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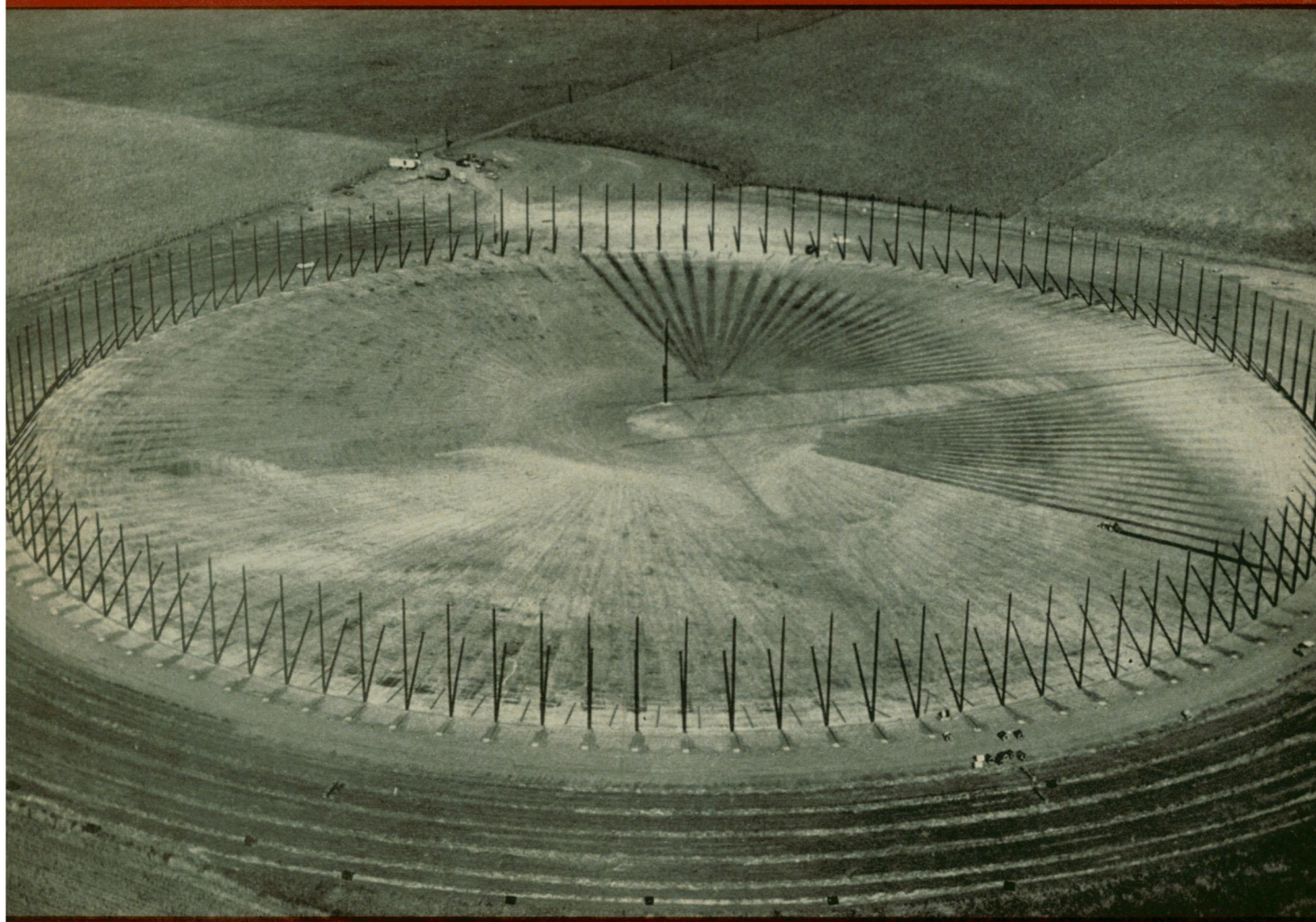
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THE WEEKLY SUMMARY OF CURRENT SCIENCE

