community. The doctor or police must be called. Fire may break out. Num-

berless important business and social arrangements must be made.

Even when a new exchange is built and put into use, service is not interrupted. Conversations started through the old are cut over and finished through the new, the talkers unconscious that growth has taken place while the service continues.

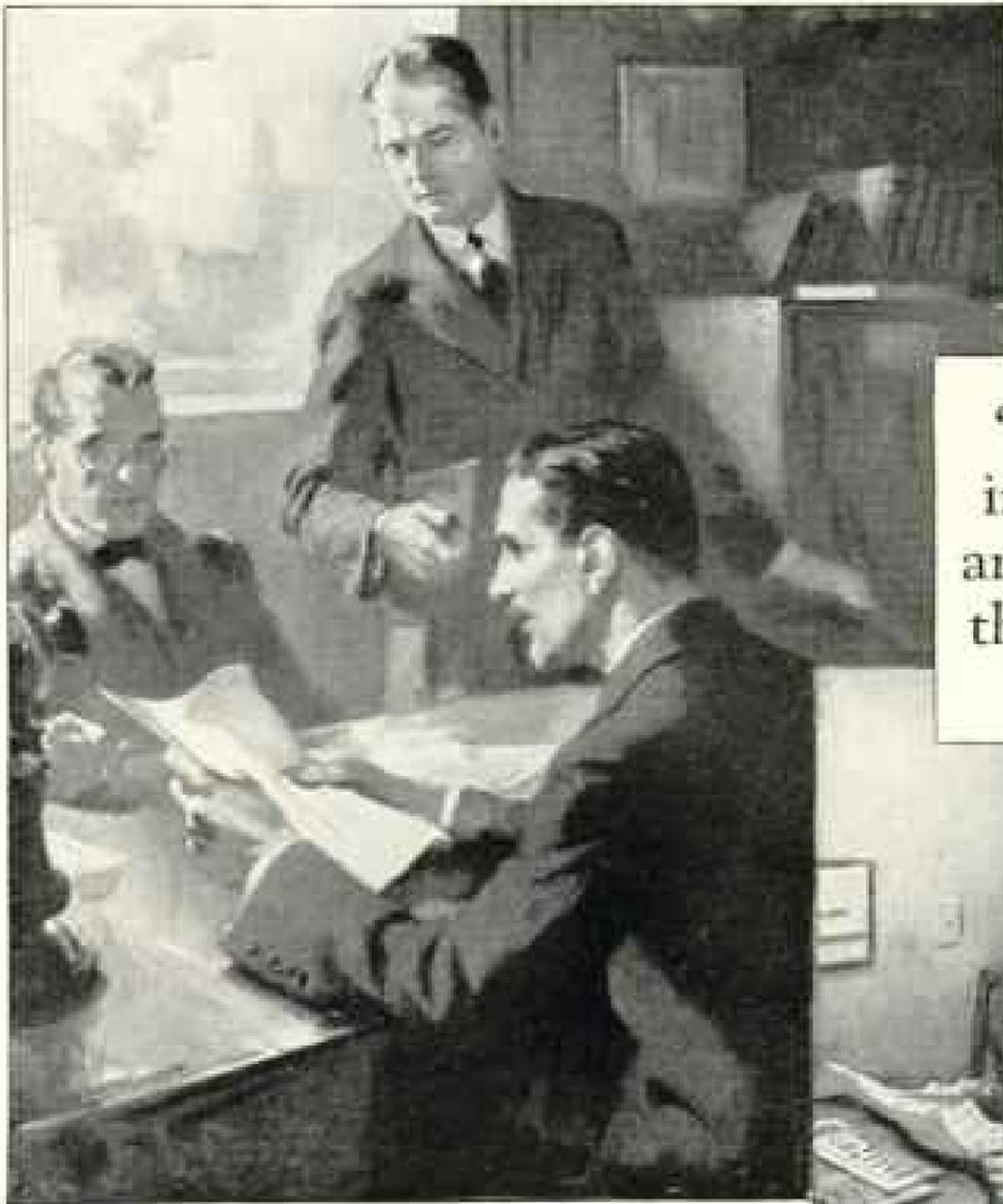
Since 1880 the Bell System has grown from 31 thousand to 16 million stations, while talking was going on. In the last five years, additions costing a billion dollars have been made to the system, without interrupting the service.



**AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES**

BELL SYSTEM

One Policy, One System, Universal Service



“Two
incomes
are better
than one”



Build both together

The forward looking man builds up two incomes—one from his business or profession, one from his bond investments. If he has been wisely investing his surplus, he will have an income from his securities to fall back upon should his business income fall off at times. The more carefully he has invested, the more dependable this income.

Our offices in fifty leading cities are ready to help you build a second income through well-secured bonds.

The National City Company

National City Bank Building, New York

BONDS • ACCEPTANCES
SHORT TERM NOTES



Offices in more than 50 leading
cities throughout the world



Special Offer

Read the offer below that puts the last touch on a perfect shave

24 hour shaving comfort

YOU know how your fingers approve the velvety feel of your skin after your morning shave with Williams Shaving Cream.

No lucky accident about it, either. Williams Cream was specifically made to leave your skin conditioned as well as smoothly shaved.

Wouldn't you like to keep that "just-shaved-with-Williams" feeling all day long? Read our special offer. This offer will allow you to enjoy an after-shaving comfort that you may have thought impossible.

Williams shaving specialists created Aqua Velva, a pure amber liquid, to keep your skin as soothed and velvety as Williams Shaving Cream leaves it.

Designed solely for use after shaving, it benefits your skin in these five ways:

- it tingles delightfully when applied
- it gives first aid to little cuts
- it protects the face from cold and wind
- it prevents face-shine
- it delights with its man-style fragrance

The large 3-ounce bottle at your dealer's is 50c (60c in Canada).

Williams Aqua Velva

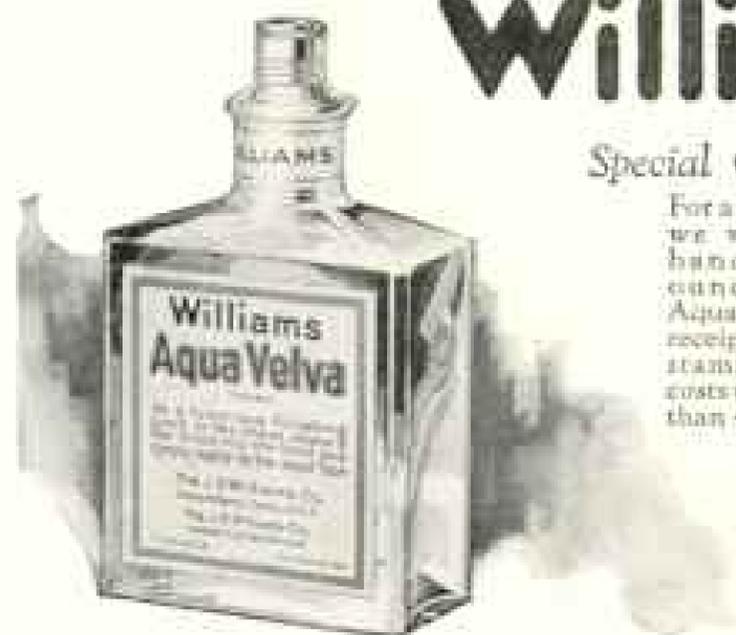
for use after shaving

SEND COUPON FOR SPECIAL 1-OZ. BOTTLE

The J. B. Williams Co., Dept. 511, Glastonbury, Conn. If you live in Canada, address The J. B. Williams Co., 51, Patrick Street, Montreal

Enclosed is 4¢ in stamps for the 1-oz. bottle of Aqua Velva.

MACT Gen. 11-18



Special Offer

For a limited time, we will send a handsome one-ounce bottle of Aqua Velva upon receipt of 4 cents in stamps. This size costs us much more than 4 cents.

The Favored
Four—Already
Chosen by Tens
of Thousands!



Bearing the same standards of surpassing value which characterize its companion car, the famous Chrysler Six; built by the same skilled Chrysler craftsmanship and of the same high quality of alloy steels; of the same distinctive beauty of color and line—little wonder that the new Chrysler Four is sweeping the country.

Literally sweeping the country, for Chrysler production has been forced by public demand to the great total of more than 800 cars per day.

Tens of thousands of new owners have chosen the Chrysler Four in the

three months since its announcement in comparison with both fours and sixes of equal or greater price.

So velvety smooth is its power flow even at the lower speeds, so lightning-like its effortless acceleration, so free from resonance and any sense of vibration, that the Chrysler Four is acclaimed as the ultimate development of the four-cylinder principle.

We are eager to have you test the Chrysler Four in your own way, at your earliest opportunity. It will not take you long to learn the reason for such universal favor.

CHRYSLER FOUR—Touring Car, \$895; Club Coupe, \$995; Coach, \$1045; Sedan, \$1095.
Hydraulic four-wheel brakes at slight extra cost.

CHRYSLER SIX—Phaeton, \$1395; Coach, \$1445; Roadster, \$1625; Sedan, \$1695; Royal Coupe, \$1795; Brougham, \$1865; Imperial, \$1995; Crown-Imperial, \$2095.

All prices f. o. b. Detroit, subject to current Federal excise tax.

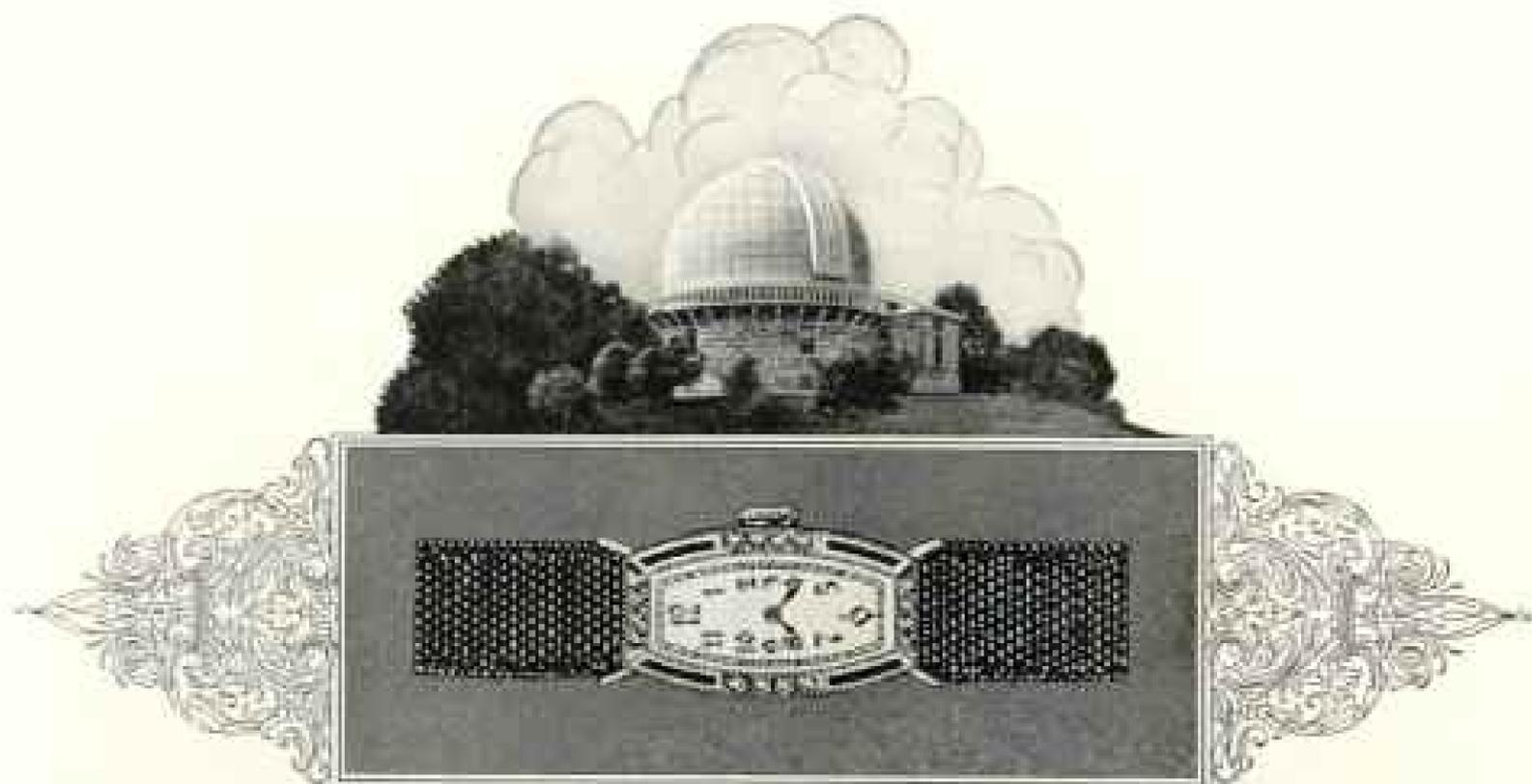
Bodies by Fisher on all Chrysler enclosed models. All models equipped with full balloon tires.

There are Chrysler dealers and superior Chrysler service everywhere. All dealers are in position to extend the convenience of time-payments. Ask about Chrysler's attractive plan.

All Chrysler models are protected against theft by the Fedco patented car numbering system, exclusive with Chrysler, which cannot be counterfeited and cannot be altered or removed without conclusive evidence of tampering.

CHRYSLER SALES CORPORATION, DETROIT, MICH.
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONTARIO

CHRYSLER FOUR



**Official Government
Observatory Awards**

At U. S. Naval Observatory—Washington: Longines have been first in order of merit in all International Trials. Since 1905 more Longines Watches passed six months' Accuracy Trial and were accepted than all others combined.

At Geneva Observatory—Switzerland: This year Longines again obtained first prize of series, duplicating results of 1923 and 1924.

At Neuchâtel Observatory—Switzerland: 102 awards to Accuracy Competitions 1926. During 1921 Longines received 17 first prizes.

At King Teddington Observatory—England: 102 awards to Accuracy Competitions since 1910 (1915 year's record for the best performance). Since 1915 every Longines Watch submitted passed trial with mention "especially good."

When time itself is judge

Many long years ago Longines Watches acquired honor and merit for measuring time accurately. Official observatory tests proved them. At International exhibitions they won the Grand Prizes. Time, and occasions, added honor to honor until good jewelers all over the world recognized the supreme accuracy of Longines.

Then, in the pockets of hundreds of thousands of owners of all nationalities, Longines Watches lived up to their reputations. In all these years, Time has only proved and re-proved Longines accuracy.

Is it not remarkable that this accuracy can be bought at prices ranging from \$35 to \$1000? Let us send you an illustrated booklet and tell you of a jeweler near you who will show you Longines Watches.

