

The  
**Lamp**  
Spring 1961



Frank  
'60



# The Lamp

Spring 1961

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THE COVER is a scene symbolic of Lagos, capital of the new Federation of Nigeria. In this busy port city, as elsewhere in the country, old and new are side by side. The kerosene lamp, the colorful array of produce at the waterfront market, the exotic robes of the Yoruba women are as much a part of the city as the loading cranes at the docks, the endless construction taking place, and the tall modern buildings that are making a new skyline. This watercolor, like those on pages 11 through 14, was painted for THE LAMP by Dr. Frederick Franck. A brief biography of him accompanies the article on Nigeria that starts on page 10.

AN INDEX of THE LAMP for the years 1958, 1959 and 1960 (Volumes 40, 41, 42) is available on request. Please write to the Editor of THE LAMP, 30 Rockefeller Plaza, Room 1626, New York 20, N. Y.

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## STANDARD OIL COMPANY (NEW JERSEY) 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

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◀ NIGERIAN TEACHER explains arithmetic to pupils in a primary school in Kano, capital of the Northern Region. Governments of Nigeria's three regions spend one-third of their income on education at all levels

## The President's Letter:

# America's Favorite Sport

I WAS happy to learn, very recently, of some evidence that motoring for pleasure, far from being extinct, is still America's favorite sport. A survey of the views of 3,200 motoring men and women, made for the Ethyl Corporation, reveals a good many interesting things about American motorists' habits and preferences.

About three-fourths of all these drivers still feel that there's adventure in motoring. They say that driving makes them feel relaxed, independent and free. Women, especially, enjoy driving without an urgent destination. Even men who drive regularly to and from their work find pleasure in being at the wheel.

It seems clear from their comments that most Americans still enjoy the leisurely exploration of the country's byways as well as its highways, the feeling that first drew Americans into their epic romance with the motor car. For example, almost two-thirds of the motorists interviewed said they like to drive on roads where they've never been before. More than half of them said that they enjoyed driving the turnpikes, but more than half also reported pleasure in traveling the back roads—"shunpiking," as it has been called.

Most of the motorists surveyed had taken at least one weekend or overnight expedition for pleasure within a year for a median distance of 250 miles. Families with children took the most pleasure trips; families without children took the longest ones. Parents were generally enthusiastic about the educational values of visits with their children to places of scenic, cultural and historic interest.

Most Americans, apparently, still like the idea of a two-week touring vacation, and even the Sunday afternoon drive, which pessimists have called a vanishing institution, received kind words from more than two-thirds of those interviewed.

All this is encouraging to a company a large part of whose business is serving the needs of U.S. motorists. I would like to think it is the beginning of a large-scale renewal of the American habit of driving for pleasure, which has been somewhat overshadowed by the development of the automobile as a business and household necessity for so many people.

Many things are combining to make motoring more pleasurable.

The nation is in the midst of the greatest highway building program in its history—a program, let us note, for which the nation's highway users (motorists and truckers) are paying directly.

There is reason to hope that driving is becoming safer. For example, in New York State there were 7,000 fewer highway accidents in 1960 than in 1959, in spite of more highway use.

Roadside facilities for motorists—for food, for rest, for recreation—improve in convenience and in quality from year to year.

Jersey Standard's domestic marketing affiliate, Humble Oil & Refining Company, is building a new nationwide organization with which to serve motorists better. In addition to its highway services, Humble operates a touring service, with offices in New York, Washington, New Orleans and Houston, which answers three-quarters of a million inquiries, by mail and in person, a year.

I hope that a large proportion of Jersey shareholders are among the Americans who regularly enjoy America's favorite sport, and to them I want to say, "Happy motoring!"

M. J. RATHBONE  
*President*



# Ask John Tuttle'

## IF IT'S ABOUT OIL, HE'LL HAVE THE ANSWER

**D**URING the early months of World War II, flocks of ducks migrating southward along the Atlantic coastal flyway came to rest on waters that were coated with bunker fuel from ships sunk by German submarines. Mallards, canvasbacks, bluebills and pintails descended on Long Island Sound and Chesapeake and Delaware bays and sometimes were unable to rise again because their feathers were matted with oil.

A conservationist, worried by the plight of the ducks, telephoned Standard Oil Company of New Jersey in New York City. His call was referred to John B. Tuttle, then a special assistant in the sales engineering division. The question: How could mired waterfowl be cleaned and made airworthy once more?

