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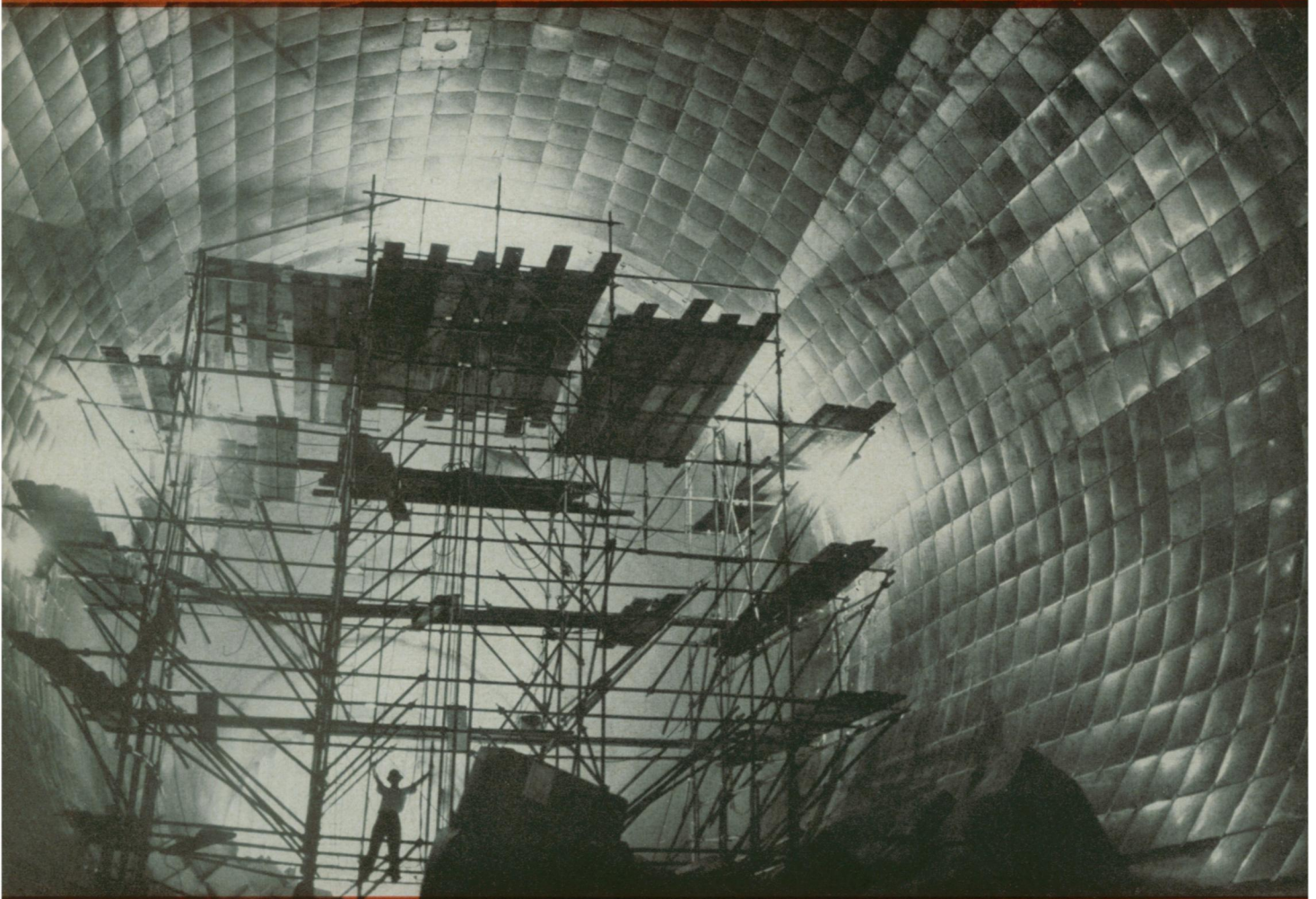
\$5.50 A YEAR

