



SUPER SACK—Weary GI's in Korea are being equipped with lightweight inflatable sleeping pads, providing them a three-inch air cushion between bedclothes and the ground. They are made of nylon fabric and crack-resistant rubber by B. F. Goodrich.

ENGINEERING

Reflecting Sheeting For Rear of Autos

► REFLECTING SHEETING outlining the rear of a motor vehicle, to lessen danger of rear-end collisions, was recommended at a meeting of the Highway Research Board of the National Research Council in Washington.

Night-time motorists can see a vehicle outlined with reflective sheeting 70% faster than one that is non-reflecting, the board was told by Dr. A. R. Lauer of the Iowa State College Driving Research Laboratory.

One of the most serious types of highway accidents during hours of darkness is the rear-end collision, he said. Research shows that drivers approaching a stalled truck at 50 miles an hour will see it a full second earlier if the truck is reflectorized. This second gives him an extra 73 feet of stopping space, the safety margin to avoid a collision.

As a result of many tests, he continued, it was found that drivers traveling at 50 miles an hour needed over two and one half seconds to determine the relative speed of a black truck with conventional tail-lighting. Only one and one half seconds were required for the same truck when its rear end was reflectorized with either a border outline or checkerboard pattern of equal area.

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BIOCHEMISTRY

Mold Remedy Sweet News

Both more honey and aid for patients with amebic dysentery promised from antibiotic fumagillin which originally looked as though it would be a dud.

► ONE OF the new mold remedies, or antibiotics, is making sweet news today, both literally and figuratively.

It promises more honey because it can stop infectious Nosema disease of adult honeybees. And it is living up to its promise, reported by SCIENCE SERVICE just a year ago, of becoming good medicine for amebic dysentery, or amebiasis.

This antibiotic's name is fumagillin. Originally isolated from an aspergillus organism by Drs. F. R. Hanson and E. J. Eble of the Upjohn Company, fumagillin at first looked almost like a dud because it showed little or no activity against bacteria or fungi and no activity against influenza in mice or MM virus in the test tube.

Two groups of doctors report good results with fumagillin in treatment of human and monkey patients with amebiasis. First sign of this potential usefulness of fumagillin came from the report last year that it was an extremely powerful killer of amebas, the germs that cause amebic dysentery, and that it acted directly on the amebas both in the test tube and in rats. This was discovered by Drs. Max C. McCowen, Maurice E. Callender and John F. Lawlis, Jr., of Lilly Research Laboratories, Indianapolis.

The trials on human patients show that fumagillin is "essentially" non-toxic and clears up the infection at least in patients who do not have severe amebic infection. Dr. Hamilton H. Anderson of the University of California School of Medicine, San Francisco, reported his results with the drug at the New York Academy of Sciences conference, while Drs. John H. Killough, Gordon B. Magill and Richard C. Smith, of U. S. Naval Medical Research Unit No. 3 in Cairo, Egypt, report their results through the journal, SCIENCE (Jan. 18).

Finding that fumagillin would cause a "striking reduction" in the number of honeybees infected with Nosema germs was made by Drs. H. Katznelson and C. A. Jamieson of the Canadian Department of Agriculture at Ottawa. This widespread disease may cause extensive losses of adult workers and queen bees in winter or spring. The Canadian scientists point out, in their report to the journal, SCIENCE, that the final test of the practicability of fumagillin in controlling the disease will have to be made with infected colonies over the winter, since the disease is most serious in overwintering colonies.

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ENGINEERING

Power Line Failures

► ELECTRIC LINES carrying power across the country find their greatest enemies in weather and trees. Weather and trees account for the major number of overhead power failures, the American Institute of Electrical Engineers was told in New York in a joint report by engineers of the organization and of the Edison Electric Institute.

Wind is the number one weather element causing power failures with lightning as number two. Data collected from 32 utility companies show wind to be the most frequent initiating cause of failure. It causes 57% of the weather failures. Lightning causes 30% of the weather failures.

Weather conditions are responsible for 55% of the total number of overhead power failures and trees are involved in 41% of the total, according to the report. The study, begun in 1947, is to determine the causes of power line failures so that steps

may be taken by the electric companies to improve their services and provide reliable power.

Reconsideration of helium for cooling large power generators was recommended to the engineers by Sterling Bechwith, Allis-Chalmers Company, Milwaukee. Supercharged hydrogen is now used. The use of hydrogen cooling has made it possible to reduce the size of generators.

"The use of a helium atmosphere for normal operation deserves reconsideration with supercharged cooling," he said, "because the smaller dimensions and more adequate cooling of the supercharged machine eliminate the ordinary objections to helium cooling to a large extent. The advantages of helium cooling from a maintenance standpoint are considerable, and construction of a helium cooled machine would also be simplified as compared with a hydrogen cooled machine."

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