

## A NEW CONCEPT IN TRACTION TABLES

KALTENBORN THREE DIMENSIONAL TREATMENT TABLE<sup>1</sup>

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*The structure and use of the Kaltenborn Three Dimensional Couch is described. The couch is of particular value to therapists practising mobilization and manipulation of the spine but would be a valuable adjunct to any physiotherapist. Use of the couch has reduced treatment time and increased efficiency.*

On a recent visit to Norway I spent some time at the clinic of Freddy Kaltenborn, who was the moving force in founding the International Federation of Orthopaedic Manipulative Therapists.

He demonstrated to me his "three dimensional" traction couch and took me to meet the manufacturer, Tore Odemark of Masolet Produkter A/S, to learn more of this unit, which at first sight seemed an unnecessarily complicated one.

It appears that Kaltenborn had been talking with great enthusiasm of the old McManus couch in the United States. However, this couch has gone out of production, and is difficult to find and, if found, would prove very expensive. Also it had limited use and Kaltenborn felt the idea could be developed further.

He could see the need for designing a couch that could not only be used to mobilize any part of the spine at will, but also be used to apply three dimensional traction when the need arose. This is not possible with the McManus couch, but, as Kaltenborn pointed out, is needed for successful treatment.

With this thought in mind, he contacted Odemark with his problem, and together they made up six experimental models before they felt they were approaching the ideal. A great deal of trial and error and modification was needed before the "Kaltenborn Three Dimensional Treatment Couch" was born.

The table's multiple positions make it an ideal unit for manual therapy—mobilization, manipulation, and three dimensional traction.

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It can be used as an ordinary treatment couch with the additional advantage of having adjustable height to accommodate to the needs of the therapist. The height adjustment is 58-98 cm (19-37 inches), which allows plenty of movement for ordinary treatment, and will lower sufficiently to permit manipulation. This up and down movement can be controlled by a hydraulic system that is operated from either side of the head of the table or, alternately, it can be operated electrically by a foot pad on the floor. The couch is castored for positioning, and the castors can be retracted for stability.

There is a slotted portion in the head and middle section of the table providing comfort for the patient in the prone position. The head section has a stepless adjustment and raises and lowers 15° so that the patient is able to lie supine in comfort or, with the patient prone, the neck can be flexed to allow massage or mobilization.

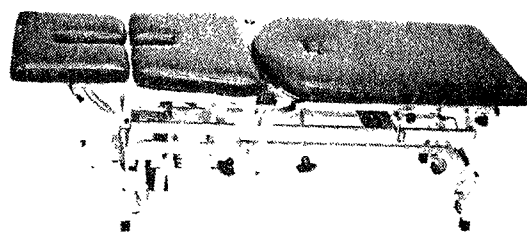


FIGURE 1

Three Dimensional Treatment Table.

The middle section is spring loaded, and can be raised to different heights to permit mobilization and manipulation of the thoracic spine.

The lower section can be moved in a horizontal plane of 50° to either side of the midline. If a patient is limited in lateral flexion, he is placed in the prone position and strapped down. The lower section is now moved laterally by the operator's thigh pushing on the leaf. If the need is for mobilization into flexion, the patient is put in side lying and the same manoeuvre performed. Further, if rotation is needed, the lower section can

be rotated in either the straight or lateral positions.

The lower leaf can also be moved, almost friction free, in a distal direction to allow traction. The patient is strapped to the unit in the usual way and, by pushing down on a grip, is able to apply traction to himself manually.

By using the special motor support, traction can be applied electronically. The motor sup-

