

Two Case Reports: Mixed Dentition Treatment

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Since the general adoption by orthodontists of appliances which use light resilient arch wires and therefore require banding all of the teeth in order to be effective, the treatment of malocclusion in the mixed dentition has largely been discarded in favor of one continuous period of treatment in the permanent dentition where such appliances can be used to greater advantage. The argument is frequently advanced that the length of time necessary to complete two stages of treatment is far in excess of that required for one, and that in cases where two periods of treatment are used a certain amount of work in the second stage of treatment is merely repetition of what was done originally. The following two case reports are examples of what can sometimes be accomplished in a reasonably short time with comparatively simple appliances and — most important — 100% cooperation from the patient.

CASE No. 969. Girl 8 years, 1 month. Class I malocclusion, upper incisors irregularly spaced — protruding and rotated. Lower incisors slightly crowded. Deep overbite. Nance's measurements with normal limits. *Etiology* — Not readily determined.

Object of Treatment:

1st Stage: Move upper six year molars distally slightly beyond their normal positions. Reduce the protrusion of the upper anterior teeth, correcting the rotations where indicated. Correct the overbite.

Treatment Plan:

The lower arch was prepared for anchorage with ribbon arch bracket bands on the four anterior teeth, and molar bands on the second deciduous

and first permanent molars. These bands each carried .022" x .036" straight tubes set in tandem (An alternate method of attachment to the second deciduous molars is to cut the buccal face from the tube changing it to an .022" x .036" bracket). Spurs were placed on the arch wire mesial to the tubes on the deciduous molars.



Fig. 1—Tubes and/or horses in tandem. See footnote below.

The lower arch with lingual crown torque in the anterior segment was placed March 2, 1937.

Ribbon arch bracket bands were placed on the four upper anterior teeth and molar bands carrying curvilinear sheaths were placed on the first permanent molars. The sheaths were aligned so that the arch in the anterior region rested 5 mm. above the gingival margin of the central incisors. The upper arch was placed March 8, 1937. Intermaxillary force was applied a month later. The nuts were kept tight against the sheaths of the molars. June 25, 1937, with less than 4 months of treatment, an upper plate retainer was placed.

In a response to a request that he amplify on the expression "tubes set in tandem", Dr. Hahn quoted from a standard dictionary, and drew the above figure in the margin of his letter. It is reproduced in the belief that Dr. Hahn draws with more clarity than he quotes.—Ed.

