

## SURGERY

# Make Short Leg Grow

► AN ELECTRIC battery method of stimulating bone growth which made a child's short leg grow over half an inch in six months, compared to about two-tenths of an inch growth for the normal leg in that time, was reported at the meeting of the American College of Surgeons in San Francisco.

The method was developed by Dr. C. Laird Wilson of McGill University and the Children's Memorial Hospital, Montreal, Canada.

Dr. Wilson calls it an electrolytic method, but essentially it is a set-up like an electric battery in which a voltaic current is produced between two dissimilar metals. Twisted strands of constantan and copper are inserted into the shaft of the shin bone close to each end of the growing bone. An electrolytic reaction starts between the two kinds of metal and this stimulates growth of the bone.

Puppies and two children on whom this operation has been performed did not have any pain and were running around normally the day after operation. They did not limp and "paid no more attention to the leg containing the wires than to the control leg," Dr. Wilson reported.

Whether the wires will have to be reinserted after they have grown away from the ends of the growing bones is yet to be determined. The stimulating effect may be lost as the distance from the battery to the ends of the bones increases. The ends of the wires must be in intimate contact with each other with a prolonged "battery effect" to be operative, Dr. Wilson said.

The children on whom the method has been started were born each with one short leg. The effects are good but not yet constant. Dr. Wilson stated. The inconsistency is the next problem he plans to work on.

## AGRICULTURE

# Test for Soil Needs

► GROWING SEEDS that are particularly sensitive to the richness of the soil is a good way to find out whether your garden needs fertilizer.

Clover, alfalfa or rye are good to use in testing your soil. Or you can use the seed from your breakfast grapefruit or orange, or from a lemon the next time you have a lemon drink.

A dozen or more small containers such as six-ounce tumblers, jelly glasses or waxed paper cups can be used as "pots" for the test. A dime or nickel makes a good measuring scoop for the fertilizer.

All except one pot should be given a fertilizer treatment. This is kept unfertilized so you can compare the growth in your original soil with that in the treated pots. As most soils are overly acid half of the pots should have dolomite sand or

hydrated (builders') lime added to their soil to overcome this defect if it exists.

The individual fertilizers you try should each be added to the soil in two pots, one containing the typical soil from your lawn or garden and one with the anti-acid treatment. Each pot should be carefully marked as to the fertilizer treatment it has received.

Plant the seeds in sets of three, about five little mounds in each pot. How well the plants are flourishing at the end of a month or so will be a pretty good indication of your soil needs.

Citrus, especially grapefruit, are among the most exacting crops in their plant food requirements and frequently show major differences in growth from only small differences in available plant food.

Clover or alfalfa usually makes poor growth on soils that are not well supplied with calcium, phosphorus and potassium. Rye is also a good test crop as it grows rapidly and draws heavily on the fertility of the soil during the early stages of growth.

A kit containing little packets of the six different types of fertilizer most frequently used today, limestone to overcome soil acidity, litmus paper to test for acidity and clover seed to grow in the fertilized pots, has been prepared for you by SCIENCE SERVICE. Complete with full directions for preparing the soil and growing the clover and citrus seed, it is available for the nominal price of 75 cents. Just write SCIENCE SERVICE, 1719 N St., N. W., Washington 6, D. C., and ask for the Fertilizer Unit.

Science News Letter, November 10, 1951

Idea for the battery method of stimulating leg growth came in part from the observation that an electrolytic reaction occurred when dissimilar metals were used in plating broken bones. Part of it came from the fact that a leg often gets longer in a child who has had a break in the middle of the thigh bone and in a child with osteomyelitis when the bone damage is close to the epiphyseal plate at the end of the bone.

Science News Letter, November 10, 1951

## INVENTION

## Radio Programs Listened to Recorded by Home Receivers

► TROUBLESOME TELEPHONE calls to radio users asking the name of radio or television station being listened to may be eliminated with an improved device to make automatic records on which a patent has been issued.

Inventor is Serge A. Scherbatskoy, Tulsa, Okla. His award was patent 2,573,279. Its use would require broadcasting stations to send out at intervals identification signals. Collaborator receivers would be equipped with means to record the signals.

Science News Letter, November 10, 1951

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