

His-and-Her Business Installs Adaptable Heat

Portland, Ore.—Virgil and Betty Webb have what you might call a his-and-hers business setup in Portland. Until recently, Mr. Webb had a barber shop downtown and Mrs. Webb had a beauty shop some distance away. They decided a better idea would be to combine shops in one building near their home.

They bought a lot at 6505 S.E. Powell st. and made rough sketches of the building they wanted. Lee Brothers builders and Tice Electric company completed the plans, and the end result is a neat looking structure 30 by 30 feet, divided down the middle. The flat-roofed building is of cedar siding with a brick front, with the entrances set at angles to the sidewalk.

Fast Heating

Webb decided that since heat would be needed in the building only when they were working, he would like a heating system that worked fast and was easily controlled. Westinghouse baseboard heating, with separate thermostats for each shop, was chosen.

Westinghouse baseboard heaters circulate warm air by gentle thermal currents to maintain room comfort so

there are no drafts. The sections are two feet long and seven inches high, and fit together to form a continuous streamlined unit that replaces ordinary baseboard in both shops.

In spite of the frequent opening and closing of the doors into the shops, the Webbs have had no heating problems, even on cold winter days. "For the convenience," says Webb, "I think it's the most economical and satisfactory system we could use."

Heat Pump Fills Year-Round Job

Operating on electricity and air alone, the heat pump, a home heating and cooling unit which uses the same mechanism for both functions, is bringing a new concept of year-round comfort to modern American homes.

The heat pump works like a refrigerator, drawing heat from whatever is stored in it and pumping the heat to the outside. Using transfer valves, the heat pump can reverse itself and either draw heat from the house or from the out of doors for year-round comfort. Little maintenance is required.

Although it needs no space for the storing and piping of fuel, and allows planning flexibility, it does demand allowance for air-intake and exhaust grills. The necessity of these grills will undoubtedly have an effect on the architectural design of future homes.

While the heat pump costs more to install than the various types of resistance heating, operating costs are very low. Complete information on the new home heating system may be obtained from most Cal-Ore Electrical League members, or from the home service department at California-Oregon Power company.

WED. NOT WELD
Oldham, England — (UPI) — Frank Jones lost his chance for a job because he is too short, but the publicity got him a bride. Jones, four feet four, was turned down as a British Railways welder. Sarah Cullis, four feet even, read about Jones' plight, wrote to him and soon will marry him.

A nest of fossilized bird eggs found in Nebraska in 1958 is estimated to be 40 million years old.

Soot Increases Heating Costs For Home Owners

Soot is a spendthrift, expensive to buy and extravagant to live with, according to the Cal-Ore Electrical League. It costs even more money to get rid of it.

Soot is fuel waste. It is composed of hundreds of tiny particles of unburned fuel. Everyone knows that unburned fuel is waste, but few people realize that everytime they see soot in their homes, they actually bought it in so many dollars and cents, the league noted.

And living with soot is expensive, too. People spend millions of dollars each year to clean smoke stains and soot smudges from clothes, curtains and furniture. Then there are the soap powders and cleaning supplies added on the grocery bill that can be charged to soot. The wages of soot are paid by the hour in scrubbing walls, windows and woodwork.

Soot runs up a tab in the medical department, too. Smoke-filled air increases sinus trouble, nose trouble, tuberculosis and pneumonia because of its effects on the nose, throat and lungs, the league claimed. It costs money to live with the inconvenient extravagances, costs even more to cure them.

Keep an invoice on soot. Add all the wasted fuel costs, the cleaning costs, the redecorating expense, a record of man-hours used, and the prescription counter charges, and it adds up to be expensive, the league stated.

Grants Planned for Fertility Research

Wilmington, Del. (Science Service) — Grants of up to \$8,000 a year to support research in the field of fertility and reproduction in various forms of life will be awarded by the Lalor Foundation, it has been announced here.

The 1960 awards program also includes grants for post-doctorate summer or short-term research awards at the Marine Biological Laboratory at Woods Hole, Mass.

