

Case Report

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This material is being presented to you through the efforts of others. I take credit only for collecting the data and sharing them with you.

I wish to report to you that the patient was the first ever treated by use of the edgewise arch mechanism. In Angle's article in *Dental Cosmos*¹ there was a series of case reports given by the students in the course of the Angle School at that time. His prelude to their presentation is interesting. I quote:

"In view of all I have previously published, it would seem unnecessary to repeat here minute directions for the specific treatment of cases belonging to the three great classes of malocclusion, their divisions and subdivisions. Following correct diagnosis, the requirements of treatment are self-evident and necessary tooth movement clearly indicated, with means, as herein outlined, for their practical complete and prompt accomplishment in harmony with the physiological demands of the tissue involved.

"The beautiful results attained in treatment of many difficult cases by this mechanism exclusively will illustrate my point. A few of these cases I shall now show on the screen, and you will bear in mind that all of this work was done by students now here at the school, who did not complain of the mechanism being 'too complicated' for their comprehensions or too difficult for them to master.

"I am especially proud of these results because, before coming to this school, none of these students, with but one exception, had had any experience in the treatment of malocclusion.

"I should ask you to compare the results of their work with that of any

orthodontist, even that of well-known older so-called experts, especially those who pride themselves on and strenuously advocate 'slow treatment,' or periods of treatment of from four to six years duration and which, as you know, often last for longer—six, eight, and even thirteen years, and some even indefinitely. And these, remember are only periods of *active* treatment and do not include retention. Judging from that which still remains to be accomplished in active treatment alone in many cases which come to you and to us here, it is reasonable to suppose that most of the patients will reach a ripe old age before retention is concluded."

Dr. Angle then presented several cases, the last of which is the present case report. Again I quote from the *Dental Cosmos*:

"We now come to a case which you will all agree is not only complicated and difficult of treatment, but even impossible of proper treatment with the types of mechanism usually employed. It is an extreme case belonging to Class I, rapidly developing into a subdivision Class II, Division 2 and is illustrated in the following slides (Figs. 1, 2, 3) [Fig. 1 of the present report]. In addition to the pronounced mal-arrangement of the teeth of both jaws, you will note how greatly out of harmony are their axial relations, due to the extreme mesial inclination or tipping forward of their crowns, particularly as truthfully indicated by the positions and inclinations of the cuspids. The correction of all of these malpositions certainly offers an extreme test to any orthodontist and to any orthodontic mechanism. Yet you cannot fail to observe, in the next slides (4, 5) [Fig. 2] how fully all of the teeth are shown to have been placed in their correct relations in the dental arches and in their