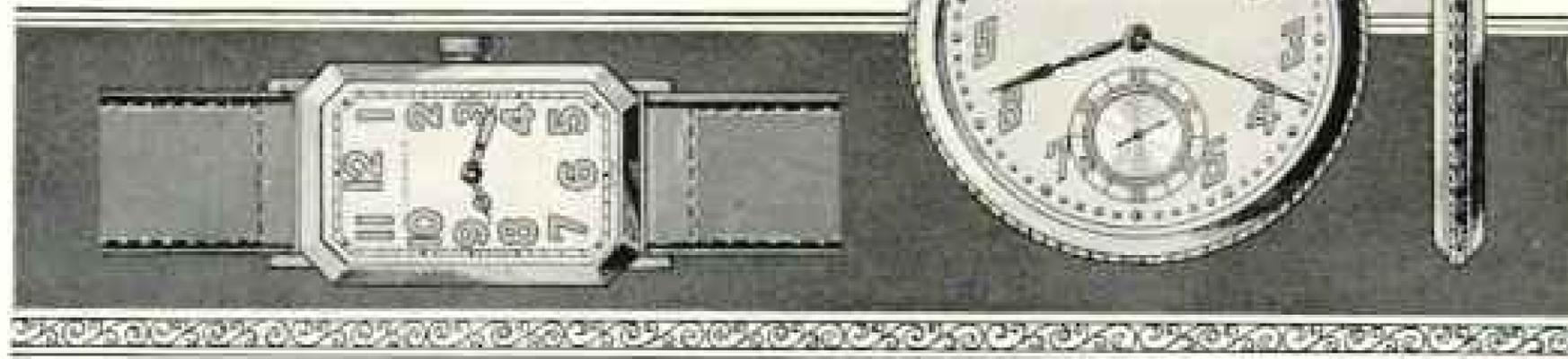


A. WITTAUER CO.

Established 1885

New York Montreal Paris Geneva

The Longines WATCH



WILLYS · OVERLAND · FINE · MOTOR · CARS



... an engine you'll never wear out . . .
very quiet, very smooth, very powerful—at your
first mile . . . still more quiet, still smoother, more and
more powerful at 50,000 and over . . . a motor-mechanism,
the only one known, that actually *improves* with use . . . beauty—
luxury—richness—comfort . . . all these are present to a pronounced
degree in this remarkable motor-car. But why expatiate upon such
virtues when their eloquent epitome is here before your-eyes.

WILLYS-OVERLAND, INC., TOLEDO, OHIO
WILLYS-OVERLAND SALES CO., LTD., TORONTO, CAN.

*Standard motor models from \$1730 to \$2295 • Four-cylinder
models from \$1195 to \$1795. All prices f. o. b. Toledo.*

WILLYS-KNIGHT SIX

THE SYMBOLS OF A DISTINGUISHED MOTOR CAR

FADA

Radio



Tune up your toes
Lopez is on the air!

EVERY tonal shading, every voice variation comes over "Fada Radio—the Standard of Reception" with extraordinary clarity—distinct, crisp, true.

This quality, together with remarkable ease and certainty in tuning in and out and the ability to get real distance have made Fada Radio the cri-

terion for almost all worthwhile radio performance.

The nearest Fada Authorized Dealer will gladly demonstrate Fada Radio in his store or in your own home—free of charge or obligation.

And to Fada Radio owners he will give Fada Service that insures permanent satisfaction.

Telephone him today.

Most Fada dealers will be glad to arrange convenient terms of payment. Send to 1501 Jerome Avenue, New York, for free book E, "Fada Radio—the Standard of Reception".

F. A. D. ANDREA, INC.

CHICAGO NEW YORK SAN FRANCISCO
FADA RADIO, LTD.—TORONTO FADA RADIO, LTD.—LONDON

Manufacturers of TUNED-RADIO-FREQUENCY receivers using the highly efficient NEUTRODYNE principle

There is a Fada Radio model for every purse—all 5 tube Neutrodyne sets for dry cell or storage battery tubes, from \$85 to Art Cabinet models up to \$300. Illustrated is the Console at \$275.



NEUTRODYNE

Burroughs

Gives You

Highest Quality ~ Best Resale Value
Unequaled Mechanical Service ~
Right Machine for Your Work



BURROUGHS ADDING MACHINE COMPANY
6285 SECOND BOULEVARD
DETROIT, MICHIGAN

ADDING · BOOKKEEPING · CALCULATING · BILLING MACHINES



© W. S. C. Inc.

Italian in speed, French
in smartness, English in
economy of fuel, American
in price and power.

WILLS SAINTE CLAIRE

WILLS SAINTE CLAIRE, Inc. . . .
Mayville, Michigan

Miami Beach, Florida

America's Winter Playground

The Carly Fisher Hotels



*Florida's
foremost resort
hotels*

The Nautilus

Geo. S. Krom, Mgr.
Opens Jan. 3rd

The Flamingo

C. S. Krom, Mgr.
Opens Dec. 15th



The King Cole

Wm. M. Gale, Mgr.
Opens Dec. 15th

The Lincoln

B. Lundberg, Mgr.
Opens Nov. 1st





Perfect healing. An oak on the estate of Mrs. Wm. K. Dupont, Wilmington, Del.

A quarter of a century saving trees

It is now more than 25 years since John Davey conceived and began to practice his new science of saving trees. From its first simple beginnings Davey Tree Surgery has advanced to a degree of scientific and mechanical perfection that is little short of marvelous.

Davey Tree Surgery is based on *proved* principles, on a great fund of practical experience on hundreds of thousands of trees—189,620 in 1925 alone. You do not need to take a chance with untrained or irresponsible men for the care of your priceless trees. Davey Tree Surgeons are *safe*; they save your trees without guessing or experiment.

Davey Tree Surgeons are local to you—anywhere between Boston and Kansas City, between Canada and the Gulf.

THE DAVEY TREE EXPERT CO., INC.
296 City Bank Building
Kent, Ohio

Attach this coupon to your
letterhead and mail today

THE DAVEY TREE
EXPERT CO., INC.,
296 City Bank Bldg.,
Kent, Ohio

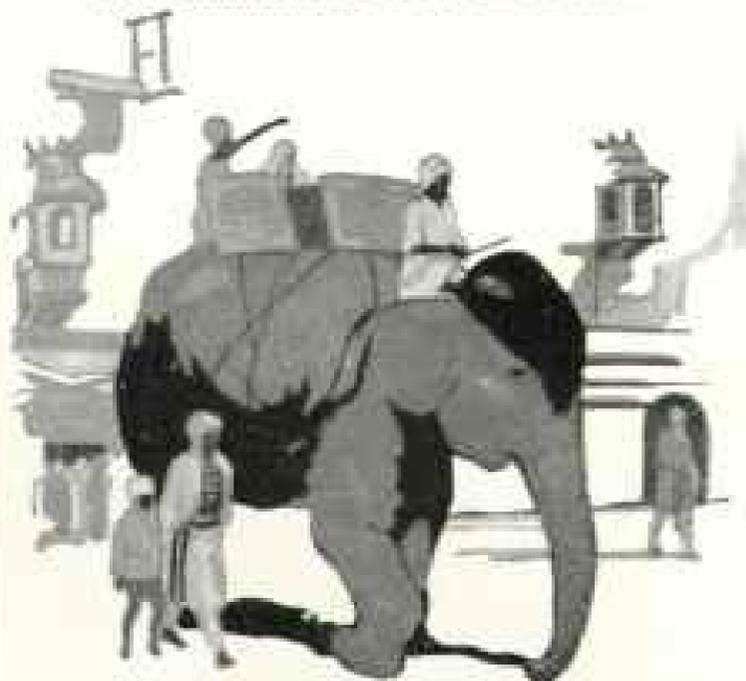
Reg.
U. S.
Pat. Off.



JOHN DAVEY
Father of
Tree Surgery

Gentlemen: Without cost or obligation on my part, please have your local representative examine my trees and advise me as to their condition and needs.

"The Sunshine Belt to the Orient"



Tour the Orient to find new interests, strange adventures and lands of infinite charm

The days you spend in the Orient will always be numbered among your most delightful experiences.

No two are alike. For the Orient is constantly new and alluring to those who visit its lands.

Hawaii, Japan, China—you have heard and read much about their beauty and their charm. Yet you know so little of the wonders you find there.

The Philippines, Malaya, Ceylon, India—each has its own distinct individuality, its mysticism, its quaintness and its interesting people.

The Nile, the Pyramids, the Sphinx are but a few of the better known sights in Egypt. They represent the age-old civilization of the Pharaohs. But there is much else, the newer developments of this great land to see.

The Holy Land is nearby. And crossing the Mediterranean, you visit Italy and France.

Surely no itinerary can promise more. Yet this is the route of the palatial President Liners of the Dollar Steamship Line. They call at 22 world ports on regular schedules.

Saturday Sailings

Every Saturday one of these magnificent oil-burners departs from San Francisco for the Orient and Round the World. They are luxurious in their appointments.

All rooms are outside deck-rooms—those with private bath predominate. The cuisine is famous.

There are in addition fortnightly sailings from Boston and New York for the Orient via Havana, Panama and California. A fortnightly service returning to San Francisco from the Orient.

For complete information relative to this finest service communicate with any ticket or tourist agent or with one of the United States or foreign offices of the

DOLLAR STEAMSHIP LINE

15 Moore Street, New York City

177 State Street, Boston, Mass.

112 West Adams Street, Chicago, Ill.

101 Bourse Building, Philadelphia, Pa.

626 So. Spring Street, Los Angeles, Calif.

Hugh Mackenzie, G. P. A.

Robert Dollar Building, Department M711
San Francisco, California

10-Day Test FREE—
Mail the Coupon

Maybe your teeth are gloriously clear, simply clouded with a film coat. Make this remarkable test and find out.

Now!

A new way to lighten cloudy teeth



— and without bleaching or harsh grit. The way foremost dentists now are urging for dazzling teeth and firm and healthy gums

DULL teeth, "off-color" teeth; gums that are softening, lacking firmness—modern science has made important, new discoveries in overcoming them.

Now, in as little as ten days, you can work a transformation in your mouth, can add immeasurably to your appearance and attractiveness.

This offers you a test without charge . . . the most remarkable, according to dental authorities, of all dental tests. In fairness to yourself, send the coupon.

*FILM—your enemy. How it invites
tooth and gum troubles*

Dental science now traces scores of tooth and gum troubles, directly or indirectly, to a germ-laden film that forms on your teeth.

You can't see it with your eyes, but run your tongue across your teeth and you will feel it . . . a slippery, viscous coating.



That film absorbs discolorations from food, smoking, etc. And that is why your teeth look "off color" and dingy. It clings to teeth, gets into crevices and stays.

It lays your gums open to bacterial attack. Germs by the millions breed in it. And they, with tartar, are a chief cause of pyorrhea and decay.

Brushing won't end it

Ordinary dentifrices and cleansing won't fight film successfully. Feel for it now with your tongue. Note how your present cleansing method is failing in its duty.

Now *new* methods are being used. A dentifrice called Pepsodent—different in formula, action and effect from any other known.

It removes that film. And Firms the Gums

It accomplishes two important things at once: Removes that film, then firms the gums. No harsh grit, judged dangerous to enamel.

A few days' use will prove its power beyond all doubt. Why cling to old methods when world's authorities urge a better way?

FREE Mail Coupon for
10-Day Tube to
THE PEPSODENT COMPANY
Dept. 14 1108 E. Wabash Ave.
Chicago, Ill., U. S. A.

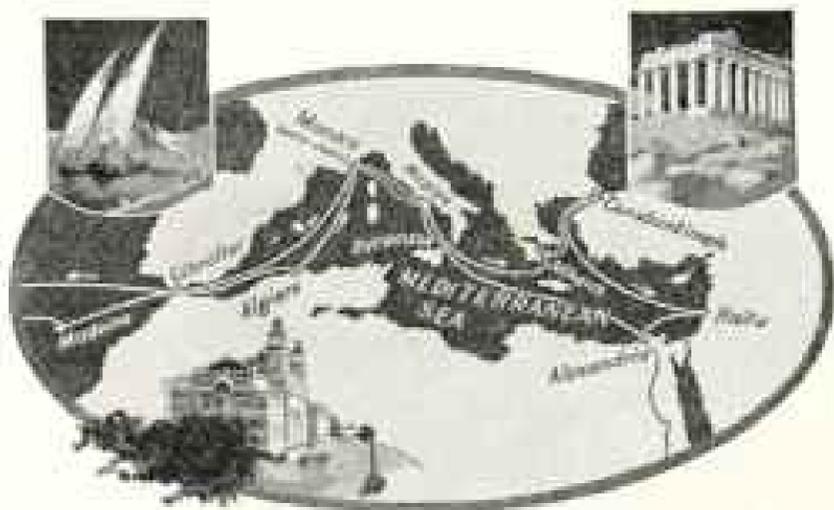
Pepsodent
The New-Day Quality Dentifrice
Endorsed by World's Dental Authorities

Name.....

Address.....

Only one tube to a family.

1491



Flashing Contrasts on the MEDITERRANEAN

You roll along the Nile in a train de luxe amid scenes but little changed since the days of Antony and Cleopatra. From Luxor and Cairo you return to your cruise home, the great liner which is the triumph of modern engineering, the embodiment of modern luxury.

Now you dip into the gay whirl of Monte Carlo. Later you stand before the Parthenon to dream of Greece and her ancient glories.

Such are the elements out of which the White Star and the Red Star Lines have built a travel masterpiece.

White Star Liner **ADRIATIC**
Jan. 7 and Feb. 25

Red Star Liner **LAPLAND**
Jan. 16 and March 6

Home in 46 days. Stop-overs from one ship to the other permitted. Optional return via North European port, allowing opportunity for visits to Paris and London.

\$690 and up, including shore trips.

West Indies Cruises: 30-31 Days. White Star Liner *Megantic* Jan. 25 and Feb. 27

Write for our booklet, "What You See on the Mediterranean Cruises." Address Cruise Department, No. 1 Broadway, New York City, or any authorized steamship agent.

WHITE STAR LINE
RED STAR LINE

CORRECT JEWELRY
FOR GENTLEMEN

14 Kt. Rolled White Gold Plate



1978 \$5.50 Pair

Hand Engine Turned Design



2192 \$2.50 Pair

Engine Turned Design



2135 \$3.50 Pair

Hand Brocaded Design

Krementz Links Make Wonderful Gifts!

What a big part links play in a man's attire! Because of their importance to the well dressed man he receives many as gifts. You can be sure that those you give are distinctive by selecting Krementz. For their quality is so fine, the construction so sturdy that each pair is guaranteed to wear a lifetime. Not only are the designs pleasing—they are exclusive with Krementz links. The name Krementz is stamped on the back of each. Ask any of the finer shops catering to the wants of the well dressed man,—they know!

Write for folder of new designs.



Beautiful blue leatherette, richly lined gift boxes 50c extra.