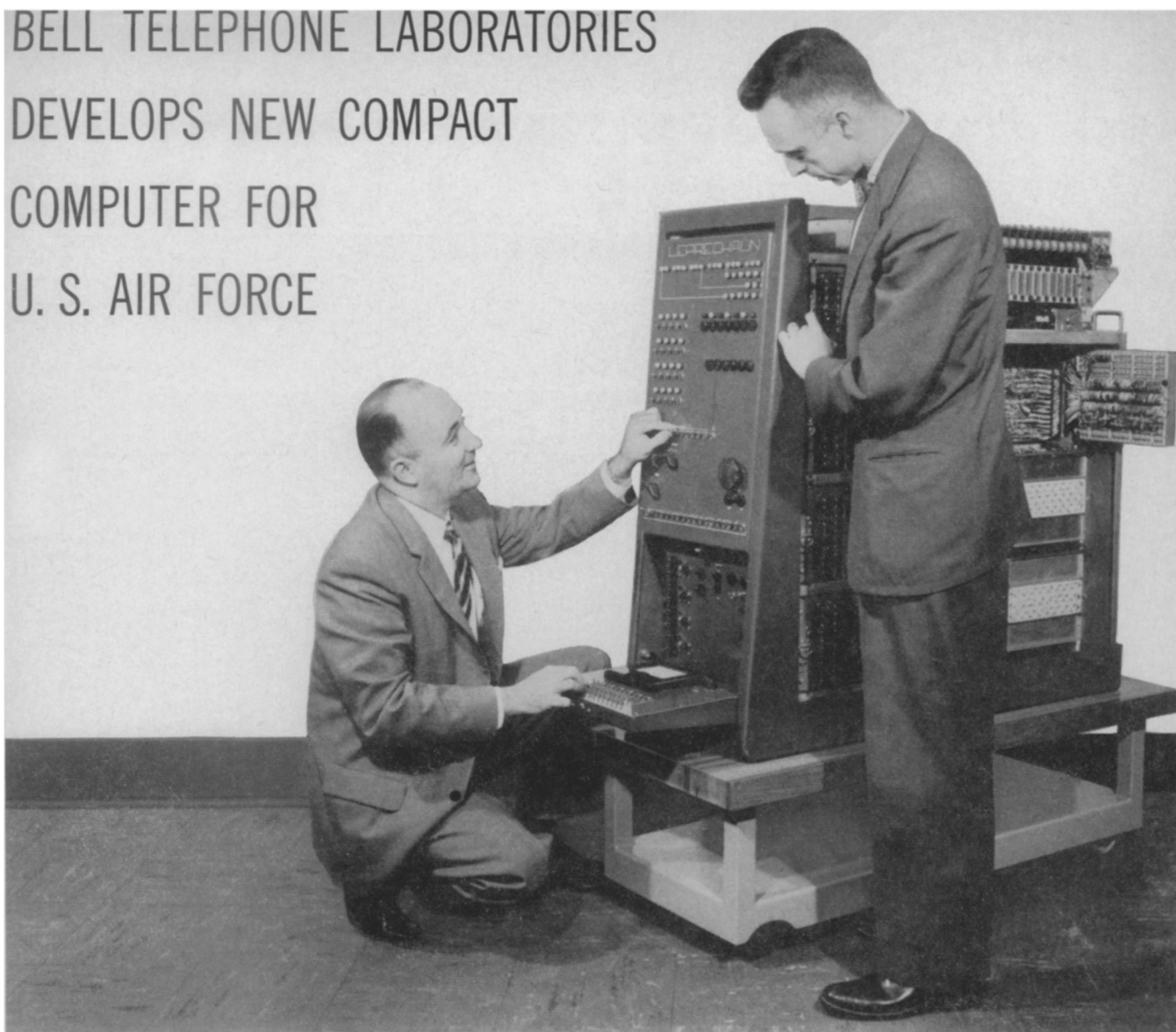


Direction Finder

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A SCIENCE SERVICE PUBLICATION

BELL TELEPHONE LABORATORIES DEVELOPS NEW COMPACT COMPUTER FOR U. S. AIR FORCE



J. A. Githens, B.S. in E.E., Drexel Institute of Technology, and J. A. Baird, Ph.D. in E.E., Texas A. & M., check the control panel of Leprechaun, a new high-speed computer which solves extremely complex problems in one-tenth of a second. Small size and low power are made possible by new design principles and Bell Laboratories' invention of the transistor.

The United States Air Force assigned Bell Labs an interesting assignment: develop a new kind of electronic computer. The major requirement was greater simplicity. Of course, no computer is simple, but this one (known as "Leprechaun" to its designers) is much smaller and simpler than most of the computers currently in use.

It has only some 9000 electrical components; 5000 of them are transistors. As a result, Lepre-

chaun has less than one-third the components of conventional computers. This facilitates testing, experimentation, assembly and service.

Even in its experimental state, Leprechaun is a stimulating example of great strides in the simplification and miniaturization of circuitry . . . a problem of profound interest to all Bell Laboratories researchers as they develop radically new equipment for your future telephone service.

BELL TELEPHONE LABORATORIES



WORLD CENTER OF COMMUNICATIONS RESEARCH AND DEVELOPMENT

BARGAIN PARADISES OF THE WORLD

Do you know where to find an island right near the U. S. so nearly like Tahiti in appearance, beauty, and color even the natives say it was made from a rainbow? (And that costs here are so low you can not only reach it but also stay a while for hardly more than you'd spend at a resort in the U. S.?)

