Abstracts from the Journals.

The Use of Air-Chambers.

Dr. William Wallace, of Glasgow, has an interesting article on the use of suction cells, in the February number of the *Journal of the British Dental Association*, which contains much important information on this subject. He starts off by pointing out that air-chambers are not really vacuum chambers, because the mucous membranes contain gases with which these cavities are always necessarily filled. If it were possible to make them vacuum chambers, the palate would have to withstand a force equal to that which would sustain a column of water thirty-two feet high, and in cross-section equal to the area of the air-chamber. In the construction of an upper denture the most important point, he claims, is to make the circumference, and not the centre of the plate, the part which rests firmly against the tissues. Air-chambers, while intended for a different purpose, bring about this result incidentally, and in constructing plates without them provision must be made for relieving the roof of the mouth from pressure. This may be done either by reducing the height of the alveolar ridge in the model, or heightening the level of the palatal surface. Such a precaution is rendered necessary by the fact that there is a hard ridge in the median line of the palate, and that a plate made to fit an exact model of the roof of the mouth will always rock more or less, in proportion to the amount that the other tissues of the palate yield more readily than the hard median part. The growth of the palatal tissues into the cavity of an air-chamber, he attributes partly to the fact that at that particular point they are subject to no pressure from either the tongue or plate, but principally to the irritation due to accumulating mucous secretions and food debris. These set up an irritation which leads to chronic inflammation and hypertrophy. Such a growth should not be used in order to hold a plate in position, and to bring it about in order to prevent lateral motion, is to make the palate fit the plate instead of the plate fitting the palate. To retain an upper plate in position, he looks upon as a purely dynamical problem. Equilibrium having been obtained by having the circumference of the plate press hardest on the palate and alveolar ridge, a number of forces combine to hold it in position. It may obtain a mechanical grip of the upper jaw by catching over the outer margin of the alveolus —the stickiness of the saliva and capillary attraction also assist— and if the extreme edges fit tightly to the gum, downward traction