Requests for information and for application forms should be directed to the Lalor Foundation, 4400 Lancaster Pike, Wilmington 5, Del. Final date for receipt is Jan. 15, 1960.



GRAPE WREATH—June Adler, National Wine Queen, receives her crown of grapes in a vineyard near Sacramento, Calif. June will reign during National Wine Week, which occurs during the middle of October.

Life Preserver for Spaceman Scheduled For Hot Workout

Washington (Science Service) — A spaceman's life preserver is slated to get a hot workout soon.

It will be the heat shield to protect the first American into space from blast furnace heat as he plunges back into the earth's atmosphere.

The National Aeronautics and Space Administration has not chosen "the" heat shield yet that it eventually will use on the Mercury capsule. But at least three are being developed, and all will be tested. These tests are expected to start this month.

Plate of Beryllium
The first type of heat shield is a three inch thick plate of beryllium six feet in diameter. This is called a "heat sink" because beryllium has the quality of absorbing vast quantities of heat.

The second kind of heat shield is the "ablation" type. It is understood that NASA has several varieties of ablating materials under development. The characteristics of these materials, however, is to flake off, melt or vaporize as they grow hot, thus carrying away heat from the capsule. One ablating material is a mat of glass fibers and resin. At least one other material already exists — the

ablating blanket for Atlas nose cones. Composition of this is still classified.

However, it is known that a phenolic resin, reinforced with asbestos, was used for the nose cone of the Vanguard satellite rocket because of its high heat resistance.

Tough Job for Shield
These heat shields will have a tough job. The Mercury capsule will plunge through the earth's atmosphere at 17,000 miles an hour as it returns from its space flight. Several inches in front of this capsule, which resembles the smoke-stack on a pioneer locomotive, a cushion of air may reach temperatures of 10,000 degrees Fahrenheit. Inside the capsule will be one of the seven young men now being trained for the historic flight.

If this man is to survive, the heat shield life-saver must do its job well.

A NASA official said all types of the heat shields would be thoroughly tested, but implied that the ablation process probably has the "inside track." Although beryllium is a relatively light metal, the beryllium heat sink would add hundreds of pounds to the overall vehicle — a tremendously significant weight factor.

Agreement Needed Between Nations on Outer Space Problem

London (Science Service) — Until the U.S. and U.S.S.R. resolve current impasses on disarmament and nuclear tests, there can be no real cooperation between these countries on solution of the problems of outer space.

Dr. Samuel Kucherov, air information division of the Library of Congress, Washington, D.C., told the International Astronautical Federation meeting here that there must be agreement at least at "some level" on these two international problems, even though complete agreement is not attained.

'About-Face' Noted
In outlining the history of the Soviet Union's outlook on state sovereignty in outer space, Dr. Kucherov pointed to an "about-face" the Russians did following the successful launching of Sputnik.

In the early 1950s, he said, Soviet jurists contended that sovereignty of a state can be extended upward without limit. But Sputnik was the first to gain access to outer view, the Russian satellite violated sovereignty of almost every state in the world.

Immediately the Soviets sharply reversed their opinion. Various Russian writers argued that — lacking international laws for outer space — any government may indefinitely launch rockets or satellites without asking permission of any other government. **View Later Modified**

Dr. Kucherov said this liberal point of view was later modified by E. Korovin, foremost Soviet specialist on international law. Korovin held that national sovereignty could not be extended to outer space, but that this does not make outer space a "vacuum."

Self-Reliance Lack Said Contributable Cause of Alcoholism

Kansas City, Mo. — (Science Service) — Much of the blame for the prevalence of alcoholism belongs to parents who do not allow their children to achieve a healthy measure of self-reliance.

Children who "shift for themselves" with adult guidance, develop good habits, learn hobbies, participate in athletics and accept the challenges of every-day living are not so likely to become addicted to alcohol as those who are neglected or doted upon.

These opinions were expressed by Dr. Albert J. Russo of Salem, Va., in the September issue of GP magazine, published here by the American Academy of General Practice.