Krementz

Newark, N. J.



DODGE BROTHERS SPECIAL COACH

A recent reduction in price is not the only advantage to be considered.

The Coach protects children against open rear doors. It affords exceptional vision on all sides. It provides an intimate and yet roomy interior.

In the Special type, it carries complete special equipment, including nicked front and rear bumpers, nicked radiator shell, steel disc wheels, motometer with lock, rear vision mirror, scuff plates, cowl lights and smart special body striping—a striking closed car value.





Oyster dressing gives the turkey a rare flavor

RECIPE

Four-boiling water over 4 quarts of stale bread crumbs. Let steam, then drain off. Add 2 well-beaten eggs, 4 tablespoonfuls of butter, salt, pepper. Then add a quart of Oysters. Season with eggs, if desired.

Luscious Oysters on the half-shell, or the delicious hot ones, help break the monotony of Autumn or Winter Day Menus.

For the Meal of the Day, a crisp, brown Oyster Fry, heavily coated with cracker crumbs, in a luring setting of green lettuce, is unequalled.

Steamed Oysters, oozing with seasoning, provide a repast that is irresistible.

Government experts have found 98 ways to easily prepare this health-giving sea delicacy. Mail coupon for Free Booklet: "Oysters: An Important Health Food."

Oysters are

- 1—easily digested
- 2—self-sufficient as a diet
- 3—rich in Vitamin C, an essential food element
- 4—200 times stronger in Iodine content than Milk or Eggs
- 5—nourishing, but non-fattening

ORDER THE OYSTER
for your health's sake

Oyster Growers & Dealers
Ass'n of North America



U. S. Bureau of Fisheries, Washington, D. C.
Oyster Growers & Dealers Ass'n.
1125 Conn. Ave. N. W., Washington,
D. C.

Please mail me Free Booklet, "98 Ways to Prepare Oysters," or "Oysters: An Important Health Food."

Name _____
Address _____
City _____ State _____

**FREE
RECIPE
BOOK**

**98
WAYS TO
PREPARE
OYSTERS**

**PEOPLE WHO DEMAND
The Best the World Produces**

Are Taking Personal Motion Pictures

with

FILMO

Automatic

**MOTION
PICTURE
CAMERA**

For the Individual



Easy as sighting a spy-glass

Vice-President Dawes, J. Pierpont Morgan, W. K. Vanderbilt, Gail-Curtis, Edith Goddard, P. K. Wrigley, and many other universally known people are typical FILMO owners. Wherever people of prominence get together you see this beautiful "movie" camera in action. It is the personal motion-picture camera that sights from the eye, like a spy-glass, getting whatever is seen in the finder. With FILMO you, too, can record family scenes, social events, travel, outings, sports—in pictures that last. Easier than taking snapshots.

Anyone can operate FILMO. A touch of the button takes the pictures. No cranking. No tripod necessary. Because FILMO embodies the same general principles of design and construction found in the famous Bell & Howell professional cameras costing up to \$1,200, used almost exclusively in motion-picture studios the world over, you are assured pictures of the same high quality as those seen in the better theaters.

Show your pictures on a wall, curtain or screen in your own home by means of the FILMO Projector. Camera and Projector of highest known quality, designed to please particular people. Sold by leading dealers everywhere. Full information sent upon request.

Booklet

**"WHAT YOU SEE
YOU GET"**

Tells the Whole
Interesting Story

Write for It!



BELL & HOWELL CO.
1817 Larchmont Avenue
CHICAGO, ILL.

YOUR TOUR ABROAD

Is too important a matter to be decided without first investigating the advantages offered by the Bureau of University Travel, a unique organization operated without private profits. Membership in its tours insures best leadership—lowest cost—greatest satisfaction.

Small parties will sail in January for
EGYPT - PALESTINE - NORTH AFRICA - SPAIN
Write for Illustrated Booklet



BUREAU OF UNIVERSITY TRAVEL
9 Boyd Street Newton, Mass.

THE QUALITY RAZOR OF THE WORLD

SHAVING is just a before-breakfast incident if you make use of the Gillette Blade. It has the finest shaving edge that steel will take.

Not the product of over-night provision, but of long years of patient research and experiment is this shaving edge. The finest of blade steel, a perfected process of manufacturing and a vigilant inspection system—all of these attest the exceptional value in the Gillette Blade.

Used in a New Improved Gillette, it is indeed the ideal way to a perfect shave—quickly, safely, comfortably.

GILLETTE SAFETY RAZOR CO., BOSTON, U. S. A.

Gillette

SAFETY  RAZOR
BLADES



The Gillette Bostonian
In gold plate, \$6.
In silver plate, \$5.

Whether you have a beard "like wire" or as soft as silk, your GOOD shave will become a PERFECT shave if you read "Three Reasons"—a new shaving booklet just published. A postcard request and we'll gladly send you a copy with our compliments.



They can be had on any Lavatory—

SPEAKMAN Lavatory Fixtures have built into them the same quality which has made SPEAKMAN Showers so nationally used. Furthermore SPEAKMAN Lavatory Fixtures can be had for any type or kind of lavatory. Because of this you can select the lavatory you desire, knowing that the lavatory escutcheons and handles will harmonize with the escutcheons and handles of your SPEAKMAN Shower and SPEAKMAN Bath valves. All of these products made by the SPEAKMAN COMPANY have behind them nearly 60 years of experience in the plumbing industry. Your plumber knows SPEAKMAN products. They are sold and installed by nearly 20,000 plumbers and handled by practically every jobber of any size in the country.

We'll be glad to send literature on SPEAKMAN Lavatory Fixtures, also SPEAKMAN Showers, Bath and Sink Fixtures.

SPEAKMAN COMPANY
WILMINGTON, DELAWARE

SPEAKMAN SHOWERS

and **FIXTURES**

7th Annual
American
Express



2 Wonderful cruises in 1

Seventy happy days—a palatial steamship—sailing away from Winter—through the sunny islands of the West Indies to the gorgeous ports of South America. Through the Panama Canal, over the Andes, along the Spanish Main—you traverse scenes rich in historical and romantic interest. Total cost (including all shore excursions) \$1850 and up. As reservations are made in the order received, and as the party will be strictly limited, you should write at once for Booklet "F" showing deck plans with full itinerary and other details.

American Express Travel Dept.
65 Broadway, New York

Always carry American Express Travelers' Cheques



Enjoy your
Geographics
for a
Lifetime
in
**MOLLOY
MADE
COVERS**



David J. Molloy

EVERY number of the Geographic is worth reading again and again. Bind your Geographics in Molloy Made two-tone embossed covers and they will be preserved to give you a lifetime of enjoyment and instruction.

Six copies can be bound in one cover, and covers are available for issues back to 1912. Price \$2.00 each or \$3.65 a pair. Punch and instructions furnished enable you to bind copies yourself easily without gluing or sewing. Simply punch copies and insert in binder. Specify years or volumes wanted. Your money refunded if you are not pleased.

THE DAVID J. MOLLOY COMPANY
2863 N. Western Avenue, Chicago, Ill.



UNLIKE ANYTHING ELSE
 -- IT IS DUCO, THE BEAUTIFUL, ENDURING FINISH

*Its smart lustre
 responds at a touch*

THE chauffeur-driven car, in spite of wear or weather, always looks well groomed... because the finish is given constant care.

Your automobile, finished with Duco, needs but little attention to look its brightest and best under every condition.

Down years of weathered roads, it will hold its first sparkling newness.

*New or old, your car deserves
 Duco. Lustre upon the genuine*



CREATED and made only by du Pont, Duco is a finish of sleek smoothness and astonishing durability. Extremes of temperature do not harm it; neither do icy storms, the sun, nor protracted rains. Duco is easily kept shining with Duco Polish No. 7, its lustre actually increasing in beauty as time goes by. Mud, grease and oil are wiped away without injury. Even strong soaps have no effect upon it. It is easier to clean and costs less to keep clean. Remarkable qualities of permanence and smart appearance earned for Duco quick adop-



tion by the representative makers of automobiles whose trade-marks appear above. Furthermore, Duco is widely used for refinishing old cars. There is a Duco Refinishing Station in almost every locality. Renew the value of your car under the protection of its sign. It identifies a shop qualified to apply genuine Duco and du Pont undercoatings. E. I. du Pont de Nemours & Co., Inc., Chemical Products Division, Paris, N. J., Flint, Mich., Chicago, Ill., San Francisco, Cal., Everett, Mass., or Flint Paint & Varnish Limited, Toronto, Canada.

There is only ONE Duco — DU PONT Duco



Plan now for Tucson

GLORIOUS OUTDOOR LIFE
ALL THE SUNNY WINTER

Tucson, garden city of Arizona, bids you
come this winter.

Boundless stretches of open country, skies
that are blue, days brilliant beyond com-
pare await you here.

Send for Booklet

Now, while this invitation is before you, take the
first step toward coming to Tucson—fill in the
coupon and mail it today.

In return a copy of "Man-Building in the Sunshine-
Climate" will be sent you. This illustrated book
tells in simple, straightforward language the facts
you will want to know about Tucson, of how hun-
dreds each winter find benefit—often complete re-
lief—from pulmonary infections, physical depletion,
"nerves", asthma and other disorders responding to
outdoor living and favorable climatic conditions.

Tucson is the ideal place to play, rest, or rebuild
physically. Splendid hotels, golf and town clubs
open to visitors.

Low Rates

Winter excursion rates now in effect via the Rock
Island and Southern Pacific Lines. Stopovers per-
mitted on all tickets.

Mail the coupon today.

TUCSON Sunshine~Climate Club ARIZONA

Tucson Sunshine-Climate Club,
504 Old Pueblo Bldg., Tucson, Arizona.

Please send me your free book, "Man-
Building in the Sunshine-Climate."

Name _____

Address _____



114



Frank's 4th Annual Cruise de Luxe TO THE **Mediterranean** Egypt—Palestine

Madeira, Spain, Gibraltar, Algiers, Tunis, Constantinople,
Greece, Italy, Sicily, Riviera, Monte Carlo, France, England.

(Limited to 400 Guests—less than Half Capacity)

By Specially Chartered Magnificent New 20,000-Ton

Cunard S. S. "Scythia"

Sailing from New York January 26—67 days

The Cruise of the "Scythia" has become an annual classic.
In every respect it is unsurpassed. Penetrated shore ex-
cursions at every port included in the rate. Finest hotels
and the best of everything. Unusually long stay, at the
height of the season, in Egypt and Palestine.

Stop-over privileges in Europe without extra cost, returning via S. S. "Aquila",
"Mauritius," "Beringia," or any Cunard Line Steamer.

Luxury Cruise to West Indies, February 16—27 days—by
Palatial Holland-America Line Steamer "VENEDAM"

FRANK TOURIST CO.

342 Fifth Avenue, New York
41 Bank of America, Los Angeles. 182 Market St., San Francisco
1828 Lomb St., Philadelphia
(Ret. 191) Paris Cairo London

The Luxury Cruise to the **Mediterranean** PALESTINE — EGYPT



A pleasure cruise exceeding every expectation—
luxurious comfort, perfect service, enjoyable
entertainment, on board the "Rotterdam."
Scenic splendor, strange and thrilling sights in
interesting Old World lands.

By the famous "ROTTERDAM"
5th Cruise

Leaving New York, Feb. 2, 1926

Under the HOLLAND-AMERICA LINE'S
OWN MANAGEMENT

"The ROTTERDAM"

24,170 tons register, 37,190 tons displacement
Has a world-wide reputation for the mag-
nificence and comfort of her appoint-
ments, the surpassing excellence of her
cuisine and the high standards of service
and management on board.

67 Days of Delightful Diversion

ITINERARY includes Madeira, Lisbon, Cadiz,
Seville, Gibraltar, Algiers, Tunis, Athens,
Constantinople, the Holy Land and Egypt, Italy and the Riviera. Care-
fully planned Shore Excursions. Stopover in Europe.

Number of Guests Limited

American Express Co. Agents in Charge of Shore Excursions

For choice selection of accommodations make reservations NOW

Illustrated Folder "N" on request

HOLLAND-AMERICA LINE

21-24 State Street, New York

Excursions to the
WEST INDIES
27 days
Holland-America Line
in cooperation with the
Frank Tourist Co.
By the Steamer
S.S. VENEDAM
to New York Feb. 18, 1926

Boston, Philadelphia,
Pittsburgh, Chicago,
Minneapolis, St. Louis,
Detroit, Atlanta, Ga.,
Seattle, New Orleans,
San Francisco, Mexico
City, Montreal, Toronto,
Winnipeg.
Or any Steamship Agent



The FIFTH AVENUE BUILDING



The Mart of the Six Million

THAT is New York. Those two humming, enchanting, bewildering streams of people converging at Madison Square—they are Broadway and Fifth Avenue. And here at the crossing of the city's great thoroughfares is the meeting place of many businesses—The Fifth Avenue Building.

From its windows look merchants of great traffic through the world. Clothing which may be bought in Washington or Florida is handled through offices in this building. House-furnishings, perhaps from America or Europe, find their markets here. Laces, greeting cards, toys, paper, pottery, glassware, labels, blankets—these are only a few of the many trades in The Fifth Avenue Building.

Tenants enjoy the prestige of an

address which is world-famous, 200 Fifth Avenue. For many decades The Fifth Avenue Hotel, a meeting place of fashion and cosmopolitan importance, stood here. Tenants enjoy pleasant offices and interesting surroundings—Madison Square across the way. They are in the midst of things, for it is only ten minutes by subway to the Pennsylvania Station. Thirteen minutes to the Grand Central. All uptown and downtown is as near, or nearer. Surface lines and busses pass the door. Two elevated lines are within two blocks.

New York, the mart of the six million, surely! This building, center of commercial dignity from whence buying and selling to that great market may be accomplished.

Broadway and Fifth Avenue at Madison Square, New York

'More than an office building'

The **MAURETANIA**
sails to **EGYPT**
and the Mediterranean
from New York Feb. 17, 1926

A fascinating Winter Cruise offering an unusually distinctive opportunity to all who intend to visit Mediterranean points, Egypt and the Holy Land next season.

Travelling on this great, world-renowned Cunarder, you are assured of the right kind of environment plus the acme of comfort, luxury and service.

The *Mauretania* will call at Madeira, Gibraltar, Algiers, Villefranche (French Riviera), Naples, Athens, Haifa (Holy Land), Alexandria, etc. Many interesting and attractive shore excursions. Round-trip tickets via North Atlantic.

Requests for detailed information and literature are cordially invited.

CUNARD
 — ANCHOR —

25 Broadway, New York or Branches and Agencies

The **DRAKE**
 Upper Michigan Ave.
 and Lake Shore Drive
 CHICAGO

FAR-FAMED is THE DRAKE and its splendid location on the restful shores of Lake Michigan. Charming views from every window. Here you may enjoy delightful relaxation from the hurry and noise of the "loop" district—yet be almost in the heart of the city.