January 9, 1960

VOL. 77, NO. 2 PAGES 17-32

# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE



**Super Tunnel**

See Page 20

A SCIENCE SERVICE PUBLICATION

## Kodak reports on:

"Ektalith," a word which will catch on... the stable base of photography... four views of a 1920 Bavarian postage stamp... a polyolefin you can make springs out of

### Camera weds duplicator

There are many thousands of offset duplicators in offices. We have worked out new materials and equipment which enable them to start in two minutes turning out in quantity first-rate enlargements or reductions of anything drawn, written, or printed, including microfilm records. If you require relatively few copies, you don't even need an offset duplicator. Write a note to Eastman Kodak Company, Graphic Reproduction Division, Rochester 4, N. Y., and ask where in your locality you can see a demonstration of the *Kodak Ektalith Method*.

### Wall Street cheery

## Factory Photos

Firms Spur Camera Use  
To Solve Test, Sales,  
Production Problems

headlined the first column of *The Wall Street Journal* on the penultimate morning of last summer.

"Industry sources expect retail sales of equipment and supplies for industrial photographic use will reach some \$250 million this year, up from about \$100 million five years ago," the story said. (That's a very short time ago. These very discourses have been appearing for six years in this periodical.)

Feeling well disposed toward *The Wall Street Journal*, we laid it aside and took action to maintain the trend. Of "supplies" that *The Wall Street Journal* mentioned, none is older than photographic plates—our original product. For the love of challenge, we decided to get ready for the printer a chart that would put the photographic plate right into the spearhead of photography's onslaught on current technology.

The chart is now ready. You may have a copy with our compliments for your photo department wall. Indicate interest to Eastman Kodak Company, Special Sensitized Products Division, Rochester 4, N. Y. It takes 29" x 16½" to set out enough information about our 75 species of plates to permit industry and technology some intelligent basis for choice. You will receive the chart accompanied by a little pamphlet on dimensional stability entitled "Physical Characteristics of Kodak Glass Plates." Gist of the pamphlet's message: if there were no such thing as the glass photographic plate, it would be necessary to invent it.

### About the new x-ray films



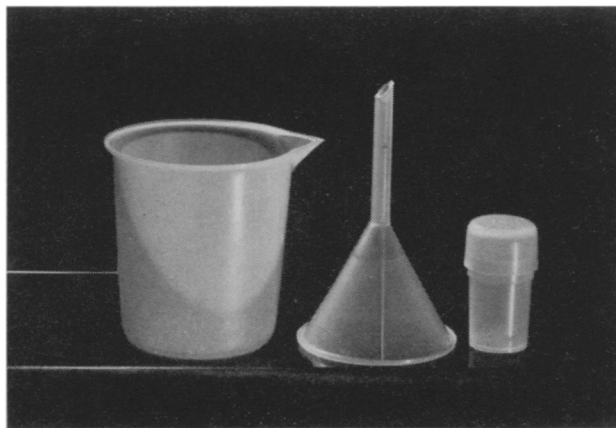
Bavarian stamp of 1920 (Scott No. 052). A. Visible light photograph. The design is green and the "Deutsches Reich" overprint is black. B. Soft x-ray radiograph. Details of both design and paper visible. Design is "negative," indicating absorption of x-rays by the ink. C. Electron radiograph. Only the details of the paper are shown. D. Electron-emission radiograph. The design is "positive," indicating a relatively high

electron emission from some heavy element in the ink. The overprint cannot be seen.

This is a clever scheme to snare the attention of those who use philately for a hobby and radiation for a livelihood. Having gained your attention, we must reward you for it. The reward takes the form of a handsome 24-page book which contains not only a discussion of the above illustrations but (much more important) of general techniques for radiography by emitted electrons, transmitted electrons, soft x-rays, hard x-rays, and gamma rays; and (most important) operating data about the several new and newly improved Kodak films for all manner of radiography and x-ray diffraction.

