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A STUDY OF THE SPACE REQUIREMENTS OF WHEELCHAIR USERS

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(Paper presented by Miss PARKES)

NINETY-ONE male and 36 female patients at the National Spinal Injuries Centre, Stoke Mandeville, were the subjects of a study to determine the functional anthropometry of wheelchair users.

Apparatus was designed to measure on these subjects nine standard anthropometric body dimensions and 35 comfortable and maximum reaching distances at different angles and at varying heights from floor level. Other relevant details, *e.g.* subject's age, nature of injury, type of chair used, etc., were also recorded.

The data were analysed by computer to derive means and 5th and 95th percentile values for the male and female groups. From these values it was possible to construct diagrams of use to the architect and designer for determining space requirements for this category of disabled people.

THE MONOTUBULAR CALIPER FOR PARAPLEGIC PATIENTS

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ONE has always tried to reduce the weight and cumbersomeness of the calipers for paraplegic patients; nevertheless the essential qualities of solidity and function should be respected.

We propose the use of monotubular calipers, made out of one single support, the external one, consisting of a metal tube of drawn steel (fig. 1). The first results have been satisfactory. One can add to this the ease with which they can be put on and removed in addition to comfort and security in ambulation. Moreover, the manufacturing of such calipers is easy, the cost lower than that of a usual conventional caliper.

Description. From the front, the monotubular caliper is straight, does not follow the curves of the lower limb, neither the axis of the thigh or leg (fig. 2).

Seen from the side, the caliper is absolutely straight, connected to the shoe by a pivot-pin placed in front of the axis of the limb (fig. 3), the effect of which is the creation of a triangle as basis for weightbearing which is important for the