Under THE BLACKSTONE Management

St. Petersburg
 FLORIDA
The Sunshine City

This year St. Petersburg anticipates the greatest season in her history. Every possible preparation has been made for the accommodation of her winter visitors. New hotels, new apartments, new homes, new entertainment, with the same old hospitality and the old dependable sunshine. Write for booklet today. Address:

H. C. DILLMAN
 Chamber of
 Commerce





When accident casts its shadow across *your* pay check. An accident or lengthy illness. . . Income blotted out, or insufficient for soaring expenses. . . Doctors, nurses, medicine . . . hospital charges, perhaps. . . Savings swallowed up . . . debts . . . sacrifices for the family . . . worry . . . fear! . . . Protect yourself now against the day when accident or illness casts its shadow across your pay check.

VITALLY needed pay checks from eleven million incomes were cut off last year by accidental injuries alone. Before the next twelve months have gone by, one man or woman in every three will lose precious time through accident or illness.

Today, while out for a walk or riding in your car—while resting at home or seeking recreation—you may suddenly be stricken. Fate strews her hazards everywhere. Accident and illness wait not for time or place.

In fairness to those you love, as well as to yourself, you should

not put off protecting *your* income against loss, or unexpectedly increased outgo. See the Aetna-izer in your community today! Let him explain Aetna's new Health and Accident policy. Let him show you how as little as a few cents a day will provide a worth-while income to replace or supplement your earnings when the shadow of accident or illness falls.

The Aetna-izer is a man worth

knowing! He can give you dependable protection and sound insurance advice. The Aetna Life Insurance Company and affiliated companies are the strongest multiple-line insurance organization in the world. In this great organization you can find security for *all* your interests—Life Insurance in all its branches; Accident and Health, Automobile, Liability, Compensation, Burglary, Fire and Marine, Fidelity and Surety Bonds.

Aetna-ize! According to your needs! As you prosper and as your obligations increase!

ÆTNA-IZE



ÆTNA LIFE INSURANCE COMPANY
Aetna Casualty and Surety Co. Standard Fire Insurance

AND AFFILIATED COMPANIES
Co. Automobile Insurance Co., of Hartford, Conn.



 ?  ?  ?  ?
 ? **WHAT ARE THEY ?**
WHAT DO THEY DO ?
 ?
 ?
 ?

Dogs, song birds, game birds, fish, flogs, native animals, butterflies, wild animals. How many do you know? What do you know about them?

ASK THE QUESTIONER
—IT KNOWS
And tells you by electricity

The most fascinating game ever invented is now equipped with wonderful picture cards in color, in addition to the printed cards which first made it famous. It tells jokes, answers conundrums, names authors of famous sayings, gives facts of history, geography and literature. A game for the whole family, from the 5-year-old to grandfather, and entertains the whole year through.

If your toy or department store is out of stock, we will send you the Electric Questioner for \$3.50

KNAPP ELECTRIC CORPORATION
 Dept. 107 Port Chester, New York



One of the finer things in life—

A LOVE for beautiful music! And how fortunate the child who is taught to enjoy it!

Music teachers endorse the grand as the best aid in developing musical talent. The Brambach is a compact, beautifully proportioned grand piano of glorious tone. \$635 and up; on terms if desired. Read the coupon.

Brambach Piano Co.
608 W. 31st Street
New York City

BRAMBACH
BABY GRAND

Please send me a FREE paper pattern showing the space requirements of the Brambach Baby Grand.

Name _____

Address _____



Front of Mr. Ashby Cemetery, Cambridge, Massachusetts

Memorials of Distinction

McDonnell Memorials always express individuality—in an appropriate way. They are designed by artists with vision and sympathy, hewn from Barre granite, chiseled by craftsmen, placed with exacting care by our own experienced men.

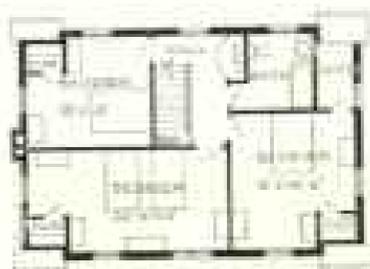
Our sixty-eight years of experience through three generations and ownership of our own quarries in Vermont enable us to render economical service. Our 100-page catalog contains photographs and descriptions of appropriate memorials erected in all parts of the United States. We will be glad to mail a copy promptly and render any service we can to interested parties.

McDonnell & Sons, Inc.

Barre, Vermont

Buffalo, N. Y., 858-860 Main St.

McDONNELL
MEMORIALS



SECOND FLOOR



FIRST FLOOR

SIX-ROOM HOUSE NO. 627-A

Designed for American Face Brick Association

This house has just been built in Chicago by the Chicago Federation of Women's Organizations, in co-operation with "Better Homes in America," in its effort to stimulate better home building. Two years ago "Better Homes in America," of which Secretary Herbert Hoover is president, built the "Home Sweet Home" house in Washington, D. C.

Beautiful Homes—Economical to Own

THE many color tones and textures in Face Brick—the artistic effects possible with various bonds and mortar joints—give a varied beauty unapproached by any other building material. The savings of the Face Brick house in repairs, depreciation and painting, in insurance rates and heating costs, in a few years wipe out its slightly higher initial cost and make it the most economical to own. The facts are more fully detailed in "The Story of Brick."

Booklets You Ought to Have:

"The Story of Brick" is, as one reader says, "a liberal education in home-building." It gives just the information the prospective builder wants. Sent free.

"Face Brick Bungalow and Small House Plans" in four booklets, showing respectively 3 to 4-room, 5-room, 6-room, and 7 to 8-room houses, in all 104. Unusual and distinctive designs combined with convenient interiors. Any one booklet, 25 cents. The entire set, one dollar.

"The Home of Beauty" shows fifty two-story six-room

houses selected from 150 designs submitted by architects in a nation-wide competition. Sent for 50 cents.

"The Home Fires," a most attractive fireplace book, with many designs, gives full directions for fireplace construction. Sent for 25 cents.

"A New House for the Old" will tell you all about restoring an old house with a beautiful, permanent overcoat of Face Brick. Sent free.

Address, American Face Brick Association, 1737 Peoples Life Building, Chicago, Illinois.



200 Sheets 100 Envelopes

High grade, clear white bond paper — unusually smooth writing surface. Size 6 x 7 inches with envelopes to match. Has that crisp, crackly "feel" that identifies it to everyone as superior quality stationery. This stationery unprinted, would ordinarily cost you more than \$1.00; our large production at narrow margin makes this offer possible.

\$1.00
POST PAID

Name and Address Printed FREE

on every sheet and envelope in rich dark blue, up to 4 lines. Type is Plate Gothic, designed especially for clearness and good taste. Makes a personal stationery you will be delighted to use. An ideal gift with your friend's name. Attractive 3 letter monogram if preferred.

Just send the coupon below with \$1.00 (west of Denver and outside U. S. \$1.10) and this generous supply of stationery will come by return mail, postage prepaid. Securely packed in a sturdy blue box. Please write or print clearly. Prompt service and satisfaction guaranteed. Money refunded if you are not pleased in every way. Send coupon today!

National Stationery Co. 1208 Lincoln Highway, Batavia, Illinois.

Gentlemen—I enclose \$1.00 (\$1.10 for shipments west of Denver and outside U.S.) for which please send the postage prepaid, 200 sheets and 100 envelopes of National Stationery printed as follows:

.....

.....

.....

.....

To avoid errors please Write or Print Clearly

The Copley Prints

Fine Art Reproductions of
DISTINGUISHED AMERICAN ART

For 30 years a hall-mark of good taste in pictures
for Gifts, your Home, and Schools

One can live without art—but not so well

Extensive choice of subjects,
including

ABBEY'S HOLY GRAIL

Depicting the
Triumph of Right Over Evil
Prices, \$2.00 to \$200.00

Send 25c for
Illustrated Catalog

Send Money Order or
Stamp—NOT COIN

It is a Little Handbook
of American Art
Address below



ALSO YOUR FAMILY PORTRAITS
done privately in the Copley Prints from old daguerotypes, faded photographs, tintypes, snapshots, etc.

They make unique gifts to one's relatives

Also Portraits Painted on Canvas

from originals in any form, or from life. High artistic quality guaranteed. Write us for particulars.

Typical letter:—"Absolutely the finest copies I have ever seen."

The Scout, above, by Dollen, from a Copley Print copyright by

CURTIS & CAMERON, 160 Harcourt Street, BOSTON

Subsroom: Pierce Building, opposite Public Library

DAYTONA BEACH FLORIDA

HERE winter is softened into a northern spring. The world's finest beach—23 miles long, 500 feet wide—awaits you. Magnificent auto drives. Boating on the famous Halifax and Tomoka Rivers. Widely varied fishing. Golf, tennis, roque, lawn bowling. Daily concerts. Cultural amusement. Best accommodations.



For booklet address

203 Chamber of Commerce
Building,

Daytona, Florida





Nature puts the Bran in
The
New Pettijohn's
WHOLE WHEAT CEREAL
You don't have to add it

YOU have heard and read a lot about the value of *bran* in the diet of both children and adults.

Let us assume that you want the family to benefit by what you now know about bran—and come straight to the question: "What is the *best way* to give it to them?"

The Quaker Oats Company asks you to consider these facts about the New Pettijohn's—

The New Pettijohn's is the whole wheat. So it contains *all* the bran of the wheat. It is 25% bran, and this is *natural* bran. The bran is not added. It is there because *Nature* put it there.

The New Pettijohn's is a *delicious* food. So the family eats it because they *like* it—and gets the bran as something *good to eat*, not as a medicine.

The New Pettijohn's is more than

bran. It is *food*. So fine a food that dietetic authority has no hesitation in saying that, "Eaten with milk, the New Pettijohn's fills *all* nutritive requirements of the human body, and is an *ideal food* for growing children."

The New Pettijohn's is a most *convenient* cereal food. It cooks *through and through* in 3 to 5 minutes, and comes to the breakfast table fresh, hot and appetizing.

In brief

The New Pettijohn's is a delicious whole wheat food.

It contains 25% natural bran—with essential Vitamins and Mineral Salts.

With milk it forms what dietitians call a "perfect" food.

It cooks in 3 to 5 minutes.

The Quaker Oats Company
CHICAGO, U.S.A.

Go West this winter!



this
book
shows
you
how

HERE is a Book that shows you how best to see the New Southwest. It is free—published by the Gateway Club of El Paso who will send you a copy if you mail the coupon below.

Fill in the coupon and receive 58 beautiful photos and a brief story of this great sunshine country. You will enjoy the pictures of Old Mexico—pleasure-loving Juarez! (a six cent car ride away). See also the views of prehistoric villages, mountains, and many intimate shots of El Paso, the City where Sunshine spends the winter, and where there is room, health and prosperity for all.

6 cents
to old
Mexico



Send for the Book today. Then plan a trip West and visit El Paso en route. All railways allow free, 10-day stop-over. No trip to the Coast complete that does not include El Paso and vicinity.

Mail the coupon.

El Paso

★ Gateway Club
TEXAS

GATEWAY CLUB

504 Chamber of Commerce Bldg.,
El Paso, Texas.

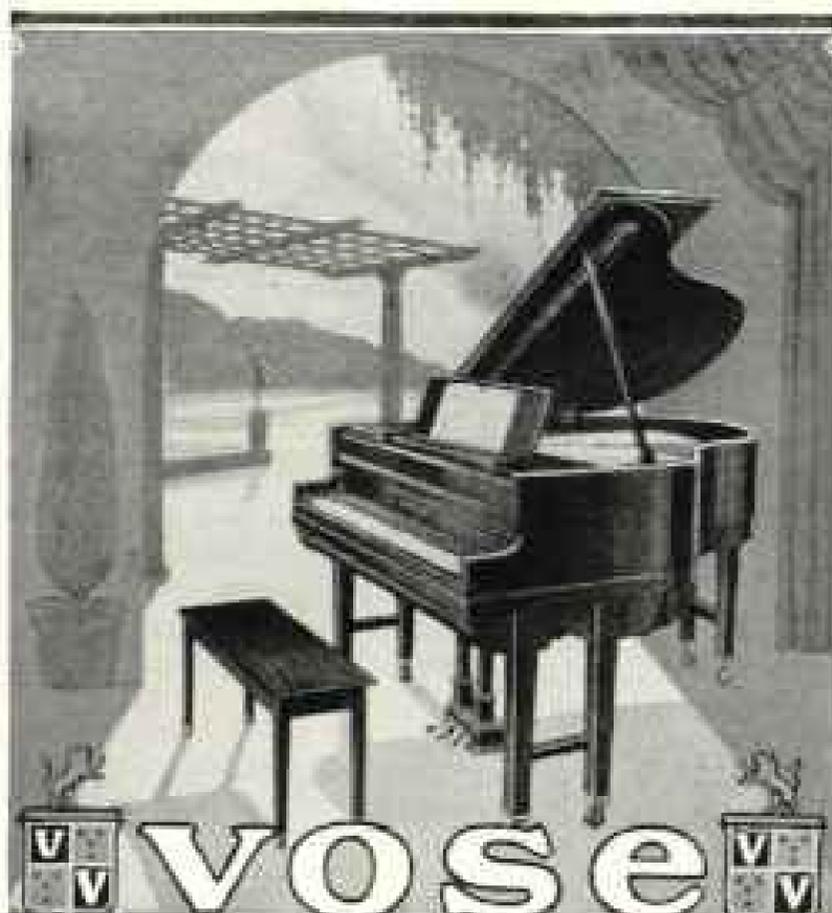
Please send me the free booklet,
"El Paso and the New Southwest."

Name _____

Address _____



68



THE VOSE REPRODUCING GRAND PIANO

brings into your home the art of the world's greatest pianists, with all their subtlety of touch and expression.

Although the exquisite tone of the Vose is world-famous, the Vose price is moderate.

We Challenge Comparison

Write for Floor Pattern and Easy Payment Terms.

