INVENTION

## Man Resembles Martians In New Pressure Suit

➤ MEN WILL LOOK like Martians when they zoom their jet-planes into the stratosphere, if a pressure suit designed by three Goodrich engineers comes into general use. U. S. patent 2,410,632, issued to R. S. Colley, C. P. Krupp and D. H. Shook, has been assigned by them to the B. F. Goodrich Company.

The problem was to encase a man in something that would maintain normal atmospheric pressure around his body at great heights, yet allow complete freedom of movement. The torso and upper arms could be covered with pieces resembling fourteenth-century plate armor, but greater flexibility had to be provided for the coverings of elbows, hips and knees.

This was achieved by annular bulges of rubber-impregnated fabric, one above another, giving the general appearance of a series of pneumatic tires. Longitudinal straps hold the segments in line.

Over the wearer's helmeted head is a second, transparent covering, looking very much like an inverted goldfish bowl, gasketed securely against the ringshaped neckpiece. Tubes for air and oxygen and wires for heating electricity are let in through one hose attachment at the waist.

Science News Letter, November 16, 1946

An eggshell is about 98% calcium carbonate.



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A Poet's Botany

➤ PROBABLY everyone who has looked at flowers at all carefully has been struck with the similarities between their bright petals and the green leaves on the stem. So obvious is the homology between the two that it is common to hear persons who do not know the names of the parts of a flower refer to petals as "leaves."

This resemblance between leaves and petals was responsible for the venture of the great German poet, Goethe, into the field of botany, and probably for his interest, as a rather serious amateur, in science generally. He pushed the homology as far as he could—and thereby fell into some serious errors-but in the process he produced one of the most interesting essays in speculative botany that was ever published. Titled "An Attempt to Explain the Metamorphoses of Plants," it appeared in 1790, when the poet was 41 years old. A new translation into English, by Dr. Agnes Arber, has just been published by the Chronica Botanica Company, (\$15.00).

Goethe saw all plant appendages—sepals, petals, stamens, pistil, bracts, stipules, segments of seed-pods—as metamorphosed leaves. The examples he cites show that he was a close observer of the things he saw in the gardens of his patron, the Duke of Weimar, and in the woodlands around that small but favored city. He paid special attention to the reversion of stamens to petals in double flowers, with traces of their origin in the form of pollen-containing anthers sometimes cropping up on the metamorphosed members.

In his attempt at an explanation he was not so fortunate. He started out with a preconceived idea (always fatal in science) that the "crude saps" of the

roots and more remote region of the stem became progressively "refined" as they proceeded towards the flowering apices, the final stage of refinement being the "fertilizing fluid" that resulted in reproduction and the growth of the seed.

The scheme was just too diagrammatic and neat. It was the physiology and developmental morphology of a poet and philosopher, rather than of a scientist. Where Goethe used his eyes and told what he actually saw, he was a good botanist; where he tried to solve the riddle of how these things came to be by pure speculation, he went astray.

Science News Letter, November 16, 1946

MEDICINE

## Bearded Lady's Gland Cures Addison's Disease

➤ CURE of a case of Addison's disease by the grafting of an adrenal gland from another patient of the bearded lady type is announced by Dr. L. R. Broster, surgeon to Charing Cross Hospital, and Dr. H. Gardiner-Hill, physician to St. Thomas's Hospital, in a report to the British Medical Association.

The patient, a 33-year-old woman, had been ill for six years with nervousness and depression and stomach trouble which she described as a "nervy tummy." A year before the operation her skin took on a smoky brown color characteristic of Addison's disease.

For a year before the operation she had to take four teaspoonfuls of salt daily and also was given injections of adrenal cortical hormone. Failure of the adrenal glands to produce the normal amount of this hormone is the cause of Addison's disease.

Up to the present time, 14 months since the gland-grafting operation, the patient has been well and no longer takes salt or hormone injections.

The gland which cured her was taken from another young woman who suffered from overactive adrenal glands. This affected her sex glands and she became something like the bearded ladies of circus sideshows, having to shave daily. She also was depressed, but her mental condition was more serious than that of the Addison's disease sufferer. She had hallucinations and, contrary to previous experience, her mental condition got worse after the gland was removed. Under psychiatric treatment she recovered and was left with only slight hairiness of her face.

Science News Letter, Nevember 16, 1946