Mr. Tuttle obtained two oil-smearing ducks and washed them in a petroleum solvent. The cleanser removed the bunker fuel, but unfortunately it also removed the natural oils in the ducks' plumage so that they were unable to stay afloat on the water. Tuttle then made further inquiries and learned of a treatment that had been tried successfully in the West, where migrating waterfowl occasionally landed in oily slush pits near drilling rigs. The oilmen had found that handfuls of corn meal or sawdust rubbed on a bird would remove the oil without affecting the bird's natural buoyancy. After Tuttle passed this information on, the method was widely reported by nature writers, and it is still one of the best known for the purpose.

For many years John Tuttle has devoted a part of his time to answering unusual questions about petroleum products and their uses. Because oil and its derivatives touch the lives of everyone, he has accumulated a massive file of correspondence with hobbyists and housewives, engineers and businessmen, the technically sophisticated and the merely curious. As a member of the product development section of Jersey's marketing coordination department, he is today mainly involved in trademark and quality control work. Still, when anyone in the organization wants the answer to a question that falls into no readily classifiable branch of petroleum science, he is likely to call on Tuttle, who has become known as a man who can find an answer to almost anything.

John says he has specialized "in not being a specialist." He is, however, a trained chemist endowed with endless curiosity. During more than thirty years with the company he has acquired an encyclopedic knowledge of the characteristics, behavior and out-of-the-ordinary uses of the hundreds of solvents, oils, greases, waxes and other products manufactured by Jersey affiliates.

John's experience has been brought to bear on innumerable questions that appear at first glance to have little or nothing to do with the oil business. Some time ago, for example, a shareholder wrote that she had acquired an antique crystal salt cellar and was unable to get the top off. John suggested a treatment with a series of lubricants and solvents that did the trick.

In explaining why he is happy to give part of his time to problems that may seem unimportant, John says, "Every honest question deserves an answer. When someone asks our company for information he's paying us a compliment, and the tougher the question, the greater the compliment and the implied confidence."

**J**OHNSON has been interested, as long as he can remember, in how things are made and how they work. As a child in Ravenna, Ohio, where he was born in 1906, he preferred watching the local blacksmith at his forge to playing ball. This inquiring turn of mind led him to major in chemistry at Ohio Wesleyan University, where he maintained himself at various jobs including firing the furnace and waiting on table at a home for old ladies. To pay back borrowed tuition after graduation, he made toy balloons for a Ravenna manufacturer. He then went to work as a chemist for Standard Oil Development Company (now Esso Research and Engineering Company) in Linden, New Jersey.

For five years John worked there on motor oils and specialty products such as automobile radiator cleaners and anti-freeze solutions. In 1934, when another Jersey affiliate formed a sales engineering group, he became one of its first members. He soon discovered that one of the things the company's industrial salesmen needed most was a source of unusual technical information for customers with questions concerning new or potential applications

of petroleum products. John set out to provide this help.

To do so he undertook a systematic study of industries that were actual or possible users of petroleum. He learned the manufacturing and processing techniques for foods and food packaging, perfumes, inks, dyes, optical goods, toys, pencils, men's hats, garment fasteners and many other products. He studied more than one hundred industries, large and small, including such specialties as the manufacture of horseshoe nails, buttons, wooden shoe pegs, hairnets and toupees. His investigations covered most non-fuel petroleum products and their applications. He wrote encyclopedia articles on petroleum waxes and on candle-making, contributed to technical handbooks and trade journals, and provided answers on the oil industry for newspapers, magazine columns and radio programs. His familiarity with the ways in which Esso products are used led to his appointment as chairman of the toxicity committee, which considers potential hazards to customers and the preparation of cautionary labels. He also served for a number of years as a company representative in the American Petroleum Institute, and assisted in the labeling work of the Manufacturing Chemists' Association.

John's reputation as an expert on practically everything has brought him all kinds of queries. A window-display artist consulted him about the problem of creating a three-foot-tall iced drink with a wax lemon slice that wouldn't melt in the sun. John prescribed the proper mixture of stearic acid in the wax—a technique used by candle-makers to give their product a sufficiently high melting point. A team of professional skaters called to ask whether paraffin might be used instead of ice in a portable rink. John told them that it could be done, but the difficulties involved would probably outweigh any advantages. He was also approached by a toymaker who wanted to mold paraffin cows. His problem was how to apply black spots to Holsteins. John's knowledge of candle-making again supplied an answer.