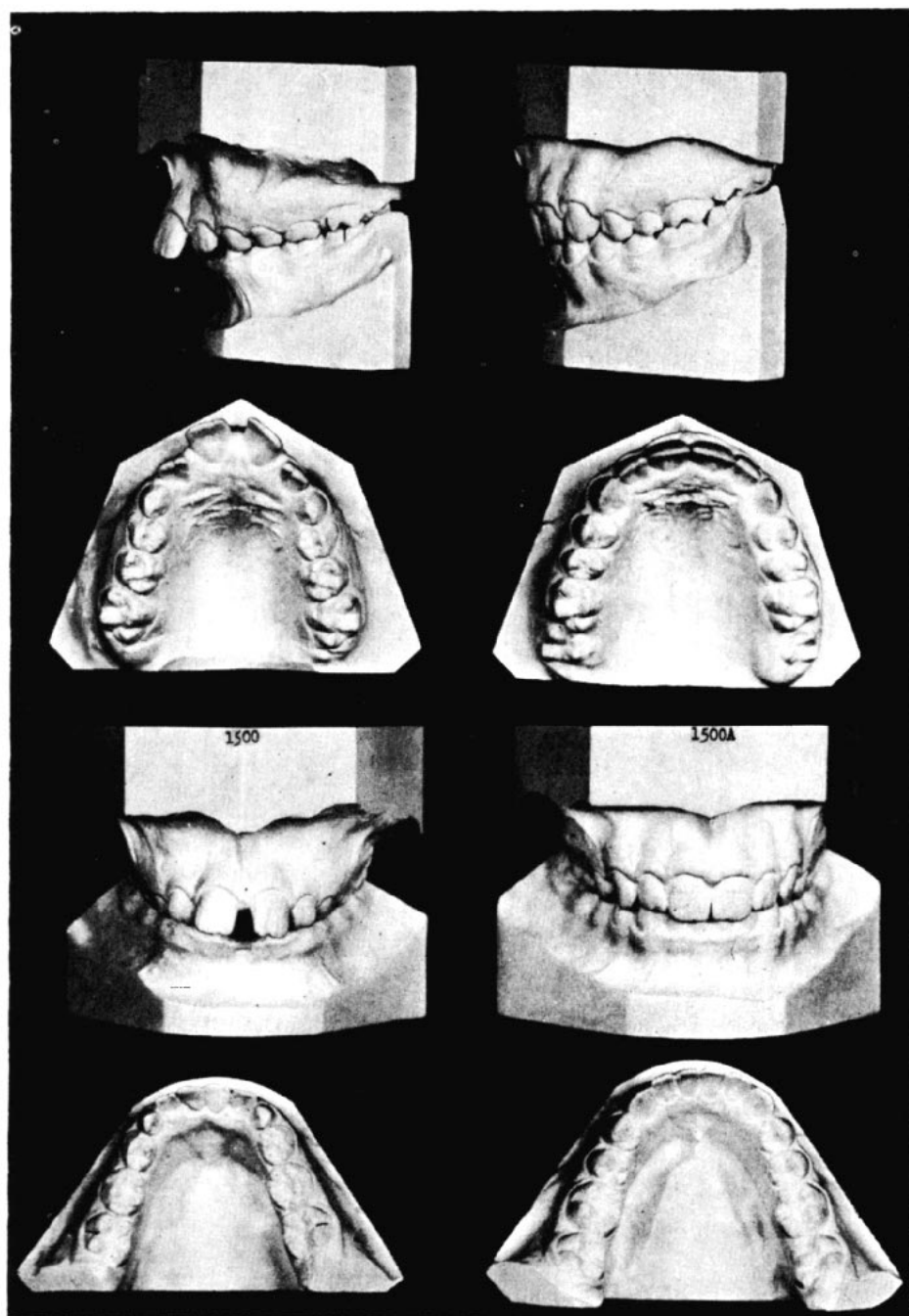


Fig. 2—(1500) In each instance the view on the left represents the dentition at the time treatment was commenced; the right shows the result one year after the completion of all treatment.



Fig. 3a—(1500) The face at the time treatment was commenced.
3b—One year after the completion of all treatment.