Vose & Sons Piano Co., 146 Boylston St., Boston



The World's Winter Metropolis

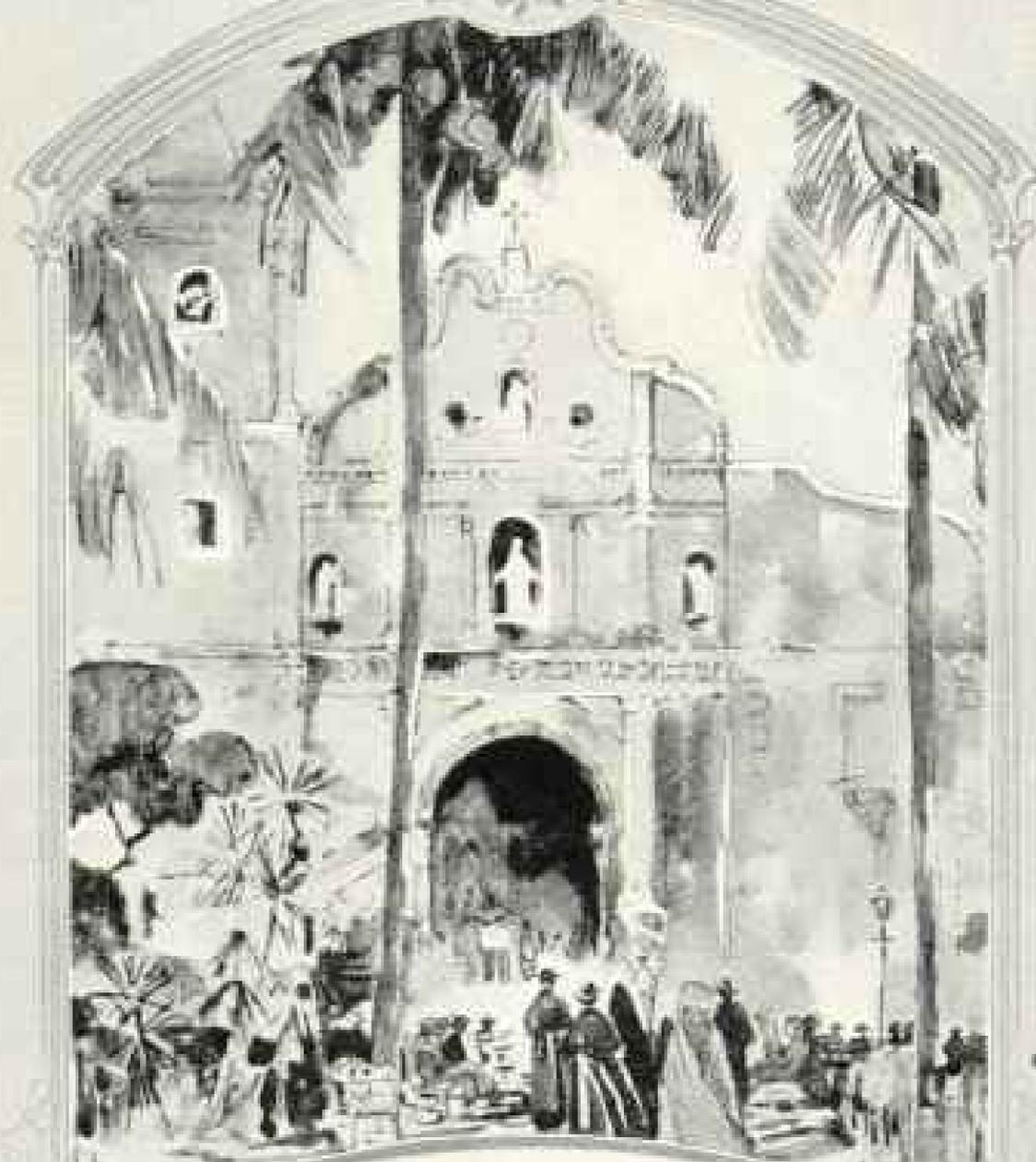
Have you noticed how many important business concerns list their addresses as New York, London, Paris—and Greater Palm Beach?

Greater Palm Beach—truly an international city, comprising Palm Beach and West Palm Beach, only 16 hours from New York City and in constant communication with the world's financial centers. The logical business place and residence of the world's social and financial leaders. Its permanent population has tripled in the last five years. More than \$30,000,000 worth of buildings now being erected.

A beautiful four-color booklet is ready for you. Write us today.

**GREATER PALM BEACH
CHAMBER OF COMMERCE**
518 Chamber of Commerce Bldg.,
West Palm Beach, Florida





View of Santa Ana
in Panama City
from original water color.

GREAT WHITE FLEET CARIBBEAN CRUISES

Five thousand miles of sunshine, over sapphire seas, on a Great White Fleet Ship that carries only first class passengers. Food of the finest. Rooms with, and without, private bath. Cabins de luxe, with beds instead of berths — and personal, intimate, whole-hearted service that makes good the claim

Every Passenger a Guest

You can visit Havana, with its gorgeous old world life, and its modern shops. Jamaica, where winter never comes. Inspect the engineering wonders of the Panama Canal and the ruins the pirates left of Old Panama. Land at Port Limon and travel to San Jose, the mountain capital of Costa Rica. Wander

through historic Cartagena, centuries old Santa Marta and modern Barranquilla and travel from Puerto Barrios, Guatemala to delightful Guatemala City and Antigua, that was. —and remember that all shore excursions including hotel accommodations, railroad fares, motor and launch trips are included in the price of your ticket.

Arrange for your Winter Vacation NOW! Cruise sailings every week, Wednesdays and Saturdays, from New York and New Orleans. Cruises from 11 to 24 days according to the route selected. Write for beautifully illustrated booklet and full information about the historic "Spanish Main" and the luxury of a winter cruise to the Tropics.

Address Passenger Department

UNITED FRUIT COMPANY

Room 1841, 17 Battery Place

New York City, N. Y.

SAILINGS FROM NEW YORK AND NEW ORLEANS
EVERY WEEK IN THE YEAR

A Transport of Delight



Golden State Limited

California

A traveling home of luxury, complete in every particular; a service that leaves nothing to chance; a short route of infinite variety—American, Mexican, Indian and American again.

From Chicago, St. Louis and Kansas City direct to San Diego, Los Angeles and Santa Barbara.

All-Pullman—observation, club car, barber, valet, shower for men, women's lounge, maid, manicure, shower for women.

Mail this coupon for booklets on California and the Golden State Limited.

Coupon

L. M. ALLEN, Vice President, Rock Island Lines
765 La Salle Street Station, Chicago, Ill.

Please mail me copies of booklets on California and the Golden State Limited.

Name.....

Address.....

Look Inside the
Piano for this
Trademark



The Sign of the
World Standard
Piano Action

Quality in the Action Means Quality in the Piano

YOUR continued enjoyment of a piano or player depends largely upon the piano action it contains. For the action controls both tone and touch. Manufacturers who build worthy pianos are fully aware of the importance of using a fine piano action to match the quality of their instruments. For this reason, leading American makers have used the Wessell, Nickel & Gross piano action for upward of half a century.

Because it is the world's highest-priced piano action, the Wessell, Nickel & Gross action is naturally found only in instruments of established worth. Music lovers everywhere, realizing the significance of these facts, are insisting upon the Wessell, Nickel & Gross action. Look for the octagonal trade-mark.

WESSELL, NICKEL & GROSS
Established 1874 New York City

When you buy an Upright Grand
Player or Reproducing Piano—
Insist on the Wessell, Nickel &
Gross Piano Action.



HARRISON MEMORIALS

Our long experience in building memorials of character helps us to appreciate and attain the results you desire.

Write for Booklet "C"

HARRISON GRANITE COMPANY, INC.

Established 1845

4 East 43rd Street, at Fifth Avenue, New York, N. Y.

Offices—Detroit Chicago Pittsburgh Minneapolis
Works: Barre, Vermont



Magnified 225 Diameters

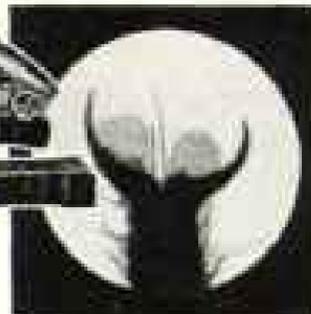
This is what the tip of a fly's leg is like when seen thru the

ULTRALENS MICROSCOPE

Any amateur can immediately start using his Ultralens to examine the edge of a razor, the mesh of a cotton shirt, the bacteria in dirty water. No technical training required, yet hundreds of scientists and teachers are using this instrument.

Give enormous magnification and perfect definition. Send \$7.50 for complete outfit. Write for catalogue.

\$7.50
for Complete
Outfit
Prepaid.



Scientific
Apparatus Corp.
Dept. 301 Milton, Pa.

WINTER CRUISES

Around the World

WESTWARD via the Panama Canal—The RESOLUTE offers a combination of features found on no other



world cruising ship; an itinerary that will fascinate to the very end—an American management fully conversant with the desires of American travelers—European

chefs and servants, trained in the continental way—perfect appointments. The RESOLUTE offers all the privileges of foreign registry. Four months perfect vacation

on the

RESOLUTE

(Queen of cruising steamships)

From

New York

Jan. 21, 1926

Los Angeles, Feb. 6

San Francisco, Feb. 9

Rates \$1500 and up including shore excursions



To the West Indies

PANAMA CANAL and Spanish Main—For West Indies cruising the RELIANCE is ideal in size and appointments. Her splendid staterooms, public rooms and unusually spacious decks were designed especially to keep people comfortable in tropical waters. Her management, cuisine, and service are world renowned.

Five delightful cruises, each one just long enough for a splendid vacation, will be made this winter



by the

RELIANCE

(Sister ship of the Resolute)

Dec. 19—14 days

Jan. 9—15 days

Jan. 27—27 days

Feb. 27—27 days

April 1—14 days

Rates \$150 and \$250
and up

For full information about these splendid cruises, send to

UNITED AMERICAN LINES

(HARRIMAN LINE)

35-39 Broadway, N. Y.
230 S. 15th St., Phila.

177 N. Michigan Ave., Chicago
87 St. James St., Montreal
or local steamship and tourist agents

131 State St., Boston
574 Market St., San Francisco

Imperial Table Desks

Grand Rapids



A cherished possession for the home library or living room. A lifetime gift for a private office. Fashioned with painstaking craftsmanship, and enriched with figured woods of surpassing beauty. Your favorite furniture store will show you this and other Imperial Table Desks of impressive character.

Write Dept. G for book, "Heirlooms of Tomorrow"

IMPERIAL FURNITURE COMPANY, Grand Rapids, Michigan
"World's Largest Table Factory"

DUES

Annual membership in U. S., \$3.00; annual membership abroad, \$4.00; Canada, \$3.00; life membership, \$100. Please make remittances payable to the National Geographic Society and if at a distance remit by New York draft, postal or express order.

RECOMMENDATION FOR MEMBERSHIP

IN THE

NATIONAL GEOGRAPHIC SOCIETY

*The Membership Fee Includes Subscription to the
National Geographic Magazine*

PLEASE DETACH AND FILL IN BLANK BELOW AND SEND TO THE SECRETARY

192

To the Secretary, National Geographic Society,
Sixteenth and M Streets Northwest, Washington, D. C.:

I nominate

Occupation

(This information is important for the records.)

Address

for membership in the Society.

Name and Address of Nominating Member



Your ORIENTAL TOUR

JOURNEY with modern American comforts to the fascinating cities of the Far East, travel on a big, swift Government vessel of the American Oriental Mail Line. See the colorful life of ancient Asia—glimpses of temples and gardens—the picturesque coast of Japan—beautiful Manila Bay and our own Philippines, vivid tropical islands.

These splendid oil-burning Government vessels (21,000 tons displacement) offer exceptional service: the cuisine is famous, fresh American vegetables being provided both ways—all outside rooms with hot and cold running water, most rooms have private bath, real beds instead of berths—unusual accommodations, deck sports, concerts, every convenience.

S. S. President Jefferson
S. S. President Grant
S. S. President Madison
S. S. President Jackson
S. S. President McKinley

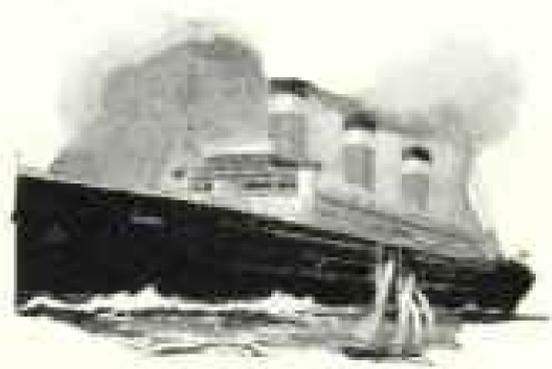
Sailings every twelve days from Seattle via Victoria, B. C., over the short route to Yokohama, Kobe, Shanghai, Hong Kong, Manila—the fastest time between the United States and the Orient. See your local tourist or steamship agency or write for interesting illustrated booklets and full information.

AMERICAN ORIENTAL
MAIL LINE



ADRIAL ORIENTAL LINE
Managing Operators 32 Broadway New York

112 W. Adams St., Chicago Fourth at University, Seattle



The four best ways of going to Europe

DOLLAR for dollar, your money buys more on United States Lines ships. You enjoy the utmost in comfort, cuisine and service for whatever price you pay.

A Round Trip for \$155

You can buy a Tourist Third Cabin, round passage for \$155-\$175. Many who can afford far more are traveling this way and saving the difference. Curtains, pictures, flowers, snowy linen and very best food. Music, dancing and deck sports.

A Round Trip for \$280

For \$280-\$300 up you have the choice of a round trip by the famous "one-class" ships AMERICA and REPUBLIC or second class aboard the speedy LEVIATHAN or GEORGE WASHINGTON. Long decks, deep carpeted lounges and smoking rooms. Private dining tables. Luxurious travel at moderate cost.

A Round Trip for \$380

For \$380 and up you can travel first class aboard the distinguished PRESIDENT ROOSEVELT and PRESIDENT HARDING where every stateroom is an outside one. Real beds and period furniture. And a round trip, first class, on that great Atlantic favorite, the GEORGE WASHINGTON, costs only \$420 and up.

A Round Trip for \$530

\$530 and up buys the thrill of a lifetime aboard the mighty LEVIATHAN, flagship of the fleet and the most famous ship in the world, with its Pompeian Swimming Pool, Winter Garden and Louis XIV Salon. World famous chefs will cater for you.

Regular sailings from New York to Cobh (Queenstown), Plymouth, Cherbourg, Southampton and Bremen. Ask your local steamship agent for complete information or write to 45 Broadway, New York City. European branch offices in all principal cities are organized to give every assistance to travelers.

United States Lines

Operating the LEVIATHAN,
GEORGE WASHINGTON,
PRESIDENT ROOSEVELT,
PRESIDENT HARDING,
REPUBLIC and AMERICA
to Europe.



45 Broadway
New York City

AFTER TEN YEARS AS GOOD AS NEW
I take pleasure in stating that the weather strips placed by you on my house about ten years ago have given the best of satisfaction, and the same are in practically as good condition today as they were when first installed.

Very truly yours,
(Signed) OLIVER J. SANDS, President,
American National Bank, Richmond, Va.

