

Species that lasted forty years but were missing at the half-century mark included pigweed, ragweed, peppergrass, plantain and purslane.

There are still eleven bottles buried in the soil of the State College campus. If the ten-year interval schedule is kept up, the end of the experiment will not be reached until the middle of the twenty-first century.

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#### MEDICINE

## Test Hopeful Chemical Treatment of Tuberculosis

**T**HE first group of tuberculosis patients to be treated with promin, new sulfa drug which Mayo Clinic scientists have found a promising remedy for tuberculosis in guinea pigs, will have to be followed for at least one year before the doctors will know whether or not this drug can "cure" tuberculosis in humans as it does in guinea pigs.

Small doses of this drug can be safely given to patients, Dr. H. C. Hinshaw reported to the American Medical Association.

This much, but no more, has been learned from a careful trial in a limited number of patients during the last two months. This trial followed extensive trials of the remedy in guinea pigs infected with human tuberculosis germs. The drug apparently eradicated the disease in guinea pigs, Dr. W. H. Feldman had previously reported. The disease in guinea pigs, even though produced by the same germ as causes tuberculosis in humans, is, however, an entirely different disease, the Mayo Clinic scientists emphasize.

Promin, which is a sugar-containing relative of sulfanilamide, has not yet been released for general distribution. It is a "definite poison," Dr. Feldman said, and must be handled with discretion as is the case with many other drugs.

Finding a dose that can be safely given to humans is therefore considered something of a triumph for its first two months of clinical trial, but it is far too early to say whether or not it will benefit these tuberculosis patients. In fact, it is too early even to expect to find evidence of any effect of the drug in X-ray pictures of the lungs. Doctors generally set three months as the interval between X-ray pictures to check on the course of tuberculosis and these patients have only had promin for two months.

Tuberculosis patients and their relatives are warned not to hope for too

much from the first report of clinical use of this drug, and not to expect to be able to get it.

Promin has also been tried on patients suffering with various other ailments such as pneumonia and staphylococcus

#### ENGINEERING

## Substitutes in Automobiles Superior in Many Instances

**S**UBSTITUTE materials adopted for automobile parts, because the old materials are needed for defense, in some cases "will stay permanently after the emergency is over, since they will have time to prove their worth, demonstrating hitherto undiscovered qualities," Thomas A. Bissell, Technical Editor of the S. A. E. Journal, told the Society of Automotive Engineers.

"In addition," he added, "the cost of many of these parts will have been lowered through design and production development. This is one of the brightest spots in the picture since the exigencies of the emergency will force many developments that would not have been made under normal conditions."

Pointing out some of the difficulties encountered, he said: "In considering alternate materials for certain parts in the automobile, engineers working for the best interests of national defense often

and streptococcus infections. The results were encouraging but Dr. Hinshaw believes that other sulfa drugs are perhaps a little better in pneumonia and that there is no reason to change to promin treatment in this disease.

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find themselves in a dilemma. Substitution of the alternate material will release a relatively small amount of material needed for defense, when compared with that released by replacing other parts, but production of the alternate parts requires extra machining and processing, entailing additional machine tools, machinists, and other skilled labor needed just as urgently in defense industries as is the critical material itself.

"The example most often cited to illustrate this problem is that of carburetors made of critical zinc alloy versus those of alternate cast iron. The zinc-alloy carburetor die castings weigh little when compared with zinc-alloy radiator grilles; also, they require virtually no machining or processing. Cast iron carburetors, on the other hand, would require additional batteries of machine tools to perform the necessary finishing, drilling, and facing operations."

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#### MEDICINE

## Prevention of Diabetes Possible, Dr. Best Suggests

**A**REQUEST to American doctors to carry on war-interrupted efforts of Canadian scientists to test on humans a promising method of diabetes prevention was made by Dr. C. E. Best, of Toronto, co-discoverer of insulin, and his associate, Dr. H. E. Haist, at the meeting in Cleveland, for the first time anywhere, of the newly-organized American Diabetes Association.

By giving insulin, a diet high in fat content, and also by fasting, the Canadian scientists have succeeded in preventing diabetes in dogs. By any of these procedures the amount of insulin in the

dog's pancreas is reduced, indicating that the insulin-producing cells of the pancreas are being given a chance to rest. Overwork of these cells with consequent breakdown of insulin-producing ability results in diabetes.

The hereditary tendency to diabetes has been so well established that Dr. Best and his associate believe the measures which prevented diabetes in dogs should be tried, under carefully controlled conditions, to protect children of diabetic ancestry from developing the disease. They have not been able to make such a trial, Dr. Best explained, because