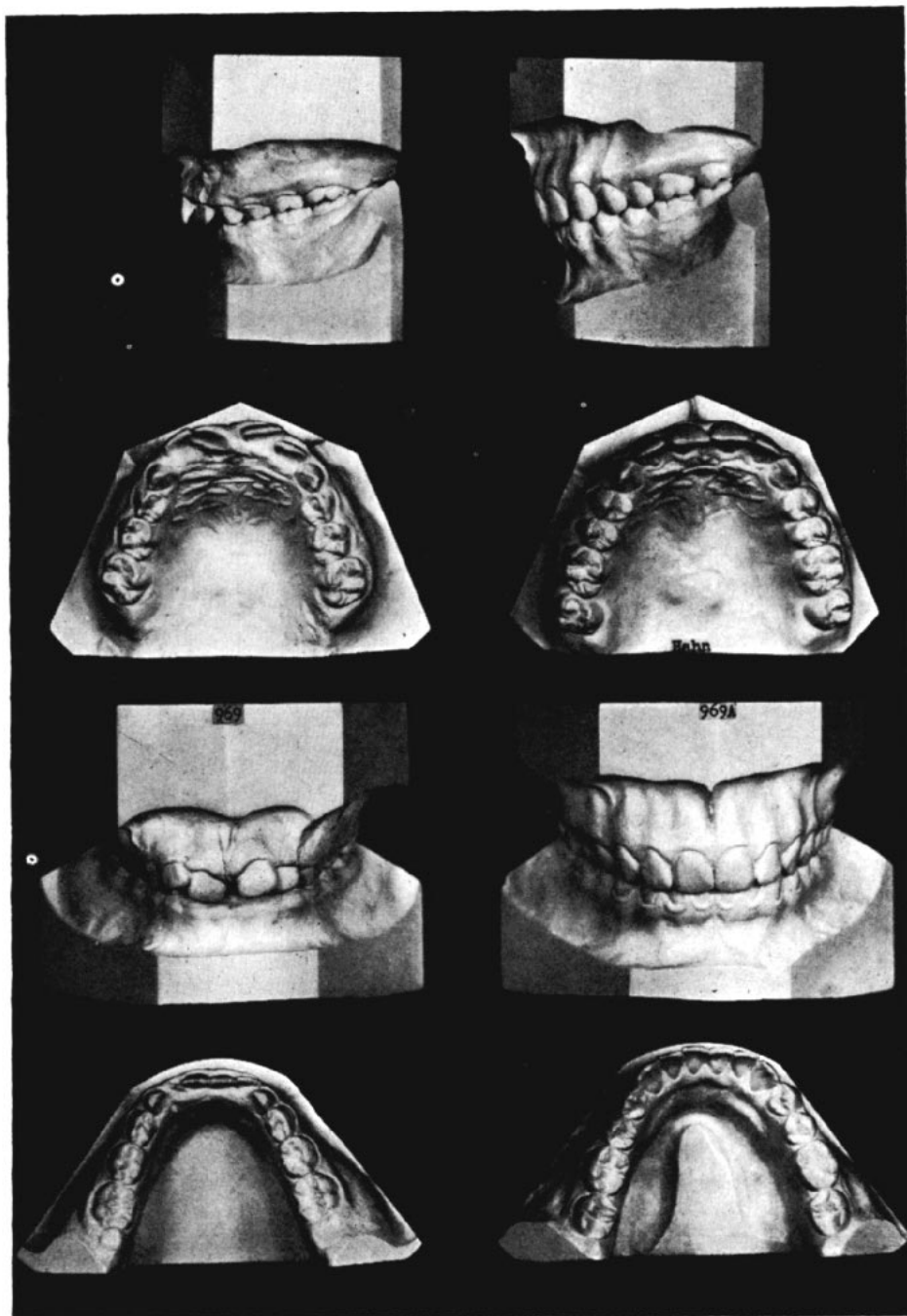


Fig. 4—(969) In each instance the view on the left represents the dentition at the time treatment was commenced; the right shows the result nine years after the completion of treatment.



Fig. 5a—(1941) The face at the time treatment was commenced
5b—Nine years after the completion of treatment.

2nd Stage:

The second period of treatment was instituted March 18, 1941. At this time all of the permanent teeth had erupted. The lower anterior teeth and the lower right first bicuspid were rotated. The upper molars needed some additional distal movement to permit positioning of the cuspids and bicuspid.

Ribbon arch bracket bands were placed on the lower six anterior teeth. The first permanent molars carried bands with .022" x .036" flat tubes. After the rotations were completed, cleats were placed on the lower arch to engage the cuspid brackets, and spurs were placed on the arch mesial to the molar tubes. These gave suffi-

cient additional anchorage to carry out the contemplated treatment of the upper. The original appliance was replaced on the upper teeth and intermaxillary force was applied immediately. The nuts were kept tightened against the upper molar sheaths. The cuspids and bicuspid were carried distally by the use of clasps which exerted pressure against the mesial of the cuspids. At the end of five months the clasps were removed from the cuspids and the nuts were removed from the arch. The full force of the intermaxillary ligatures was thus made to act against the upper four anterior teeth. A month later, September 18, 1941, the case was retained with an upper and a lower plate retainer.

Active treatment in the two stages totaled 10 months.

Upper and lower retainers were removed February 9, 1942.

CASE No. 1500. Boy 9 years 9 months. Class II, Division 1, Upper anterior teeth in extreme protrusion, with lower anterior teeth crowded and rotated. Deep overbite. Nance's measurements show normal relationship between primary and secondary dentitions.

Etiology — Thumb sucking.

Objective of Treatment:

1st Stage: Move upper six year molars distally to slightly beyond normal interdigitation with the lower molars. Reduce the protrusion of the upper anterior teeth and correct the overbite.

Treatment Plan:

Ribbon arch bracket bands were placed on the four upper anterior teeth, and molar bands with curvilinear sheaths aligned so that the arch in the anterior region rested 1 mm. above the gingival margin of the central incisors. By aligning the arch in this manner the molars can be tipped distally and the incisors depressed so that the bite is opened. No appliance was placed on the lower teeth. The Johnson headcap was placed with hooks engaging the upper arch distal to the lateral incisors. The headcap was placed October 30, 1945, and was worn at all times except during meals and while bathing. Active treatment was completed, the appliance removed and an upper plate retainer was placed April 22, 1946.

2ND Stage:

In the spring of 1949 all permanent teeth had erupted. There were minor rotations of the lower anterior teeth and a slight relapse in the upper anterior region. A positioner was placed March 29, 1949, and used actively for three hours during the day and passively at night for two months, after which it was used as a retainer, being used during sleeping hours only. After nine months this was discontinued.

Active treatment in this case totaled 9 months.

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