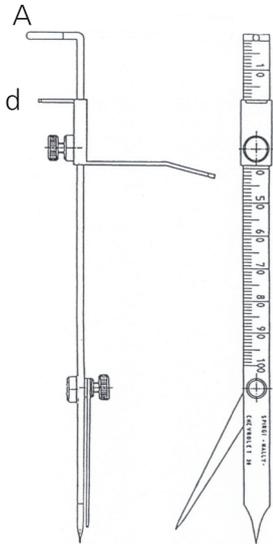


## Spirgi-Nally-Chevrolet Compass Vertical Dimension Measuring



- For the determination of the vertical dimension of patients with or without teeth.
- For the determination of the distance between the upper anterior alveolar ridge and the mobile part of the palate.
- For the control of the tissue resiliency for possible retouches of the upper mastermodel.
- The lateral mobile arm serves for :
  - ➔ The determination of the « free-way-spaces » in a relaxed position.
  - ➔ The transfer of the posterior occlusal plan reference point (opening of the parotis canal).
  - ➔ Measuring of the side-wings of the nose and the canine distance.



This instruments for the determination of the rest position, of the occlusal plane and for the making of a hermetic posterior finishing line in full denture prosthetics. By S. Chevrolet, J.J. Berta (Chief of the Dental Laboratory at the University Dental Polyclinic UNIVERSITY Geneva ) and Mr. Spirgi (Head of the Dental Laboratory University Dental School).

### I) Preliminary

The determination of the form of the posterior contact aerea and of the posterior delimitation of the upper full denture is in general left to the dental laboratory technician.

He creates a small groove of 0.3 to 0.4 mm depth into the plastermodel or grinds one or two so called American lines. These two methods do neither create a correct morphology of the posterior contact surface nor a correct delimitation of the upper denture to compress the underlying soft tissue sufficiently and herewith develop a thight posterior border seal.

### II) Introduction

In order to obtain an hermetic posterior seal in the most posterior palatal aerea, some knowledges of the anatomic and physiologic elements of region are necessary. They must be used to preserv the positive and negative biologic factors.

A precise clinical examination and comparison of these factors will furnish sufficient information, in order to create an acceptable contact surface and a suitable form so that together with the supporting zone of the mucosa a thight posterior border seal is obtained.

An instrument was created to allow the dentist to determine the precise border where the posterior seal of the upper full denture will be located. The compressability of the mucosa is determined. In the posterior palatal aerea, which contains the Schroeder zones, the intermaxillary suture and goes upto the retro-molar tuberosity aerea between the pterygo-mandibular ligaments; ligaments which might be or might not be present.



Instrument or toucher according to Spirgi Nally and Chevrolet toucher with a gliding metal part, needis marked with rounded off ends.

Toucher end with 1 mm and 2 mm markings, rounded end. allows to measure the compressability of the mucosa in the aerea. Schroeder zone, sulci-Pterygo-maxillaris - intermaxilla line.

**III) Use of instrument according to Spirgi, Nally, Chevrolet** (Fig. 1 A and d)

a) The dentist can use the instruments and particularly the rounded off end of the toucher and the upper part of the glider (Fig. 1: A and d) to measure the distance between the anterior jaw ridge and the beginning of the soft palate, in the middle left and right. Then these measures are transferred to the working models (Fig. 2 and 3).

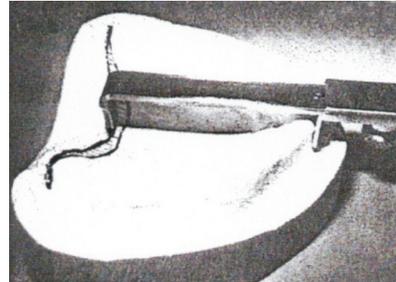
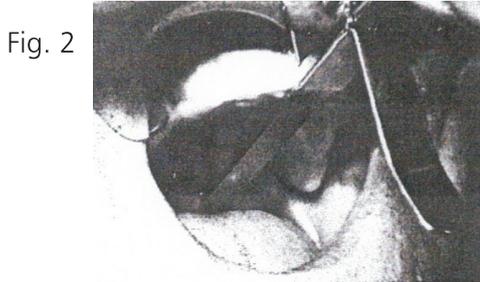