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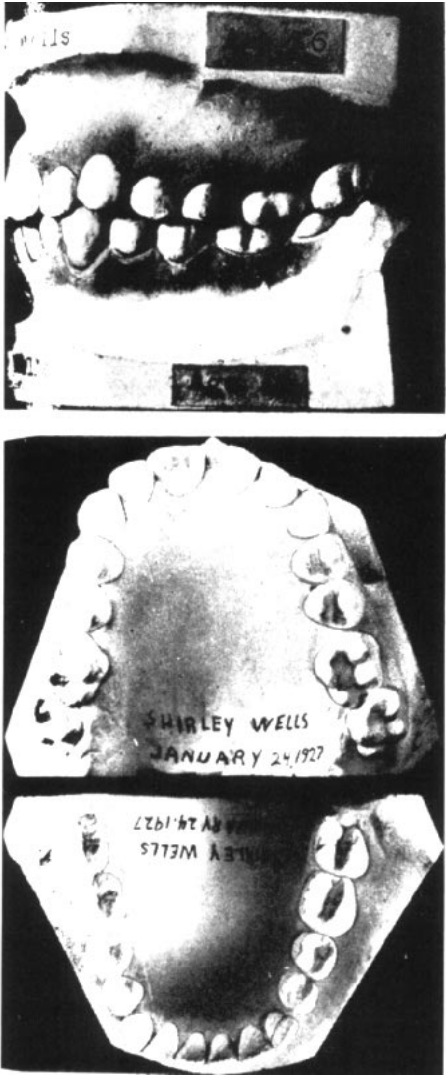
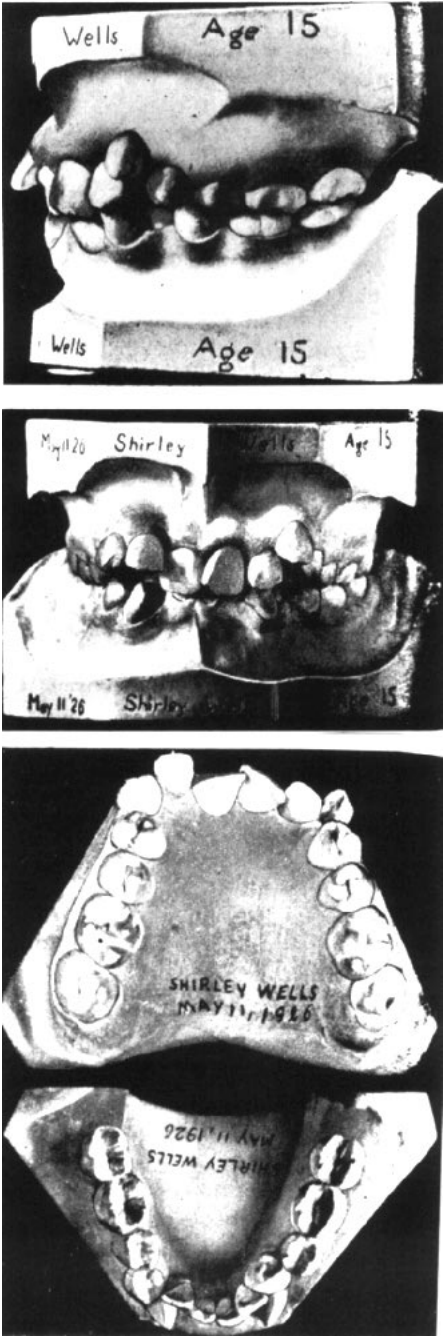


Fig. 2

correct positions of interdigitation through movements of the first order and into their correct axial relation and relations to the skull through pronounced movements of the second order; in other words, the teeth have been placed in their normal positions in the line of occlusion. In this case the torque power was also enlisted in some of the incisors, but only as an auxiliary to anchorage.



"The facial lines of the patient after treatment are shown in the next slide (6) [Fig. 3].

"It would seem that the impossible had been accomplished in this case and that in a period of eight months. The case was treated by Dr. Allan G. Brodie.

"This result, although beautiful now, will be very much better after the teeth have settled into place and the natural development of the alveolar process and related tissues has taken place."

Now let us see how well this patient has settled and adjusted over the past fifty years. Figures 4 and 5 illustrate the dentition and photographs of the patient at age sixty-five.

Dr. Angle's closing remarks in defense of his new mechanism are as follows:

"Now, in common with all new orthodontic mechanisms, the one I have shown you today must and should be brought into sharp comparison now, at the time of its introduction, with that which is already employed, before it can with full confidence be adopted. We

can therefore, to advantage, spend a few minutes in analyzing for the sake of comparison with it some of those mechanisms which, at the moment, seem to be popular.

"First, the so-called 'new' lingual arch mechanism, which some of us frequently see in the mouths of children who come over the mountains to spend their winters (or their summers, as the case may be) in our glorious 'sun-kissed' Southern California, together with others from cities not so far away. In fact, this mechanism is very familiar to us, as are also the all too many unfortunate results of its use.