Fit Into Patterns
The more one studies alcoholics, Dr. Russo says, the more they fit into patterns. Ninety per cent of the more than 5,000,000 Americans who overindulge in alcoholic beverages lack the basic personality traits to meet the obstacles of life, he says. They drink only as a relief or an excuse and to obtain more courage and social finesse.

Dr. Russo talked to more than 13,000 alcoholics and concludes that they reach that condition in stages. First there is generally an unhappy home life in which children are either unloved or overloved.

The potential alcoholics are the spoiled first children, neglected middle-sized children or the babied little ones. They either have alcoholic parents or were subjected to a strictness they forgot completely when they become free to take their first drink.

Treatment Necessary
From an inadequate home life, Dr. Russo says, the potential alcoholic enters a "harsh, usually misplaced business

world of intrigue, jealousy and money," which is only occasionally softened by religion, a fine woman and a few friends.

Treatment of the alcoholic is both difficult and necessary, says Dr. Russo. After continued use of alcohol, there are mental blocks to any method to stop it. The desire to get well is often lost in the battle to escape realities or emotions and life.

Those alcoholics who do get well are those who find something in life they like better than whiskey, such as a job, religion or a family. Unless they find this "something," Dr. Russo says, they do not have a strong enough will to overcome their faults. Fortified with a new hope, people who have been alcoholics for five, 10 or even 20 years can suddenly stop and never get drunk again.

Gas Turbine Will Power Troop Carrier

Lynn, Mass. (Science Service) — An amphibious troop carrier that can land 46 fully equipped Marines will be powered by a gas turbine engine, General Electric engineers announced here. Originally designed to serve as a helicopter engine, the turbo-shaft engine is compact, rugged, reliable and powerful, a General Electric spokesman said. The 29-foot-long landing craft, called LVT(X)-10 (Landing Vehicle Tracked Personnel), can function as a rolling and floating tank when equipped with artillery.

Missile Missfires Produce Data

Washington (Science Service) — The recent missfires of Atlas and Polaris missiles have not dealt the U.S. intercontinental ballistic missile program any "real setback," the House Committee on Science and Astronautics said here.

In a report on progress of the Air Force Atlas program and the Navy Polaris program, the committee observed that both are progressing at a "highly satisfactory" rate.

Even the missfires of both missiles have provided "extremely valuable information that is indispensable to the progress of the testing program and the improvement of the missiles," the report states.

The committee commended both services for achieving "an outstanding record in the planning, organization and management of their respective research and development missile programs."

The Air Force has suffered only a 60-day slippage in a four-year schedule, and the Navy has compressed its Polaris timetable by five years.

garg to the legal problems of outer space, Dr. Kucherov said. But the State Department's legal advisor, Loftis Becker, told a special senate committee on space last year that "at no time have we conceded that we have no rights in the higher regions of space."

GATHER FOR ECLIPSE

Las Palmas, Canary Islands (UPI) — World scientists gathered here today for the solar eclipse of Oct. 2, which should be seen to best advantage from this Atlantic archipelago. An American group setting up headquarters includes Dr. R. Grant Athay and Robert H. Lee of the High Altitude Observatory of Colorado.

MAIL TRIBUNE, Medford, Or. 3

Montgomery, Ala. — (UPI) — Miss Katherine Tyson may start riding the bus and leaving her 750-pound Italian car at home. The society editor of the Alabama Journal complained today that for the second time in recent weeks someone put her car on the sidewalk and took her parking place.

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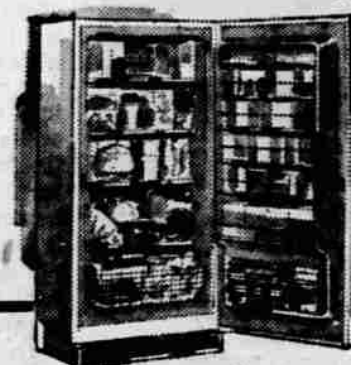
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