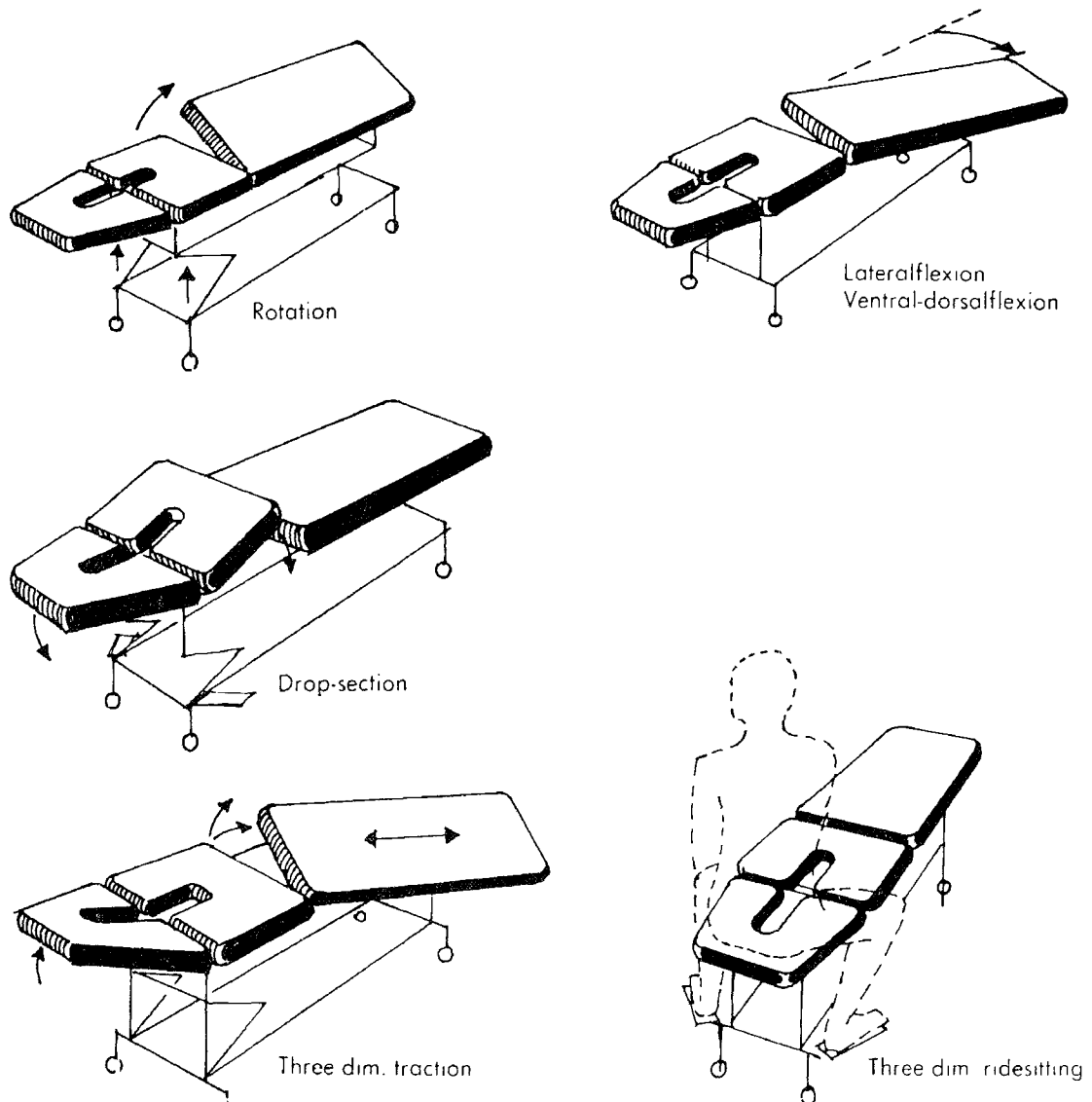


FIGURE 2

Adjustment of Table Segments.

port can be tilted at any angle, depending on where the traction is required.

The most effective traction is three dimensional; but before the development of this table, it was not possible. If the diagram is studied, it can be seen that whatever position is required it can be accommodated by a simple adjustment of the couch.

For instance, the lower leaf can be rotated along its longitudinal axis and laterally flexed. The patient is strapped to the couch, and then to the traction apparatus. The lower leaf is now unlocked to permit a friction-free movement along its longitudinal axis. The traction

can be performed by the patient pushing down on the grips, or by mechanical operation.

The lower leaf is hinged at its distal end, allowing the medial end to be lifted to give further comfort to a patient who cannot lie prone without discomfort. The couch can be also used for postural drainage.

A fixation peg, inserted in the centre of the couch, permits hip traction. This peg is placed between the legs, with the patient in the supine position. Traction is applied to the affected leg either manually or mechanically.

For mobilization or examination of the thoracic spine, the patient is put in ride-sit position at the head of the table with the feet on a removable footplate.