"You who have been taught to analyze orthodontic mechanisms from the only truly scientific basis—that of dynamics, physiology and art—know that the possibilities of the correct treatment of the average case of malocclusion with this lingual mechanism are very small, and of difficult cases practically nil; that true force control in its use is greatly limited for any tooth movement and impossible for many because of the design of the mechanism, the principles upon which it operates, and its relation to the teeth dynamically and statically. Also for these reasons, it violates the laws of physiology and not only permits but fosters jiggling of the teeth and interferes with the function of the cells of the tissues acted upon, as we have abundant proof. And I see no possibility of its ever being sufficiently improved to successfully meet scientific demands for force control. For example, how could it possibly be operated to accomplish, with physiological rapidity, difficult movements of the first order, such as rotation of cuspids and bicuspid, depression of teeth, root movements, etc. or to perform the movements necessary for the restoration of correct axial relations in the second order of movements, or to exert torque force in the third order? Even its most



Fig. 4

ardent advocates have reported no cases that I have been able to find in which movements of the second and third orders have been proved to have been accomplished with it, yet most certainly their practices must include cases in which such movements are required."

Further quoting: "As to the so-called orthodontic appliances of the crib variety as a means for controlling force for the movement of teeth, their possibilities greatly exceed those of the lingual arch mechanism just considered. But their necessary frequent re-

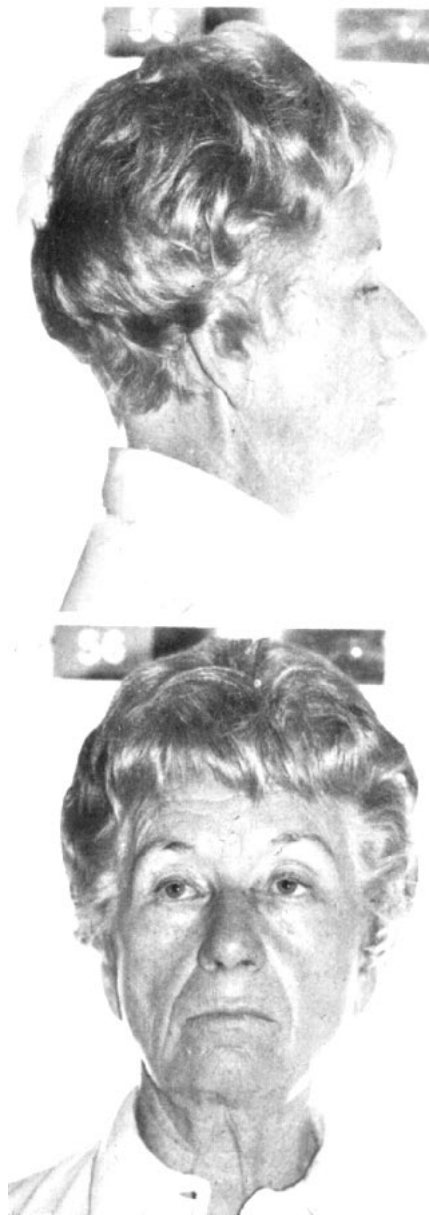


Fig. 5

moval and replacement by the patient so disturbs the alveolar tissues and so violates the laws of physiology that this alone should be enough today, to condemn it to say nothing of the impossibility of accomplishing with it the prompt, successful uprighting of teeth,

root movements, rotations, torque movements, etc. Yet it possesses one important advantage over the mechanism last considered, and one that should not be overlooked. This is that when it tends to become embedded in the gum and otherwise burdensome, the patient can and often does remove it and thereafter wears it in his pocket.

"In conclusion, I hope you may be successful in the use of the new mechanisms, and I know you will be just in proportion to the energy and enthusiasm you put into its study and use. In the application and operation of the mechanism there are, of course, many more points of interest that I might dwell upon, but they are only such as you, with your experience, judgment

and skill in orthodontic practice, will naturally and readily work out for yourselves, and as occasions present in your daily practices."

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REFERENCE

1. Angle, E. H.: The latest and best in orthodontic mechanisms. *Dental Cosmos* 71:409-421, 1929.