A letter from a lawyer in Kansas City began: "Recently at a party a lady insisted that maraschino cherries are a coal-tar product made by your company. Is this true?" John replied by describing carefully the pickling, bleaching and dyeing of maraschino cherries, and the solution in which they are bottled, and explained that no petroleum goes into their manufacture.

John even finds himself involved occasionally in the plot problems of television mysteries. Not long ago a producer called to ask how long it would take to burn a wax manikin, and was informed that figures of this kind ordinarily have only



faces and hands of wax and are otherwise made of plaster, which will not burn readily. A television writer was disappointed to find out that he would have to change a plot centering around the detection of carbon monoxide by its odor, because, as John pointed out, it has none.

John became concerned with waterfowl for a second time during the war when the U.S. Navy consulted him about a goose-raising project undertaken to provide down for a top-secret application. Shortly after goslings were hatched they were attacked by rats, and the Navy was looking for a safe way to scare off the predators. John recalled that butyl mercaptan, a sulfurous component occurring in certain crude oils, had been tested as a rat repellent and found effective because it resembles the body odor of the ferret, arch terror of rats. He suggested that this chemical be blended in petroleum jelly and that small open jars of it be placed in the birds' hutches. It worked, the Navy reported.

**O**CCASIONALLY a query leads to a new use for an existing product, or even to the development of a new product by the company. Some years ago, for example, a manufacturer of apple champagne called John to find out how he might remove a musty taste that sometimes occurred in his beverage. John suggested agitation with a white mineral oil which, he recalled, had been used successfully to eliminate the wild garlic odor that cow's milk sometimes has in the spring. This solved the problem.

More recently, a manufacturer asked John whether an oil could be supplied to float on top of vinegar tanks to limit evaporation. He subsequently worked with a group of technical people on the development of a flotation oil now frequently used in vinegar storage.

Fortunately, John is temperamentally attuned to dealing with all sorts of individuals—whether engineers, housewives or mystery writers. He is a friendly man with a ready smile and youthful enthusiasm, naturally interested in people and their problems. He and his wife, Charlotte, live in a gray and white Colonial house on a quiet street in Pelham Manor, New York, with their three sons, John, fifteen, Jeremy, thirteen, and David, twelve. All three boys are Scouts and John, Sr., is a member of the Pelham Troop I committee. His hobby is photography, and the walls of the Tuttle house and of John's office at 30 Rockefeller Plaza are adorned with pictures he has taken of his sons and of the New England countryside and seacoast where they spend vacations. He is also an omnivorous reader with the retentive memory an answer man must have.

"I make a living satisfying my own curiosity," John has said. When he is



Endless curiosity and encyclopedic knowledge serve him well

working on a problem that particularly interests him, he can't let go until he has found a satisfactory solution. Some years ago, for example, he was asked to give a talk on the origins of waxed paper. Library research on the subject took him back to 1909, when the Clean Foods Association of New York undertook a campaign to end "the crime of unwrapped bread" and thus brought about the first widespread use of waxed paper as a food wrapping.

But John was not satisfied until he had tracked the matter back to the nineteenth century and a man by the name of Siegfried Hamersley, a candle-maker in New York City. In 1881 Mr. Hamersley commuted ten miles daily between his business in Manhattan and his home in New Jersey. On Thursdays he usually bought a fish at Washington Market for Friday's dinner. Moisture soaked through the paper wrapping and when he reached home his clothes were often soiled and smelly. One day he dipped a sheet of paper into a vat of candle paraffin. The fishmonger used it for wrapping, and it provided an ideal moisture-proof protection. Today the Hamersley Manufacturing Company still makes waxed paper in Garfield, New Jersey.

Wax is one of John's favorite subjects, and he has studied it assiduously for many years. In an encyclopedia article on paraffin and other petroleum waxes, he has

catalogued an immense variety of uses for wax, ranging from containers, wrappers and candles to drugs and cosmetics, textiles, rubber, matches, adhesives, paint removers, crayons, polishes and fireworks. During the war he was called to Washington to help the Army Medical Corps devise wax molds from which simulated wounds could be cast to assist in the training of corpsmen. As a result of this work, a government contractor recently asked him to help devise a wax formula to seal the skeletons of human figures prepared to test the effects of atomic radiation on the body. As John remarks with pleasure, "What other product is useful in the ancient craft of candle-making and also in studying the atom?"