Chamberlin
METAL
Weather Strips



**End Draughts
Keep Warm—Save Fuel**
Now Is the Time to Install

The comforts of Chamberlin Metal Weather Strips are also important economies. They are saving and paying for themselves every day in the year—in fuel, labor, and protection against dust, dirt, and draughts. Just see how little these advantages cost. In fuel alone from 25% to 40% is saved. The experience of thousands shows that this item itself more than pays for the installation. All parts of the house are kept warm. No cold spots. No draughts. Order your installation now, as the heating season has scarcely begun, and even on January 1, 63% of the average household's heating requirements must still be met.



and Inside Door Bottoms
Chamberlin Metal Weather Strip Co.
Detroit, Michigan

Chamberlin Metal Weather Strip Co.
1650 W. Lafayette Blvd., Detroit, Mich.

I would like an estimate covering the cost of installing (check which)
Chamberlin Inside Door Bottoms—
Chamberlin Metal Weather Strips—In my home—Office Bldg.—
Church—Number of Windows—Number of Doors—

Name _____

Address _____

City and State _____

Eng. Dept. W-9

**GENUINE GERMAN
"WETZLAR"
POCKET TELESCOPE**

FULLY
GUARANTEED



\$1.00

POSTPAID

Powerful German Telescope. Brings distant scenes before you. Made in the heart of the German Optical Industry. Clear and accurate lenses show a brilliant image. For use when hunting, boating, automobileing, or on your vacation. Heavy brass body with brass slide for focusing. Objectives are 2 1/2 in., giving large field of view. Size extended, six inches.

Exceptionally favorable rates of exchange make possible this surprising offer for a real quality telescope. Shipped promptly on receipt of check, money order, or dollar bill. Please your order at once. Cash refund if not satisfactory.

HENDERSON BROTHERS

Largest Importers of Field Glasses in America
97 FEDERAL STREET, BOSTON, MASS.

GENTLEMEN: Enclosed is \$1.00. Please send telescope to this address.

NAME _____

ADDRESS _____

CITY, STATE _____

**don't
use
your
hands**



SANI-FLUSH does the work. Removes all marks, stains and incrustations. Reaches that hidden, unhealthy trap. Destroys foul odors.

Simply sprinkle Sani-Flush into the bowl—follow directions on the can—and flush. Sani-Flush will not harm plumbing connections.

Always keep a can handy in the bathroom.

Buy Sani-Flush at your grocery, drug or hardware store, or send 25c for a full-size can.

Sani-Flush

Cleans Closet Bowls Without Scouring
THE HYGIENIC PRODUCTS CO., Canton, Ohio

West Indies Cruises



See South America, Panama Canal, West Indies, Bermuda

The northern coast of South America and the fascinating islands of the Caribbean—the Panama Canal and the beautiful island of Bermuda—the gaiety of life on board a delightful liner, the *Megantic*, specially constructed for tropical cruises—and the supreme restfulness of being away from the worries and responsibilities of every-day life.

This cruise is skilfully planned by an organization with over 25 years' experience in West Indies cruises, to give you all the joys of traveling and none of the irksome little details and responsibilities.

And the price—that's the final great temptation. A few accommodations at **\$250**, the minimum rate, for these thirty-one perfect days.

A trifle over **\$8 a day**

—actually less than just a regular vacation at a resort—as opposed to this glorious adventure.

White Star liner **MEGANTIC** Jan. 23 & Feb. 27
30-31 days

Mail us the coupon below for our illustrated literature.



WHITE STAR LINE

No. 1-N Broadway, New York City

Please send me literature on West Indies Cruises:

Name.....

Street Address.....

City.....

A Very Special Offer of Four Genuine COWAN Christmas Presents

COWAN Martha Washington Sewing Table



Send Only \$1.00

Reproducing the famous original in ME. Vernon. "It's a beauty! For proof of it we can let," says Miss M. E. C. of Ashburn Falls, Mass. And so say 30,000 other women!

Genuine Mahogany, beautiful finish: 29 in. high; 27 in. wide; 14 in. deep; sliding needle tray in top drawer; spool rack in second; deep pockets each side. Made only by COWAN, Chicago.

Now offered the first time on easy payments. Pay \$1 (all or cash) to your order and pay balance of \$26.50 in \$4 a month, 10 per. discount for cash. Delivery free anywhere in U.S. Money back within 30 days if not perfectly satisfied. FREE booklet on request.

days if not perfectly satisfied. FREE booklet on request.

The COWAN Drop-Leaf Table



Send Only \$1.00

The Living or Breakfast Room. Takes little space when not being used. Seats six comfortably when leaves are raised. For well-furnished apartment where smaller furniture is desirable.

Combination Gum Wood, Mahogany top and end drawer. Masterly make, beautiful finish; closed size: 12" x 29". Opens to 29" x 45"; 30" high. Send only \$1. Balance \$13.50 on easy payments, \$4 a month, 10 per. discount for cash. Delivery charges prepaid. Return

in 30 days, if not delighted, for full refund of your money. FREE descriptive circular.

The COWAN Cane Chair



Send Only \$1.00

Your Living Room hasn't complete "Emah" without this most comfortable, good-looking piece of furniture. Large and roomy; made of genuine solid Mahogany throughout, with cane seat and back. Truly a masterpiece of chair-making craftsmanship. And a value whose equal you won't find anywhere. Only \$13.50 on easy payments. Rucker to match (if desired) at the same low price.

Comes to you, transportation charges prepaid, for \$1.00. The rest of payment in monthly installments of only \$4.00, 10 per. discount for cash. If not satisfied, return to us within 30 days at our expense, and your money will be

promptly refunded. FREE catalog tells all about it.

The COWAN Tea Wagon



Send Only \$1.00

A beauty, and useful, too! All genuine Mahogany or solid Walnut as desired. Removable glass tray and rubber-tired wheels with casters. Drop-leaves on both sides make a large table when raised. Takes little space when not in use. 17 1/2" x 27"; 28" high.

Ideal as a gift or for yourself. Send only \$1. Pay the balance of \$41.50 in small installments of \$4 a month, 10 per. discount for cash. We pay delivery. If not even more than expected, return within 30 days for a refund of your \$1 deposit. Descriptive folders sent FREE.

refund of your \$1 deposit. Descriptive folders sent FREE.

COWAN CABINET COMPANY

837 Rush Street

Chicago, Ill.

Phoenix

ARIZONA

Where "Winter" never comes!

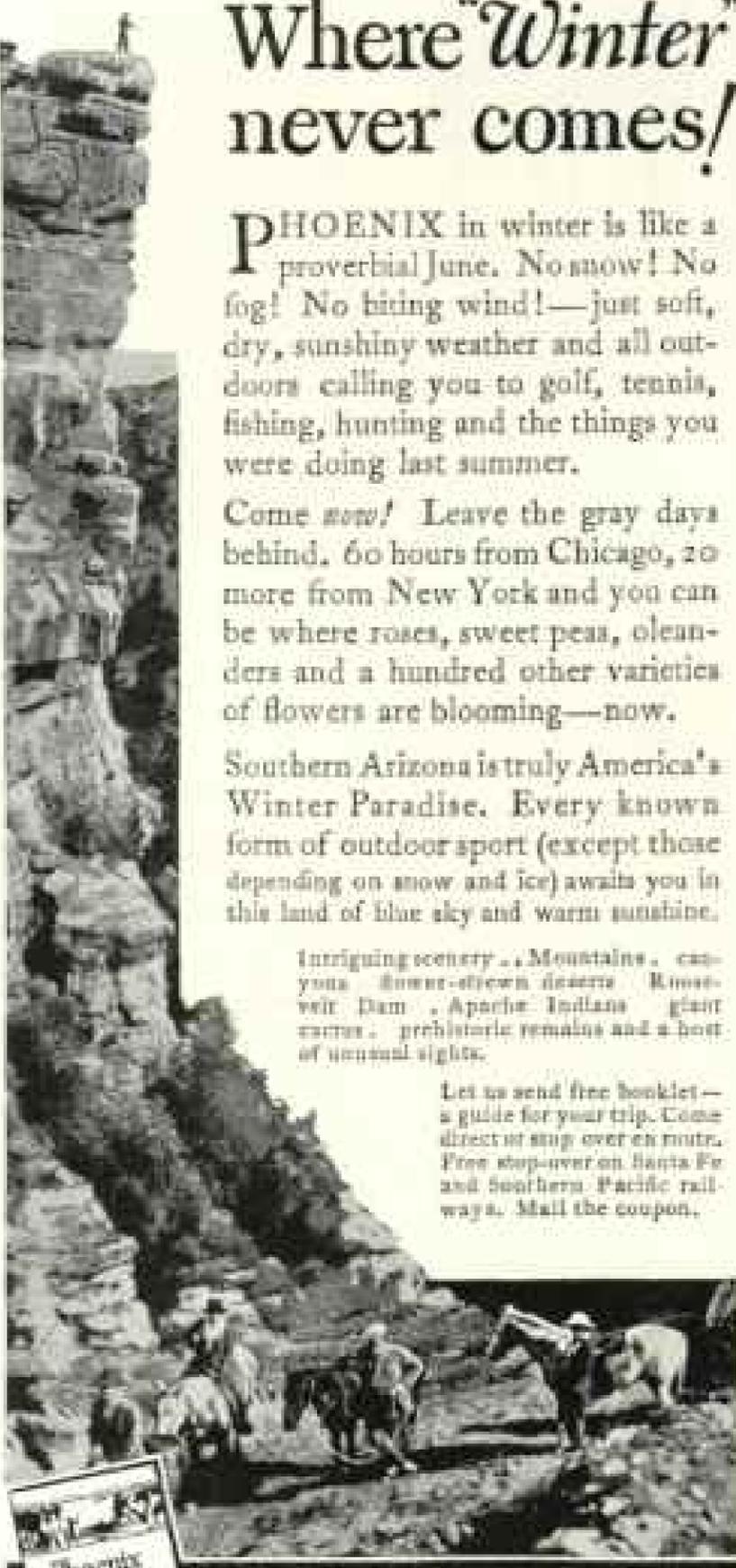
PHOENIX in winter is like a proverbial June. No snow! No fog! No biting wind!—just soft, dry, sunshiny weather and all outdoors calling you to golf, tennis, fishing, hunting and the things you were doing last summer.

Come now! Leave the gray days behind. 60 hours from Chicago, 20 more from New York and you can be where roses, sweet peas, oleanders and a hundred other varieties of flowers are blooming—now.

Southern Arizona is truly America's Winter Paradise. Every known form of outdoor sport (except those depending on snow and ice) awaits you in this land of blue sky and warm sunshine.

Intriguing scenery... Mountains, canyons, flower-strewn deserts, Roosevelt Dam, Apache Indians, giant cacti, prehistoric remains and a host of unusual sights.

Let us send free booklet—a guide for your trip. Come direct or stop over en route. Free stop-over on Santa Fe and Southern Pacific railways. Mail the coupon.



Phoenix-Arizona Club
504 Chamber of Commerce Bldg., Phoenix, Ariz.

Please send my copy of "Phoenix, Where Winter Never Comes," by return mail.

Name _____
Street _____
City _____

SOUTH AMERICA

by the Famous V-FLEET

Those who have always followed the beaten paths of travel will find a delightful change in South America's bracing climate, gorgeous scenery and magnificent cities.

Luxury, comfort, meals and service equal to the finest modern hotels; all outside staterooms. These are a few of the advantages to be obtained by booking your passage on one of the famous V-Fleet vessels—the finest plying to South America.

BARRADOS—RIO DE JANEIRO
MONTEVIDEO—BUENOS AIRES

Calling northbound at SANTOS AND TRINIDAD

45 days, \$675 Special Cruise Tours, including 100 for the Marit Graf, all expenses included, S. S. Voltaire, Jan. 22. 58 days, \$850

Regular Sailings by the

S. S. Voltaire S. S. Vauban
S. S. Vanduyck S. S. Vestris

For illustrated literature, etc., apply Scudder & Son, Inc., 33 Broadway, N. Y., or your local S. S. or tourist agency.

LAMPOR
& HOLT
"The Better Way" LINE

SEE A MILE OR MORE

with Binascope. Magnifies 6 times. Light, practical, powerful. Made in America. At dealer or postpaid in leather case. WOLLENSAK OPTICAL CO., 815 Hudson Ave., Rochester, N. Y.

\$5
B
I
A
S
C
O
P
E



HEALTH and COMFORT

are obtained by using

AIR MOISTENERS

Removes excessive dryness from air. Hangs on back of radiator. Preserves furniture, musical instruments, plants, books, oil paintings and saves coal.

Four for \$5.00

Postage Prepaid

\$5.25 West of the Mississippi



DELBROOK VENTILATING CO., Inc.

Dept. 1-N 25 Common Street Boston, Mass.

REG. IN U.S. PAT. OFF.

Thermo

Knitted Coats Vests & Knickers

WE have for years been telling you about Thermo knitted, guaranteed *all virgin-wool* sport coats; now we shall let some Thermo wearers tell you what *they* think. All unsolicited.

A man in Chicago, Ill., says:—
"I have worn one of your coats for six years and think there is nothing like it."

A man in Hudsonville, Mich., says:—
"After over a year's service it is as good as new."

A man in Freeport, N. Y., says:—
"I have had one of your coats for several years and think it the most satisfactory garment I have ever owned."

A man in East Haven, Conn., says:—
"I have had one for years and still going."

A man in Kansas City, Mo., says:—

"I wore your coat last winter and was very much pleased with same. It wore well and laundered well."

Thermo knitted knickers to match Thermo sport coats and vests are now obtainable in a variety of colors, including the latest popular shades, to suit all tastes. Look for the Thermo hanger. If your dealer cannot supply you write us.

THERMO MILLS, Inc.
345 Broadway,
Dept. N
New York



From Sheep's Back To Yours



"Say—I never tell my folks anything"

It is one of the mysteries of raising a boy—this losing touch. As a little chap he comes to you with everything. Then, little by little, he begins to grow reticent.

He gets it from the older fellows. The age-old law of the gang is his rule—"Thou shalt not peach."

From twelve to twenty is the age of visions, dreams, trying of the unknown, seeing if it will work. He stiffens at moralizing and curtain lectures. But how quickly he responds to suggestion and example.

Give your boy the advice and counsel he needs. Give him the strong leadership of **THE AMERICAN BOY**. Here, in story-form, is the adventure he craves. Here are heroes whom he comes to worship.

These fiction-and-fact fellows, supplying incentive for fun and work, coupled with trips into the actual world of business and science, will win his friendship and then show him by their success and their failure how life demands fair-play, courage, self-reliance and the ability to come up smiling.

Every boy needs **THE AMERICAN BOY**. Your boy will delight in its vigorous, virile stories. Subscribe for him for a year. Order it for that other fellow you'd like to see get ahead. Mail the coupon today.

\$2.00 a year by mail, 20c a copy at all news-stands. Subscribe for a year or leave a standing order at your newsdealer's

The American Boy
THE SPRAGUE PUBLISHING CO.
No. 355 American Bldg., Detroit, Mich.

Enclosed find \$2.00, for which send **THE AMERICAN BOY** for one year, beginning with the current issue, to

Name

Address

Canada \$2.25. Foreign \$2.50



HOW much of an investment does your baggage represent?