Fig. 3

b) The dentist can with same rounded of toucher measure the distance between the alveolar ridge and the retromolar sulci. Measure that is also transferred to the working model (Fig. 4)  
Through touching and measuring with the 1 and 2 mm marks the Schroeder zone can be determined and marked (Fig. 4)

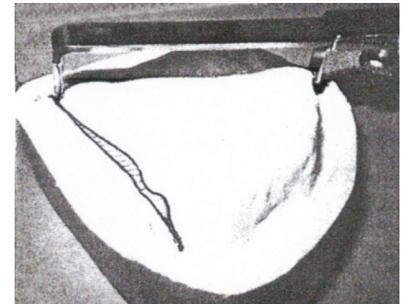


Fig. 4

The dentist can measure the vertical dimension height in rest position and in centric occlusion (Fig. 5-6).  
With the circle the rest position and occlusal height can be compared (Fig. 7-8)

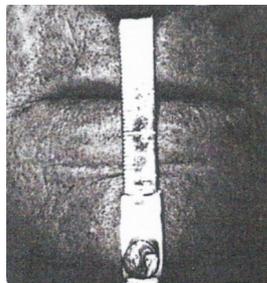


Fig. 5

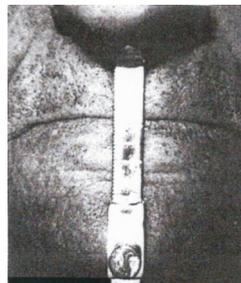


Fig. 6

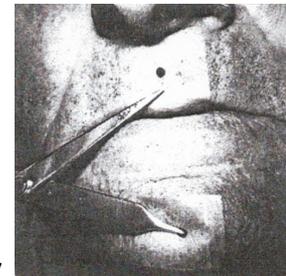


Fig. 7

With the same compass the laboratory technician can mark the occlusal position (Fig. 9)

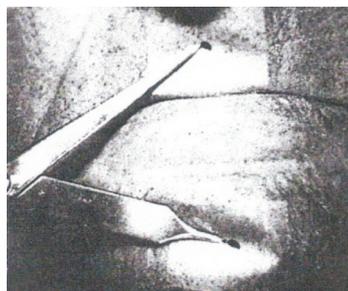


Fig. 8

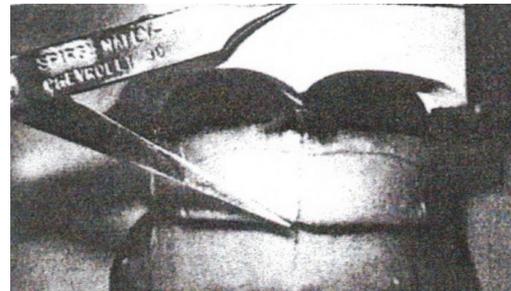


Fig. 9

**IV. Use of the stinging instrument to create a groove.**

a) The laboratory technician use the 1,5 mm working point to groove the model. This by following the posteriorly marked line, which indicates precisely the posterior upper denture limit (Fig. 10-11)

b) If desired by the dentist a 2 mm groove can be made with the other working point (Fig. 12)