Working on such a wide variety of problems may help keep John Tuttle looking young at fifty-four. In addition, he is often cheered by letters from appreciative correspondents who have brought their questions to him. A man in Wilmington, North Carolina, wrote: "I'm embarrassed at the trouble I've put you to in my inquiry about dehumidifiers. The matter was important perhaps only to me. . . . At any rate, you can now put my letter in your permanent file of 'Contented Customers.'"

As every businessman knows, contented customers are among the most important assets a company can have.



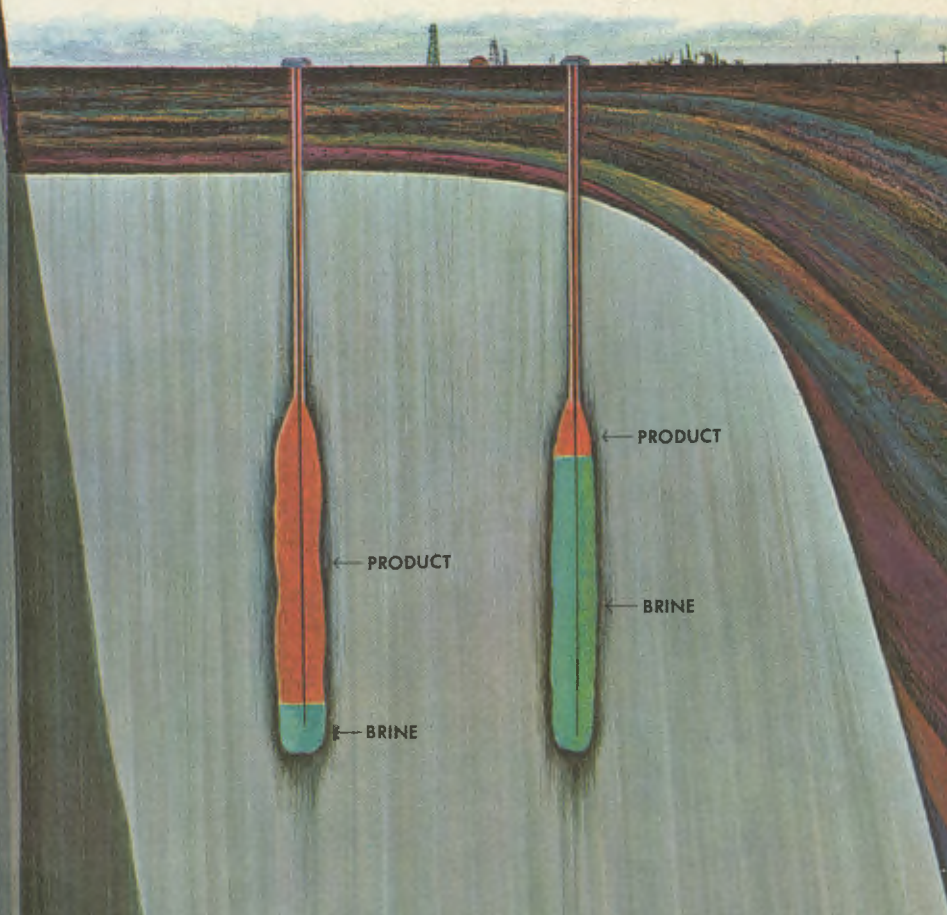
# The Lamp

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BULK RATE  
U. S. POSTAGE  
**PAID**  
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Dotted line shows final size of finished cavity



## STORAGE IN SALT

Oil geologists have long been interested in underground domes of solid rock salt because oil and gas sometimes occur near them. Today man-made caverns in some of these salt domes provide safe and economical storage for valuable light refinery products such as butane, propane, ethylene and propylene. Water, pumped deep into the salt for many months (diagram at left), washes out a cavity with a capacity of as much as half a million barrels. The product is stored in the finished cavity under pressure. To withdraw it, the operators pump brine (fresh water would continue to dissolve the salt) down the pipe, driving the product to the surface through the casing around the pipe. Thus the cavity is always filled, with the product on top and brine below (diagrams above). The petroleum hydrocarbons neither dissolve the salt nor mix with the brine, and therefore remain pure.