

is resisted chiefly by suction. To secure these forces at their best the plate should fit closely at the edges, and be free at the centre, but not so free as to permit the inclusion of any air when the piece is pressed home. That there should be no air between the palate and the plate anywhere, follows from the law that the volume of gases varies with the pressure. In the case of a suction plate, when we relieve the pressure of the atmosphere by dragging on the plate, the air in the cavity expands, but offers no resistance. If, however, the cavity had been filled with glycerine, or had there been no air-chamber, the expansive force of the contained air would need to have been exerted to remove the plate.

Influence of Second Dentition.

In the *International Dental Journal* for June, Dr. Newton, of Montclair, N.J., treats of the physiology and pathology of the second dentition from the standpoint of a practising physician. The period of life from birth to the second dentition he divides into three periods of about seven years, viz., first, until the complete eruption of the first four permanent molars; second, until the complete eruption of the second four permanent molars; and third, until the complete eruption of the third four molars. The first period, *i.e.*, from birth to seven years of age, from a physiological standpoint, is the most important period of human life. During this period the child masters the use of his senses, learns to reason, learns an elaborate and difficult language, and frequently has attained considerable proficiency at school. At its conclusion the brain has attained very nearly its growth, and its subsequent enlargement is very slow. During the second period the rudiments of education are secured, the character is largely formed and a fair indication is given of the way in which a child is likely to turn out physically and mentally. This second period is a critical one, and many of the maladies peculiar to it are due to the second dentition. What are known as "mucous diseases" are oftener due to second dentition than anything else. The child becomes emaciated and weak, the skin becomes sallow, dry and rough, and the pulse feeble. The emaciation and debility suggest tuberculosis and frequently cause much alarm. Although mucous disease is not dangerous in itself, it predisposes to other more fatal diseases. Diarrhoea is a constant attendant on second dentition, and usually arises in the spring or fall. The troubles commonly attributed to worms, the approach of puberty, malaria, etc., he believes in most cases can be traced directly to the eruption of the second teeth. Paralysis is frequently caused by teething, the recovery in some cases being rapid, while in others the limb atrophies, and cases are on record