Do you know where to find the world's best mountain hideaways or its most dazzling surf-washed coastal resorts, where even today you can live for a song?

Do you know where it costs less to spend awhile, the surroundings are pleasant, and the climate well nigh perfect in such places as Mexico, the West Indies, Peru, France, and in the world's other low cost wonderlands?

Or if you've thought of more distant places, do you know which of the South Sea Islands are as unspoiled today as in Conrad's day? Or which is the one spot world travelers call the most beautiful place on earth, where two can live in sheer luxury, with a retinue of servants for only \$175 a month?

Bargain Paradieses of the World, a big new book with about 100 photos and 4 maps, proves that if you can afford a vacation in the U. S., the rest of the world is closer than you think. Authors Norman D. Ford and William Redgrave, honorary vice presidents of the Globetrotters Club, show that the American dollar is respected all over the world and buys a lot more than you'd give it credit for.

Yes, if you're planning to retire, this book shows that you can live for months on end in the world's wonderlands for hardly more than you'd spend for a few months at home. Or if you've dreamed of taking time out for a real rest, this book shows how you can afford it.

In any case, when it can cost as little as \$24.50 from the U. S. border to reach some of the world's paradises, it's time you learned how much you can do on the money you've got. Send now for **Bargain Paradieses of the World**. Price \$1.50. Use coupon to order.

WHERE TO RETIRE OR VACATION

at what look like prewar prices
—and where no one ever heard
of nerves or worries

These Are America's Own Bargain Paradieses

Norman Ford's new book **Off-the-Beaten Path** names the really low cost Florida retirement and vacationing towns, the best values in Texas, the Southwest, California, the South and East, Canada, and a dozen other areas which the crowds have not yet discovered.

Fabulous places like that undiscovered region where winters are as warm and sunny as Miami Beach's yet costs can be two-thirds less. Or that island that looks like Hawaii yet is 2000 miles nearer (no expensive sea or air trip to get there). Or those many other low-cost, exquisitely beautiful spots all over the United States and Canada which visitors in-a-hurry overlook (so costs are low and stay low).

Every page of **Off-the-Beaten Path** opens a different kind of vacationing or retirement paradise which you can afford—places as glamorous as far-off countries yet every one of them located right near at hand. Like these:

- France's only remaining outpost in this part of the world—completely surrounded by Canadian territory . . . or a village more Scottish than Scotland . . . or age-old Spanish hamlets right in our own U. S., where no one ever heard of nervous tension or the worries of modern day life.
- Resort villages where visitors come by the score, so you always meet new people . . . (but they never come by the thousands to raise prices or crowd you out).
- That remarkable town where a fee of 3¢ a day gives you an almost endless round of barbecues, musicals, concerts, picnics, pot luck suppers, smorgasbord dinners and a fine arts program. That southern island first discovered by millionaires who had all the world to roam in . . . and now their hideaways are open to anyone who knows where to find them.

You read of island paradises aplenty in the United States and Canada, of art colonies (artists search for picturesque locations where costs are low), of areas with almost a perfect climate or with flowers on every side. Here are the real U. S. A.-brand Shangri-Las made for the man or woman who's had enough of crowds. Here, too, are unspoiled seashore villages, tropics-like islands, and dozens of other spots just about perfect for your retirement or vacation at some of the lowest prices you've heard of since the gone-forever prewar days. They're all in the United States and Canada, and for good measure you also read about the low-cost paradises in Hawaii, the Virgin Islands and Puerto Rico.

Off-the-Beaten Path is a big book filled with facts that open the way to freedom from tension and a vacation or retirement you can really afford. About 100,000 words and plenty of pictures. Yet it costs only \$2.

HOW TO TRAVEL

— and get paid for it

There's a job waiting for you somewhere: on a ship, with an airline, in overseas branches of American firms, in foreign firms overseas—even exploring if you're adventurous.

The full story of what job you can fill in is Norman Ford's new book **How to Get a Job That Takes You Traveling**. Whether you're male or female, young or old, whether you want a life-time of paid traveling or just hanker to roam the world for a short year or so, here are the facts you want, complete with names and addresses and full details about the preparations to make, the cautions to observe, the countries to head for.

You learn about jobs in travel agencies (and as tour conductors), in importing and exporting concerns, with mining and construction companies. Here's the story of jobs in the Red Cross and the UN organizations, how doctors get jobs on ships, the almost-sure way for a young girl to land a job as airline hostess, the wonderful travel opportunities if you will teach English to foreigners, and the fabulous travel possibilities for those who know stenography.