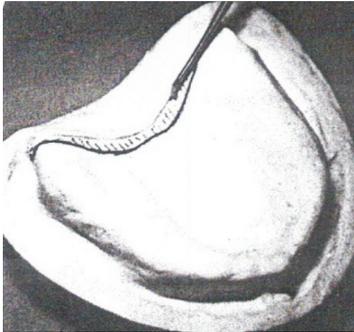


Fig. 10

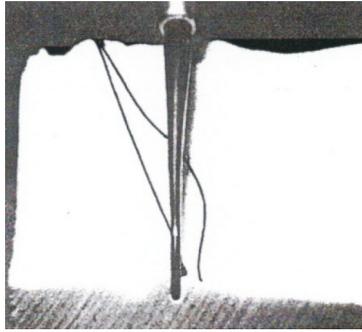


Fig. 11

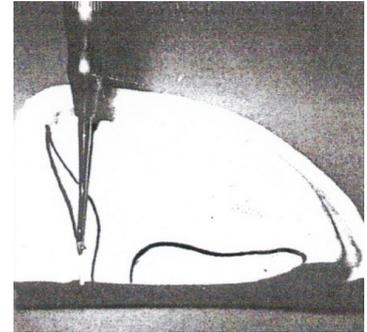


Fig. 12

**V. Use of instrument with a spatula for modeling from the groove.**

The laboratory technician uses the large side of the instrument to create an inclined plane from the posterior to the anterior line (Schroeder zone) Fig. 13 and 14

Fig. 15 the depth and form of the groove made on the model (sagittal view)

Fig. 16 Master model with the groove and in the marked area of palatal torus where a 0.4 mm thick tin foil is being placed

Fig. 17 The black line indicates the anterior border of the Schroeder zone

The posterior border of the upper denture must be smoothed and polished (Fig. 17).

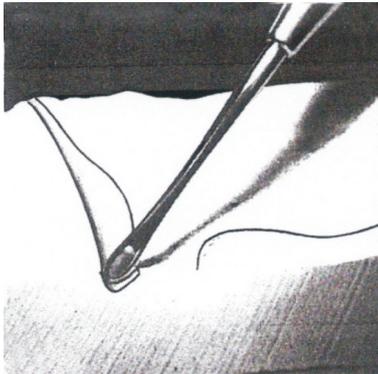


Fig. 13

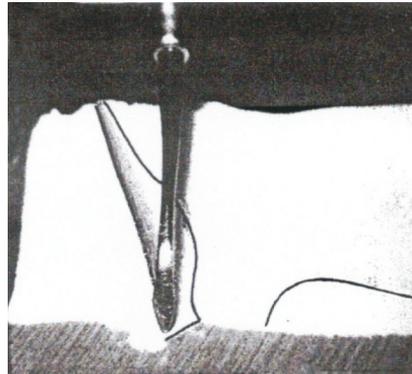


Fig. 14

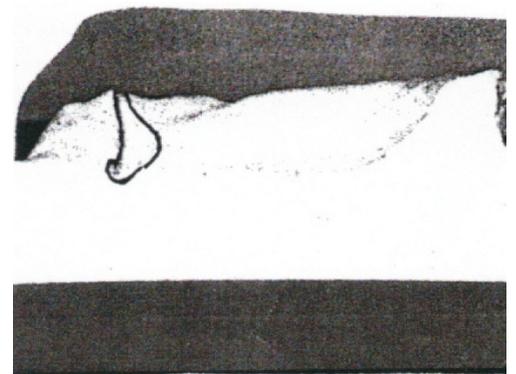


Fig. 15

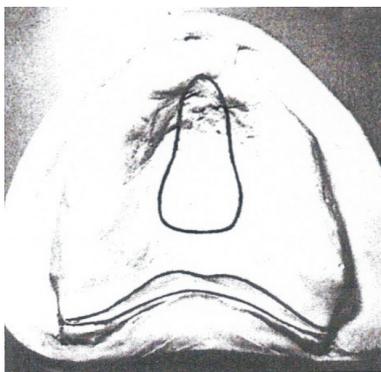


Fig. 16

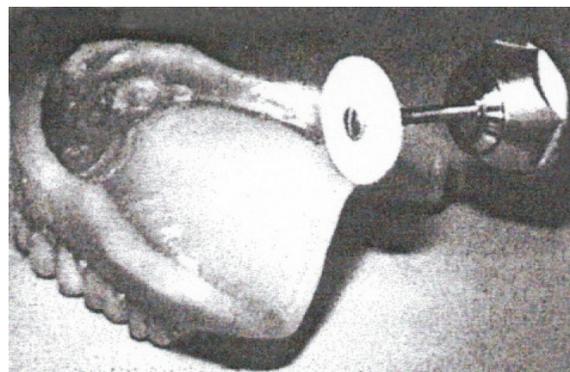


Fig. 17