Request a copy of the Second Supplement to "Radiography in Modern Industry" from Eastman Kodak Company, X-ray Division, Rochester 4, N. Y. To have it make full sense, it helps to have a copy of the book that the supplement supplements. This hard-cover, thoroughly indexed, 136-page affair is sold by x-ray dealers for \$5. If you already own it and have sent in the postcard that came with it, you doubtless have already received and read the supplement and have been wasting your time for the past 90 seconds.

### Big one coming



See what Pioneer Plastics of Jacksonville, Fla., has done with some of our first commercial output from a process we have invented for polymerizing our high-purity propylene.

The polypropylene dawn is breaking. Polypropylene has a significantly lower density than polyethylene.\* A pound of it therefore yields more funnels, beakers, weighing bottles, or anything else—dimension for dimension. It melts higher. It resists stress-cracking better. Its stiffness permits it to hold a vacuum under conditions where polyethylene would collapse. Its resilience permits it to serve as a molded spring to seat a check valve, where a spring of even expensive alloy would still contaminate a reagent.

As yet we are making no excessive noise about Tenite Polypropylene, but inquiries directed to Eastman Chemical Products, Inc., Plastics Division, Kingsport, Tenn. (Subsidiary of Eastman Kodak Company) will elicit adequate replies.

\*Among the uses of Tenite Polyethylene—may their numbers ever grow—we have just heard of one that requires neither molding nor extruding. You just set out 1.5 kg of the raw pellets outdoors over a sheet of polyester in a tray and let them sit there to entrap debris from nuclear detonations as it falls from the sky. Then you wash them with isopropyl alcohol and, by the use of sieves, analyze for fallout. They do a better job than washed pea gravel, quartz sand, glass beads, or several other granular synthetics. Read all about it in *Industrial Hygiene Journal* 20, 267 (1959).

This is another advertisement where Eastman Kodak Company probes at random for mutual interests and occasionally a little revenue from those whose work has something to do with science

**Kodak**  
TRADE MARK

# 67 Reasons Why

**it would have paid you to answer our ad a few months ago**

A few months ago, we published a newspaper ad inviting readers to accept a trial subscription to U.S. NEWS & WORLD REPORT, on a money-back assurance of satisfaction.

We don't have room here even to begin to summarize the many hundreds of pages of "useful news" you missed by not subscribing at that time. But here, at least, are 67 examples of the way U.S. NEWS & WORLD REPORT has enriched the thinking, the planning, and the conversation of its 1,150,000 readers since then...67 of the exclusive reports, analyses, and interviews that have given our readers a valuable "inside" look at the important trends and developments of our time.