"Can a man or woman still work his or her way around the world today?" Norman Ford asks in this book as you might ask today. And he replies in 75,000 words of facts, "The answer is still a very definite Yes."

To travel and get paid for it, send today for **How to Get a Job That Takes You Traveling** on a money-back guarantee if not satisfied. Price, \$1. Fill out coupon.

WHERE DO YOU WANT TO GO?

FRANCE?

WEST INDIES?

BRAZIL?

HAWAII?

MEXICO?

Go by Freighter—the pleasant way to travel

When the travel editor of the Christian Science Monitor saw a copy of "Travel Routes Around the World," he wrote: Many fascinating travel booklets pass over this desk in the course of a year but the one that arrived the other day so interested this department that it cost the office several hours of work in order that we might absorb its contents. The booklet is entitled "Travel Routes Around the World" and is the traveler's directory to passenger-carrying freighters and liners. In no time at all you find yourself far out to sea cruising along under tropical skies without a care in the world. You find yourself docking at strange ports and taking land tours to those places you long have read about. Most interesting of the vast listings of ships are the freighters which carry a limited number of passengers in quarters comparable to the luxury offered in the so-called big cruise ships which devote most of their space to passengers.

The booklet first of all answers the question: What is a freighter? The modern freighter, says the booklet, ranks with the de-luxe passenger vessels so far as comfort and accommodations are concerned.

LARGE ROOMS WITH BEDS

It is important to realize that in most cases today, freighter passengers are considered first-class passengers, although the rates charged are generally on a par with either cabin or tourist-class fare. Most passenger-carrying freighters, to quote the booklet, have their private bath and shower, and these cabins offer beds, not bunks. The rooms are generally larger than equivalent accommodations aboard passenger ships, and the cabin of a modern freighter is sometimes even twice as large as first-class cabins on some of the older passenger ships. It goes without saying that your room is on the outside, and amidsthips, the most expensive of all locations, for which you are usually charged a premium over the advertised minimum fares on passenger ships.

This booklet points out that it is frequently astonishing how low freighter fares are as compared with passenger ship fares; for example, less than one-half of the passenger ship fare to California is the amount asked on freighters. On most of the longer runs, the difference in favor of the freighters is regularly from a third to half of the passenger ship fare.

SERVICE AND MEALS RATED EXCELLENT

Service and meals on a freighter leave little to be desired. You will be treated with consideration. Stewards will go out of their way to make your voyage pleasant. On ships with East Indian stewards you will be waited on almost hand and foot, in a manner that is completely unknown to Americans and most Europeans.

Foreign ships offer their own specialties, says the booklet. Thus vessels in the East Indian trade serve Rijkstafel, the East Indian dish which can run to as many as 50 different courses. Scandinavian ships serve Smorgasbord every day, and some of their desserts (like strawberries smothered in a huge bowl of whipped cream) are never forgotten. Another feature of freighter travel is in its informality. No formal clothes are needed. Sports clothes are enough.

Other valuable information such as how to tip, shipboard activities and costs are covered in the booklet, "Travel Routes Around the World." Some of the trips listed include a trip to England for \$160, a 12-day Caribbean cruise, or a leisurely four-month round the world voyage.

The booklet is published by Harian Publications, Greenlawn, New York, and may be obtained by sending to the publisher. So, when it arrives all you need to do is sit down and take your choice. The booklet lists literally hundreds of ocean trips.

"Travel Routes Around the World" is yours for just \$1, and the big new edition includes practically every passenger carrying service starting from or going to New York, Canada, New Orleans, the Pacific Coast, Mexico, South America, England, France, the Mediterranean, Africa, the Indies, Australia, the South Seas, Japan, Hawaii, etc. There's a whole section called How to See the World at Low Cost, plus pages and pages of maps.

A big \$1 worth, especially as it can open the way to more travel than you ever thought possible. For your copy, simply fill out coupon.

Mail to HARIAN PUBLICATIONS, 150 Prince St.
GREENLAWN (Long Island), N. Y.

I have enclosed \$_____ (cash, check or money order). Please send me the books I checked below. YOU WILL REFUND MY MONEY IF I AM NOT SATISFIED.

- ☐ Bargain Paradieses of the World—In Mexico, the West Indies, and other parts of the world where the dollar buys a lot. \$1.50
- ☐ Off-the-Beaten Path—America's own bargain paradises. \$2.00
- ☐ How To Get A Job That Takes You Traveling. \$1.00
- ☐ Travel Routes Around the World—the traveler's directory of passenger carrying freighters. \$1.00
- ☐ SPECIAL OFFER: All books above for \$4.00

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