

• New Ideas and Gadgets •

Ask for Gadget Bulletin 1375 for source information. Send self-addressed stamped envelope to SCIENCE NEWS, 1719 N St., N.W., Washington, D.C. 20036.

☼ **FOLDING TRIPOD TABLE** for camping, boating, picnicking and other outdoor uses can be quickly adjusted in height from 19 to 27 inches. The table, 24 by 24 inches in size, can be quickly disassembled and folded compactly for storage or transport, and weighs only 7½ pounds. It has a plastic blue top with white vinyl trim.

☼ **ULTRASONIC SYSTEM** to detect leaks in vacuum bags containing aircraft structures is a battery-operated, nine-pound instrument that responds only to ultrasonic energy. If there is a puncture in a bag or leak at a seam, the pressure differential across the tiny opening activates air molecules releasing ultrasonic energy which is detected by the hand-held instrument. The device emits a hissing sound and the operator quickly locates the defect for repair.

☼ **STIRRING ROD** useful for all micro, semi-micro and macro stirring has no joints, and no metal blades to come in contact with materials being stirred. The unit consists of a stainless steel drive shaft and a Teflon semi-sheath with an integrated, replaceable O-ring that provides a high vacuum joint seal with the container. The Teflon sheath does not rotate but a smooth stirring action is created by the steel shaft within. Various sizes are available.



☼ **FLEXIBLE NOTEBOOKS**, shown above, suitable for class notes, term papers, compositions and other papers are made of durable plastic that takes hard school use without fraying, tearing or becoming dog-eared. The one-piece cover with strong built-in hinges is unaffected by rain or moisture, is lightweight and easy to carry. The notebook comes in six different colors.

☼ **FUEL TRANSFER PUMP** makes filling boat fuel tanks from larger gas cans or drums at dockside easy and effortless, with no spilling or dripping or lifting of heavy tanks. The small pump which screws tightly in the fill hole of a can or drum, has a two-foot-long intake hose and a five-foot fueling hose, both one-half inch in diameter. The pump parts are unaffected by oil, gasoline or water. Other uses include motorcycles, lawn mowers and snow-mobiles.

☼ **PROPANE INFRARED HEATERS** are fully portable and deliver instant, economical heat where and when needed. They are useful for emergencies, curing, drying, thawing, spot and area heating, construction sites, farm buildings or outdoor shows and sporting events. The heater consists of an infrared heating unit that connects to any propane tank. The heaters produce no flame, odor or smoke.

☼ **ANTIQUING FINISH** for the do-it-yourselfer is in the form of a non-dripping foam which comes in a seven-ounce aerosol can. The foam which can be used over existing colored surfaces automatically deglosses enamel finishes to attain the desired antique effect. The can comes with an applicator pad and rubbing cloth.

• Doctors Are Reading •

Smoking, Lung Cancer Link Supported

➤ **CALIFORNIA** men belonging to a religious group that frowns on smoking had a much lower than average death rate during a recent four-year study.

The incidence of respiratory disease among the Seventh-Day Adventists was particularly low, only one-fourth the statewide average.

Findings of the four-year study support the likelihood of a strong link between smoking and lung cancer, but discount the theory that a person's physical constitution is a major factor in whether or not he gets the disease.

Lung cancer is extremely rare among nonsmoking lifetime Adventists, regardless of their occupational, residential, or other environmental exposures, the researchers said.

The study confirmed the prediction that "lung cancer would disappear as a significant death risk if cigarette smoking ceased in the United States," reported Drs. Frank R. Lemon and Richard T. Walden of Loma Linda University, Loma Linda, Calif., in the *Journal of the American Medical Association*, 198:117, 1966.

New Rheumatism Theory Presented

TECHNIQUES of management, prevention, and surgical treatment of rheumatoid deformities of the hand will

have to be altered, if a new theory about the cause of the deformities finds support among doctors.

Strong tendon force over the joint between finger and hand is needed to flex the fingers for pinching and grasping action, according to Dr. Edwin M. Smith and his associates at the University of Michigan Medical Center, Ann Arbor.

Because the tendons bend at this joint, there is a strong tendency for them to "bowstring" toward the palm and also toward the little finger. This tendency is normally opposed by the action of the joint structures. If rheumatism weakens the structures so that they can no longer counterbalance this bowstring tendency, deformity will occur, according to the researchers' theory. In the fifth finger, the deformity results from incompletely opposed muscle, rather than tendon, forces.

To reduce the flexor forces, pinching and grasping movements would have to be minimized for effective treatment, and the hand used more as a scoop or shovel when picking up an object.

Splints designed to restrict flexion of the affected joints would be useful in managing the deformity. The classic exercise of squeezing a rubber ball would be condemned.

Surgical techniques also would need alterations to conform to the theory, the scientists reported in the *Journal of the American Medical Association*, 198:130, 1966.