1. Outlook for '60: Business, Prices, Taxes
2. Effects of Costliest Steel Strike in History
3. Political Hopefuls: Where They Stand on Key Issues
4. Why a Shortage Has Developed in the 1960 Cars
5. Changes Ahead in Our Defense Ring around Russia
6. Who Will Run in '60? Size-up by Party Leaders
7. Latest Rules for Draft-Eligible Youths
8. If You're Planning to Borrow Money --
9. Ike's Good-Will Tour: What He Hopes to Accomplish
10. TV Scandals: Will Networks Take Effective Action?
11. Grassroots Elections -- What They Tell about '60
12. Where Big Investors Are Putting Their Money
13. NATO: Shield or Sieve in a Showdown?
14. India's "Debt" -- Price of Befriending Red China
15. Medical Breakthroughs for Weight, Pain, High Blood Pressure
16. Urban Renewal: Can Big Cities Save Downtown Areas?
17. Profit Picture Now -- What's Up, What's Down
18. Democratic Plans for the '60 Election
19. Overweight and Life Span: New Findings
20. Still More Trouble Ahead for Farmers
21. Why Nixon Has Become a Top Soviet Target
22. Alcoholism: Danger Signs, New Treatments & Cures
23. Report on U.S. Rockets by Men Who Test Them
24. South America: Where Communists Are Busier Than Ever
25. The Space Race Now and in Years Just Ahead
26. U.S. vs. Russia -- New Look at the Balance of Power
27. How Major Strikes Are Settled -- Lesson from Abroad
28. Kennedy's Backers -- Their Strategy for '60
29. Cheaper Products from Abroad -- U.S. Business Worry
30. Will Congress Crack Down on Crippling Strikes?
31. School Admission Tests -- Are They Being Overdone?
32. Plans for Drastic Tax Changes -- Meaning to You
33. De Gaulle and Adenauer -- Why They Worry the U.S.
34. Do We Need Antitrust Laws for "Monopoly Unionism"?
35. Doctor Shortage Coming: Official Warning
36. What It's Like to "Coexist" with Russia -- from Finland
37. Cheaper Auto Insurance: Break for Safe Drivers
38. The U.S. by 1970 -- Problems and Opportunities
39. Plans for the First American into Space
40. Why Some Unions Favor Automation
41. Putting the Brakes on Inflation
42. What's Behind Current Stock Prices
43. Where Major Strikes Threaten for '60
44. GOP Charts Its Course for 1960
45. Who Will Get Pay Raises in 1960
46. The Coming Revolution in U.S. Cars
47. The New U.S. Policy Toward Europe
48. Where You Now Get 6% on Your Money
49. Is This a Good Time to Buy a House?
50. Best Job Opportunities for the 1960's
51. Another Wage-Price Spiral Ahead?
52. What People Are Doing with Savings
53. What U.S. Bankers Say about the Future
54. Latest Threat to the U.S. Dollar
55. War Dangers in the Caribbean
56. The Cost of Living in Months Ahead
57. New Ways To Finance College Education
58. Why the Midwest Will Be a Political Battlefield

59. Another Blowup Coming in the Middle East?
60. Switching Stocks to Bonds? Check These Tax Angles
61. Quiz Shows -- Not the Only Problems for Television
62. Curfews -- How Effective in Curbing Teen Crime?
63. Coming -- Easier Rules for Social Security Benefits
64. Billions in Steel Strike Costs: Who Pays the Bill?
65. Why Hopes for a Balanced Budget Are Diminishing
66. New Products: Surprises Industry Has In Store
67. What You Should Know about Mutual Funds

This listing gives you just an inkling of what you can get from the magazine that brings you more news than you can get in any other news publication--plus the "extras" which make it the most quoted, most useful news magazine in America.

Every week U.S. NEWS & WORLD REPORT brings you news you can use, news you didn't know and can't get elsewhere. The editors not only report the news "behind" significant happenings. They go further and seek to answer the questions raised in your mind: "What does this news mean to me? My work? My family? Where is it leading?"

You get almost twice as many pages of news as in other news magazines. Five complete newsletters. Exclusive interviews with important newsmakers. Special reports based on weeks and months of study by experts. Historic speeches and press conferences reported in full. A swift-reading run-down of current trends in politics, foreign affairs, wages, prices, labor, science.

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## HOW TO TRAVEL WITHOUT BEING RICH

If you know the seldom-advertised ways of reaching foreign countries, you don't need fantastic sums of money in order to travel. You could spend \$550-\$1000 on a one-way luxury steamer to Buenos Aires—but do you know you can travel all the way to Argentina through colorful Mexico, the Andes, Peru, etc., via bus and rail for just \$139 in fares?

You can spend \$5000 on a luxury cruise around the world. But do you know you can travel around the world via deluxe freighter for only a fourth the cost and that there are a half dozen other round the world routings for under \$1000?

There are two ways to travel—like a tourist, who spends a lot, or like a traveler, who knows all the ways to reach his destination economically, comfortably and while seeing the most.

Norman Ford's big new guide *How to Travel Without Being Rich* gives you the traveler's picture of the world, showing you the lower cost, comfortable ways to practically any part of the world. Page after page reveals the ship, rail, bus, airplane and other routings that save you money and open the world to you.

What do you want to do? Explore the West Indies? This is the guide that helps you see them like an old time resident who knows all the tricks of making one dollar do the work of two. Visit Mexico? This is the guide that tells you the low cost ways of reaching the sights (how 76¢ takes you via 8-passenger automobile as far as those not-in-the-know pay \$5.60 to reach). Roam around South America? Europe? Any other part of the world? This is the guide that tells you where and how to go at prices you can really afford.

