



F. C. LIVINGSTON

**GRACEFUL BRACE**—Polio victims and other handicapped persons, traditionally encumbered by heavy metal braces on their legs, may be set free. A new appliance, warmer and lighter than the usual caliper, works as well as its heavier counterpart. Its greatest advantage is that it relieves its wearer of the psychological burden imposed by awkward and unsightly appliances.

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## MEDICINE

# Light Leg Designed

► **HEAVY** metal braces need not be a handicap to those who have been disabled by polio or by other leg injury.

A young woman, who had suffered from polio and was embarrassed to wear a heavy caliper splint and boot has been fitted with a new, almost invisible appliance developed by a surgeon in collaboration with an engineer.

Designed by J. L. Mangan, consulting orthopedic surgeon at the Salford Group of Hospitals, and J. T. Henshaw, senior lecturer in the department of mechanical engineering at Salford's Royal College of Advanced Technology, the caliper is made from curved steel strips joined to a base plate under the foot.

The strips are enclosed in a shell,

shaped to match the calf of the other leg, and the whole appliance fits inside the stocking and shoe.

Patients whose legs are nearly the same length can use a pair of ordinary shoes into which the appliance fits neatly.

Those with one leg much shorter than the other may have to wear a built-up shoe, but the appliance would still be enclosed within it.

The new appliance, just as efficient and mechanically as sound as the usual caliper, has a further advantage in being warmer to wear—polio patients often suffer from cold—and lighter.

The new device, which has been fitted on several young people who are most enthusiastic about it, has been a great help to all of them psychologically.

## TECHNOLOGY

### Improved X-ray Machine Not To Be Patented

► **A NEWLY** designed X-ray machine that will give better pictures with less exposure of the patient will soon be available to all. Prof. Albert G. Richards of the University of Michigan School of Dentistry, who developed the instrument, is not applying for a patent.

In praising the new machine, the Journal of the American Dental Association quoted the ADA in pointing out that Prof. Richards has shown the "true spirit of a scientist wishing to improve the lot of mankind."

The X-ray head houses its radiation source seven inches farther from the patient than present X-ray machines, thus producing less exposure due to scattering rays to the reproductive organs of the body. The head also produces less whole-body exposure of the dental operator than the standard apparatus with short-pointed plastic cones.

Prof. Richards' innovation is the first having to do with the rearrangement of components inside the X-ray head since the 1923 introduction of the Coolidge shockproof dental X-ray machine. It has already attracted the interest of manufacturers.

Dental radiographers have long recognized that longer distances between patient and X-ray machine produce clearer X-ray images. The long cone was introduced in past years to gain this advantage. But the long cone was cumbersome and awkward to use.

The new machine overcomes this disadvantage by using the X-ray head itself for part of the cone. The shielded avenue through the dental X-ray head provides length and stability for a sharper radiograph.

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