That's how much Baggage Insurance you need to travel in safety.

North America Tourist Baggage Insurance costs little and is easily obtained from any Insurance Agent. Let us send you further information.

Insurance Company of North America

PHILADELPHIA

"The Oldest American Fire and Marine Insurance Company"

Pin this coupon to your letterhead

Founded
1792

Insurance Company of North America
Third and Walnut Streets
Philadelphia, Pa., Dept. 6641



Name.....

Street.....

City..... State.....

Wants information on Tourist Baggage Insurance

CLARK'S FAMOUS CRUISES

By Cunard line, new oil burners

JAN. 20, AROUND THE WORLD CRUISE

westward; 128 days, \$1250 to \$3000.

Featuring 26 days, Japan and China, including Peking.

JAN. 30, MEDITERRANEAN CRUISE

62 days, \$600 to \$1700.

Featuring 15 days, Palestine and Egypt.

JUNE 30, 1926, NORWAY

and Western Mediterranean; 53 days, \$550 to \$1250.

Rates include hotels, drives, guides, fees. Originator of Around the World Cruises. Longest experienced cruise management. Established 30 years.

F. C. CLARK . . Times Building, New York

WHITING-ADAMS

TWINS

Identical in those Qualities which make Brushes Good

Whiting's
Celebrated
Brushes

Adams
Superior
Brushes

Each parallels the goodness of the other. Alike in length and strength, in suppleness and permanence of bristles — alike in all save name — these four brushes have led all others for upwards of one hundred years. Buy by either name — or both combined. You are certain of equal — and unequalled — brush service and satisfaction.

WHITING-ADAMS

BOSTON

Brush Manufacturers for 117 years and the largest in the World



Therm-o-Dial

THE ART THERMOMETER

The aristocrat of Christmas gifts — registers temperature plainly as a speedometer does speed.

GOLF MODEL (as illustrated), 6 1/4 inches high, **\$7.50**

Other Models for home or office include: Beehive, Nursery, Bell, Indian, Monkey and Fleur-de-Lis, in antique, bronze, brown or green gold, \$4 to \$10.

At dealers or by mail.

Send for Illustrated Booklet

THERM-O-DIAL LABORATORIES
129 Sussex Avenue Newark, N. J.



THE GLEN SPRINGS

WATKINS GLEN, N. Y., ON SENECA LAKE
Open All The Year. Wm. E. Leffingwell, Pres.

A Mineral Springs Health Resort and Hotel. The Pioneer American "cure" for heart disorders.

The Great African Cruise

Sailing from New York, Jan. 19, 1926,
on the Palatial Cruising Steamer ORCA

Blazing a New Trail of Wonder

*"Africa is the place to go
for sightseeing"*

Members of the first Great African Cruise will experience the thrills of the tourist-explorer—from the Cape to Cairo—by way of those alluring South and East African ports.

Combined with these features, making "the most alluring of all cruises" will be visits to West Indies—South America—Egypt—Mediterranean—Europe. Rates, including delightful shore excursions, from \$1250.

West Indies De Luxe Cruises

Jan. 21 Feb. 20
29 days 30 days

By the superb transatlantic steamer OHIO, 29,500 tons displacement. Rates \$250 up— including all excursions ashore, \$350 up.

Write for illustrated booklet

ROYAL MAIL

"The Comfort Route"

THE ROYAL MAIL STEAM PACKET CO.
New York, Boston, Cleveland, Chicago,
Detroit, Minneapolis, San Francisco, Los
Angeles, Seattle, Atlanta, Vancouver,
Montreal, Toronto, Halifax

Or any office of the
AMERICAN EXPRESS COMPANY
in cooperation with whom the African
Cruise will be operated

Hello Boys!
*Here's the biggest
thrill you ever had*
The New Erector
*the world's
greatest toy!*



WHEN a boy has an Erector Set he can make working models of steam shovels, concrete mixers, locomotives, draw-bridges, hundreds of engineering toys. The powerful Erector electric motor makes them whir and go.

Why the new Erector is the World's Greatest Toy. Erector contains more parts and builds more models than any other toy. Erector exclusive features are: Its square girders; curved girders; steam shovel; new Erector boiler; dredge bucket; giant flywheel. Other Erector features are: Its perforated strips; a great assortment of gears and hundreds of other genuine, perfect mechanical parts for a boy to build a new toy every day.

Sign this coupon and I will send my new free book about the new Erector, "One Thousand Toys in One," also a present, the Mysterious Gilbertscope.

Super Erector No. 7—\$10

The most popular Erector Set—contains powerful electric motor, new Erector boiler, steam shovel, base plates, curved girders, assortment of gears—473 parts, builds 533 models—with 64-page manual in colors. Packed in wooden chest. Price \$10. Other Erector Sets from \$1.00 to \$50.00.



A. C. GILBERT CO.
121 Blatchley Ave., New Haven, Conn.
Please send your free book, "1,000 Toys in 1" and
also the Gilbertscope to the following address:

Name.....
Street.....
City..... State.....



Hear Ye! Hear Ye!

LOVERS OF COFFEE

THE COFFEE PROBLEM IS SOLVED!

A CUP OF HOT WATER, ONE TEASPOONFUL OF

G. Washington's

DELICIOUS INSTANT COFFEE

SUGAR AND CREAM TO TASTE.

EACH CUP TO ORDER AT TIME OF SERVICE

WITHOUT TROUBLE OR FAILURE.

UNIFORM QUALITY GUARANTEED

Send 10c for Special Trial Size Recipe Booklet Free

G. WASHINGTON COFFEE REFINING CO. 76 Varick Street, New York

A Short Cut to Accurate Information

—a companion for your hours of reading and study that will quickly make itself indispensable for its wealth of ready information on just the questions which most often puzzle you.

WEBSTER'S COLLEGIATE DICTIONARY

—the best abridged dictionary. It is based upon Webster's New International, 105,000 Vocabulary terms; dictionary of Biography; Gazetteer; rules of punctuation, use of capitals, abbreviations; foreign phrases; etc. 1256 pages; 1700 illustrations.

The thin-paper edition is especially handsome and convenient to handle. Art Canvas binding \$5.99; Fabricoid, \$6.00; Leather, \$7.50.

Purchase of your bookseller; or send order and remittance direct to us; or write for information. Free specimen pages if you mention *The Geographic*.

**G. & C.
Merriam
Company
Springfield
Mass.**



Salt Mackerel

CODFISH, FRESH LOBSTER

FOR THE
CONSUMER

NOT THE
DEALER



FOR YOUR OWN TABLE

FAMILIES who are fond of FISH ought to get them DIRECT from GLOUCESTER, as no inland dealer anywhere else can possibly be in a position to offer you goods as perfect and wholesome as we can.

We sell ONLY to the CONSUMER DIRECT, not through grocers or markets. We want to supply YOU, no matter how small your requirements.

We have done a mail-order fish business for forty years, sending the goods RIGHT TO OUR CUSTOMERS' HOMES, EXPRESS PREPAID EAST OF KANSAS, and guaranteeing complete satisfaction or money refunded.

If you are interested in good fish, write us a postal that we may send you further information!

Our SALT MACREL are tender, juicy fellows—baked for breakfast they are delicious. SALT CODFISH selected and prepared by our method is unequalled.

Much of the fresh fish you buy in the market is at least several days old. OUR CANNED FISH, being STEAM STERILIZED, is ABSOLUTELY FRESH.

Our FRESH LOBSTERS, in parchment-lined cans, go through no process except boiling (no preparation of any kind being used). Opened and packed solid in whole pieces as soon as taken from the water, they retain their crispness and natural flavor. CRABMEAT, SHRIMP and CLAMS have likewise a perfectly natural appearance and taste.

Our SALMON, TUNNY and IMPORTED FISH DELICACIES are always the best produced.

A selection of our FISH PRODUCTS should always be in your STORE-ROOM for daily use and for the preparation at a moment's notice of dozens of dishes of dietary or substantial dishes.

Send for Descriptive Price List

Frank E. Davis Co., 246 Central Wl., Gloucester, Mass.



Crowfoot Coat in Richard Walton Tully's "Flowing Gold"

Patrick
DULUTH

**Patrick Overcoats
are Handsome—
and so Enduring!**

You'll be proud of their style and finish, their graceful lines and correct design and above all, their unusually beautiful and long-wearing Cloth.

Patrick Cloth is different. It is obtainable only in Patrick garments.

Write for samples of this wonderful Cloth—and our interesting Overcoat Style Booklet also name of nearest dealer. Address Desk G-21.

Other Patrick Products:

Sweaters and Sport Jackets
Flannel Shirts
Golf and other Hosiery
Leather Garments
Mackinaws
Blankets and Auto Robes



Excellent Quality.

Our Two Brands

Three cloth weights—Heavy, Medium, Light.
Prices \$25 to \$85



Superlative Quality.

F.A. PATRICK & CO. DULUTH
Makers of both Cloth and Garment

**"PURE NORTHERN WOOL
from sheep that thrive in the snow"**



**DIFFERENCES THAT PLEASINGLY
IMPRESS YOU — NUMBER THREE**

Four o'clock tea is served each day in the luxuriously fitted observation cars of the
**NEW ORIENTAL
LIMITED**

To or from California, take this interesting Northwest route on this superb train—de luxe equipment and service; no extra fare.

New Oriental Limited Westbound leaves New Chicago Union Station daily 11 p. m. via Burlington-Great Northern. Eastbound leaves Seattle and Portland 8 p. m. Spokane 8 a. m.

A. J. Dickinson, Passenger Traffic Manager, St. Paul, Minn.



GREAT NORTHERN
Route of the New Oriental Limited
Finest Train to and from Pacific Northwest—No Extra Fare

A Garden Full of Darwin Tulips for \$2.00



In anticipation of again placing before our customers a collection of Darwin Tulips we have had a sufficient quantity grown so that we can offer

**50 Giant Darwin Tulip Bulbs,
Finest Mixed, for \$2.00**

selected from fifteen named varieties

Few spring flowering plants rival the Darwin Tulip for brilliance of bloom. Borne on strong stems often exceeding three feet. They are a wonderful addition to the flower garden.

Plant any time before the ground becomes frozen, and they will bloom from the middle of May to Decoration Day

Mail this advertisement, or present at our store, with check, money order, cash or stamps and secure this exceptional collection, post prepaid to any point in the U. S. east of the Mississippi. For points west and Canada add 25c (12.75).

Our 1925 Fall Bulb Catalogue sent on request

Stump & Walter Co.

30 and 32 Barclay Street

New York



UNRIVALED FACILITIES OF THE STUDIOS QUARRIES SHOPS AND CONSTRUCTION EQUIPMENT MAKE PRESBREY-LELAND MONUMENTS AND MAUSOLEUMS PRE-EMINENT IN BEAUTY AND DURABILITY—CONSULTATIONS AND CORRESPONDENCE INVITED

MEMORIALS BY PRESBREY- LELAND

681 FIFTH AVE. NEW YORK



CENTURY SHEET MUSIC

You can't buy better—why pay more?

CENTURY gives you the world's best music, beautifully printed on the best paper? What more can sheet music be? There are over 2300 compositions in the Century catalogue all 15c (one in Canada)—masterpieces like "Foot and Prance," "Black Hawk," "Bridal Chorus," "Kande," "Faunt," etc.—all certified to be exactly as the masters wrote them. Ask for Century—Patronize the Century dealer. Century's low price is only possible because of his small profit. Complete catalogue of over 2300 compositions free on request.

Thousands of successful teachers use and recommend CENTURY CERTIFIED MUSIC exclusively—because they know it is all that good music can be—yet its price is but 15c a copy; and they know parents appreciate the saving.

Century Music Publishing Company, 211 W. 40th Street, New York City



THIS MAGAZINE IS FROM OUR PRESSES

JUDD & DETWEILER, INC.
Master Printers

ECKINGTON PLACE AND FLORIDA AVENUE

WASHINGTON, D. C.

Whatever Your Question;—be it the pronunciation of Fascista, the spelling of a puzzling word, the location of Esthonia the meaning of soviet, reallor, vitamin, etc., this Supreme Authority—

WEBSTER'S NEW INTERNATIONAL DICTIONARY

contains an accurate, final answer.

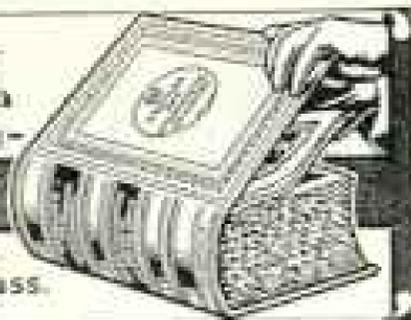
Regular and India-Paper Editions

Write for specimen pages, prices, etc.,

407,000 Words, 2700 Pages, 6000 Illustrations

G. & C. MERRIAM CO., Springfield, Mass.

and FREE, Pocket Maps per Geographic



Onoto the Ink Pencil

The Writer's Friend

Dependability and ease of writing make the ONOTO INK PENCIL appeal to travelers as well as those who must sign their name many times each day or in other ways do a great deal of writing. Always ready the instant it touches the paper. Writes smoothly as a pencil—but with ink. Without a peer for manifolded or making permanent notes.

It never leaks. May be carried in a hand bag, lower vest pocket, anywhere, right side up or upside down. Nor does it sweat. Holds a large supply of ink. The writing point is iridio-platinum. Guaranteed to last a lifetime, and back of this guarantee is the century-old house of Thomas De La Rue & Co., Ltd., London, England. Made in two sizes, long or short, black or red hard rubber, \$3—clip 25c. extra. With gold mountings, \$4 to \$25.

Insist upon ONOTO if you would know a thoroughly dependable writing instrument of truly delightful ease. The only one with an iridio-platinum writing point.

Also makers of De La Rue Playing Cards—the most beautiful and longest wearing cards ever produced.

The ONOTO INK PENCIL, and De La Rue Playing Cards are carried in stock by the better dealers. Write for names of those near you.

THOMAS DE LA RUE & CO., LTD.
450 Fourth Avenue
New York

No ink is quite so good as ONOTO INK!



SLYKER METAL Radiator Furniture



EVERY home owner enthuses over the beauty of SLYKER Radiator Furniture. But attractiveness is only one admired feature. It also prevents the costly soiling of delicate draperies and walls, and keeps heated air moist, comfortable, healthful. A patented humidifier under top serves this double purpose. Your radiators are entirely concealed in artistic cabinets, without loss of heating efficiency. Made entirely of Furniture Steel, finished in six coats of oil enamel, baked on. You have choice of three styles. Cane Grille is pictured. Finishes in shades of Mahogany, Walnut, Ivory or White—to harmonize with your room decorations. Converts radiators into useful seats or consoles.

Write us for name of nearest dealer where samples may be seen. We will send you descriptive book in colors upon request.