If you've ever wanted to travel, prove now, once and for all, that travel is within your reach. Send now for *How to Travel Without Being Rich*. It's a big book, filled with facts, prices and routings, and it's yours for only \$1.50. Even one little hint can save you this sum several times over.

## 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 is in 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, \$1.50. Fill out coupon.

## Will your next vacation really be something to talk about?

The surest way to guarantee a new, different, and exciting vacation is to learn the hundreds of things you can do and the places you can visit on the money you want to spend.

Norman Ford, founder of the world-known Globetrotters Club, tells you that in his book *Where to Vacation on a Shoestring*. This is the man who has spent a lifetime searching for the ways to get more for your money in vacations and travel.

### In his big book, you learn

- about low cost summer paradises, farm vacations, vacations on far-off islands, on boats drifting down lazy streams while you fish.
- about vacations at world-famous beaches, under palm and eucalyptus trees, in government subsidized vacation resorts, in Indian country, along rugged coastlines, on ships and by rail.
- about dude ranches you can afford; what to see, do, and how to save at national parks and in the cities most Americans want to visit.
- about low cost sailing ship cruises, houseboat vacations in the North Woods, fantastically low cost mountain vacations, the unknown vacation wonderlands almost at your front door.

Of course, Norman Ford knows where to get real vacation bargains in all America, from Maine to California, and in Canada, Mexico, etc. At no time does he ask you to spend a lot of money to enjoy yourself, no matter how really different and exciting is the vacation you choose through his experienced advice. Always, he tells you the many things you can do within your budget and how to get more for your money (if you travel by car, he shows how most auto parties can save \$6 or \$7 a day).

You can't help but learn something that is just meant for you. Yet, *Where to Vacation on a Shoestring* costs only \$1. To make sure your next vacation will be something to talk about, get the facts now.

## Where do you want to go?

FRANCE? WEST INDIES? BRAZIL?  
HAWAII? MEXICO?

Passenger-carrying  
FREIGHTERS are the secret  
of low cost travel

Yes, for no more than you'd spend at a resort, you can take a never-to-be-forgotten cruise to Rio and Buenos Aires. Or through the Canal to either New York or California. Or to the West Indies or along the St. Lawrence River to French Canada. In fact, trips to almost everywhere are within your means.

And what accommodations you get: large rooms with bed (not bunks), probably a private bath, lots of good food and plenty of relaxation as you speed from port to port.

Depending upon how fast you want to go, a round the world cruise can be yours for as little as \$250-\$300 a month. And there are shorter trips. Fast, uncrowded voyages to England, France, or South America; two or three week vacations up and down the Pacific Coast or elsewhere. Name the port and the chances are you can find it listed in *Travel Routes Around the World*. This is the book that names the lines, tells where they go, how much they charge, briefly describes accommodations. Hundreds of thousands of travelers all over the world swear by it. Travel editors and travel writers say "To learn how to travel for as little as you'd spend at a resort get *Travel Routes Around the World*."

It's yours for just \$1, and the big 130 page 1960 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, 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.

## 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 cannot 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 a while, the surroundings are pleasant, and the climate well nigh perfect in such places as Mexico, the West Indies, Peru, France, along the Mediterranean 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 Paradises of the World*, a big new book with about 70 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. Author Norman D. Ford, honorary vice president of the Globetrotters Club, shows 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 Bargain Paradises, it's time you learned how much you can do on the money you've got. Send now for *Bargain Paradises of the World*. Price \$1.50. Use coupon to order.

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Please send me the books checked below. You will refund my money if I am not satisfied.

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- Bargain Paradises of the World. \$1.50.
- How to Get a Job That Takes You Traveling. \$1.50.
- Where to Vacation on a Shoestring. \$1.
- Special offer: All books above (\$6.50 value) for \$5.

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