SCHLEICHER, Inc.
Dept. 30
GARY, INDIANA



Make your home winter-tight now

Keep out icy drafts and keep in furnace-heat by weather-stripping now. You need not wait for spring. Higgin men work in any weather, without chilling the house or inconveniencing you.

But be sure you get Higgin Weatherstrips—the strips that really keep the weather out. Write for booklet and free estimate.

HIGGIN

ALL METAL WEATHER STRIPS

THE HIGGIN MFG. CO., 505 Washington Street
NEWPORT, KY.



After weather strip has a chance to settle it will keep your door from rattling and your house from getting cold.



Send for this free book. Shows how to effectively weatherstrip every type of door and window.



The House That Bossert Builds Saves You Money

HERE is a home that wins instant admiration because of its beautiful design, staunch construction and splendid floor arrangement.

Floor plans include large, comfortable living room, 18 x 9 ft.; 2 light and airy bedrooms, with windows on three sides, 12 x 9 ft.; kitchen, 6 x 9 ft., and bath, 6 x 9 ft. Living room has casement doors at each end opening on pergolas. Pieced panel shutters on all windows.

Two people can erect the "sectional" home without experienced help, thus removing a big item of expense that often proves a serious obstacle to families buying their home.

Right now, send for free catalogue showing this and many other beautiful BOSSERT HOMES

LOUIS BOSSERT & SONS, Inc.

Largest Lumber Plant in the East
1313 Grand St. (House Dept.) Brooklyn, N. Y.

"Ready Cut"

\$1213

"Sectional"

\$2205

F.O.B. Brooklyn

OWN A BAROMETER and Foretell the Weather



This reliable Barometer enables you to predict accurately any change in weather 8 to 24 hours in advance. Scientifically constructed, attractive in appearance, highly polished mahogany case, silvered metal dial, heavy bevel glass front. Size 5 1/2 inches.

AN IDEAL GIFT

Makes a highly prized and lasting gift. Educational, useful and interesting. Indispensable to motorists. Should be in every home. Fully guaranteed postpaid to any address on receipt of **\$5.00**

DAVID WHITE, Dept. 110, 419 E. Water Street
Milwaukee, Wisconsin



To Display Your Geographic Maps Use Moore Push-Pins

Glass Heads—Steel Points

For Your Heavy Pictures or Curios You Need

Moore Push-less Hangers

Scientifically Constructed for Strength

Tail-tempered steel points insure safety and will not injure plaster or woodwork. Samples of colored map tacks for the asking.

10c Pkts. Everywhere

Moore Push-Pin Co., Philadelphia, Pa.



Clearwater

Florida West Coast—On the Gulf



Where "It's Springtime All the Time" Revel all winter in the great outdoors in an always delightful climate. Countless diversions and wonderful investment opportunities. Sporty golf on 18-hole course—grass greens. Finest Beach on West Coast. Fishing, Motoring, Lawn Bowling, Tennis, Boating, Big League Ball, Ducky Band Concerts. Attractive accommodations.

Highest Elevation on Either Coast Handsome, illustrated booklet or any desired information sent free on request. Address CLEARWATER CHAMBER OF COMMERCE Dept. 10, Clearwater, Florida

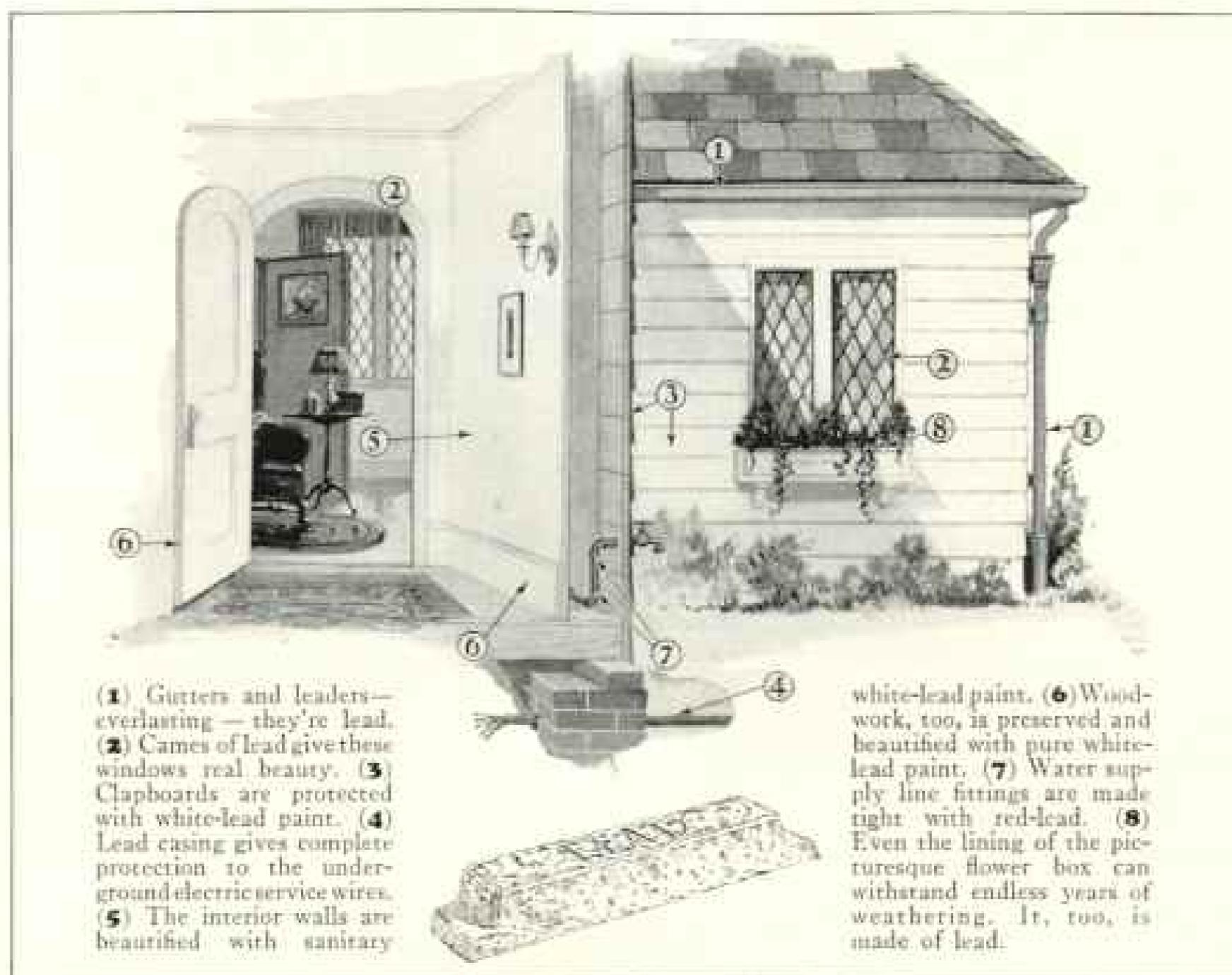


The Book of Birds Again Available

TO many who have been unable to purchase a copy of THE BOOK OF BIRDS, announcement is made that a revised edition is promised by the printer for December 1, 1925—in ample time for holiday use as a delightful gift for young and old.

210 pages; 211 Bird Portraits in full color; 24 engravings and maps; handsomely bound in cloth, \$2, postpaid in U. S.; Foreign mailing, 25 cents.

Obtainable only from the
NATIONAL GEOGRAPHIC SOCIETY
Washington, D. C.



(1) Gutters and leaders—everlasting — they're lead. (2) Casements of lead give these windows real beauty. (3) Clapboards are protected with white-lead paint. (4) Lead casing gives complete protection to the underground electric service wires. (5) The interior walls are beautified with sanitary

white-lead paint. (6) Woodwork, too, is preserved and beautified with pure white-lead paint. (7) Water supply line fittings are made tight with red-lead. (8) Even the lining of the picturesque flower box can withstand endless years of weathering. It, too, is made of lead.

Four walls—a roof—and LEAD

CAN lead be turned into gold? Look at this picture. In it is the answer to the old alchemist's dream. For today man has done more than transform dull pigs of lead into so many glittering nuggets. In his effort to beautify and protect the four walls and roof of his home, he has discovered that lead is the more useful, and therefore gladly exchanges the gold for lead.

The hand-wrought gutters and leaders, for example, are not only beautiful, but weather can't wear them. They are made of lead. The old craftsmanship of the rustic casement windows will remain unchanged through the centuries. All the casements that hold the glass in place consist of lead.

Another form of lead, one in most general use today, is present in this home. It doesn't look like lead—yet it is made from lead and has the metal's superior qualities of endurance, weather resistance and protection.

You'll find it on the clapboards and

trim—on the interior walls and woodwork. It is the basic carbonate of the metal, called white-lead, which makes a paint that gives both beauty and protection to the surface.

There are many other unseen uses of lead in this home. Lead helps to give the glass of the electric light bulbs their transparency, also the fine glass tableware its brilliancy. Lead is in the glaze of the chinaware and in that of the bathtub and sink. And a lead device makes it safe to telephone when lightnings play.

National Lead Company makes lead products for practically every purpose for which lead is used today. If you would like to know more about this wonder metal of many uses, just write to our nearest branch.



NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 121 State Street; Buffalo, 116 Oak Street; Chicago, 926 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 222 Chestnut Street; San Francisco, 483 California Street; Pittsburgh, National Lead & Oil Co. of Pa., 116 Fourth Avenue; Philadelphia, John T. Lewis & Bro. Co., 457 Chestnut Street.

FROM THE HOUSE OF BANISTER

The
LEAGUE



This manner of man!

He chooses a watch for something more than accuracy. His clothes are an unconscious symbol of his own qualities and tastes.

In shoes, he demands more than comfort and style. Arbitrarily...Banister Shoes.

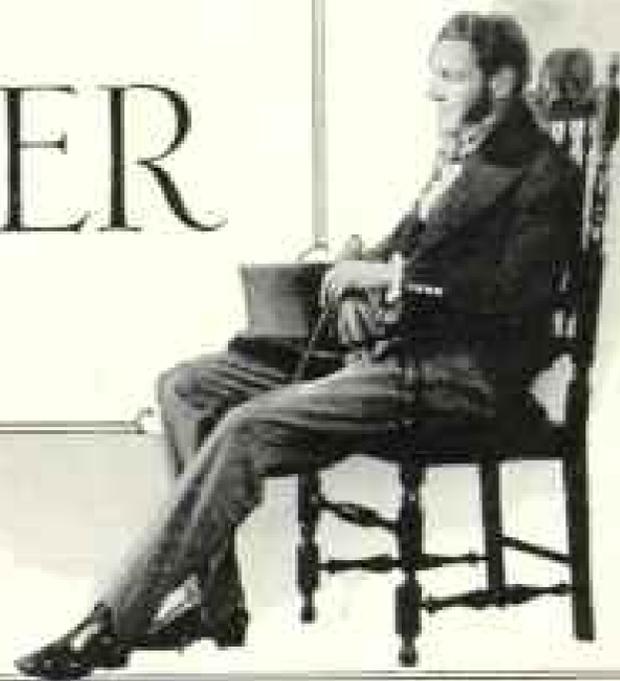
It is indicative of the man brought up to cherish fine things, uphold family traditions and to carry, even into his choice of things to wear, an individual judgment that invariably seeks out the best.

Such men, and their forebears for eighty years, have chosen Banister Shoes.

*Are you acquainted with a Banister dealer?
If not, please write to us and permit us to
send you the names of those nearest you.*

JAMES A. BANISTER COMPANY
Newark, New Jersey.

BANISTER
Shoes



SINCE 1845 THE CHOICE OF GENTLEMEN



"I bought it without touching my savings!"



"\$6.25 DOWN!—that was all I paid to have my Hoover delivered. Each day I put away a few cents. By the end of the month I had more than enough to meet the small payment. And now it's mine—all paid for!" No wonder he's proud of her. In fact, she's just a little proud of herself. And happy, too! For she has found in The Hoover her complete home-cleaning servant. It beats her rugs—and she's discovered they need beating. (You can prove this, too* . . .) It sweeps her rugs, electrically. It suction-cleans, and does all her "dusting." It saves a lot of her time and most of her labor. Her rugs wear longer—and how beautiful they are! You'd be proud, too, if you were in her place. When will you be? Your Authorized Hoover Dealer will deliver your Hoover for \$6.25 down. And you, too, can buy it without touching your savings.

The HOOVER

It BEATS... as it Sweeps as it Cleans

TO PROVE RUGS NEED BEATING: Turn over a corner of a rug; with the handle of an ordinary table-knife, or something of equal weight, give the under or warp side 15 to 25 sharp taps and watch the dirt dance out from the nap depths onto a piece of paper. Feel the destructive character of this grit. This is the dirt your present cleaning methods have missed, and that beating has dislodged. Correct use of The Hoover causes this embedded dirt to be stirred to the surface by the rapid, gentle beating of the Hoover brush, as powerful suction lifts the rug from the floor and draws all the beaten-out, swept-up dirt into the dust-tight bag.



THE HOOVER COMPANY, NORTH CANTON, OHIO
The oldest and largest maker of electric cleaners • The Hoover is also made in Canada, at Hamilton, Ontario

Outstanding improvements in every type of GRUEN watch



Strap as (Pat. applied for)
PRECISION movement
\$75 and \$85



Pocket, \$54 (Pat'd)
VeriThin PRECISION movement
\$75 up

IN EVERY TYPE of Gruen watch you will find technical improvements to adapt the particular movement to its particular use. Many of these improvements are patented by the Gruen Guild and are to be found in watches of no other make.

In men's pocket watches by Gruen are embodied the Gruen VeriThin and Ultra-VeriThin principles of watch construction, explained by the diagram below.

In women's wrist watches by Gruen is embodied the principle of the Gruen Cartouche. By placing an oblong movement in an oblong case, the Gruen Guild takes advantage of every bit of space to make the necessarily tiny movement as large and strong as possible.

Similar to the Cartouche principle is that employed in the man's strap watch shown above. The movement, instead of round, is made rectangular to gain space. The result is greater size and durability of parts, permitting greater accuracy.

The better jewelers can show you these watches, as well as a large variety of others by the Gruen Guild. Their stores are marked by the Gruen Service emblem.

GRUEN WATCH MAKERS GUILD

Time Hill, CINCINNATI, U. S. A.

Canadian Branch, Toronto

Engaged in the art of fine watchmaking for more than half a century

PRECISION

Trade mark reg.

This pledge mark of the GRUEN Guild is placed upon those watches of higher quality and finer finish.

Buy a little more and get the best

GRUEN GUILD WATCHES



Wheel train diagram, showing how the four operating pins of the ordinary watch are reduced to three in the Gruen VeriThin and two in the Ultra-VeriThin. Thus thinness is secured without loss in accuracy or durability of parts.

