one, in contrast to the first portion of it, which is an inspiratory one; and that this forced expiration had a most important bearing on the weak ventricles of the heart, by helping them to squeeze the blood on the one side into the pulmonary artery, and on the other into the dilated and inelastic aorta. In proof of this he exhibited sphygmographic tracings showing that it was only during this expiratory portion of the respiration that arterial tension was raised in the arteries, and that this tension continued through the apneal period following, during which time the respiratory center was fully supplied with arterial blood and the weak and degenerated left ventricle resting. He regarded the apneal period, during which time respiration was suspended, as only an effort on the part of the higher automatic centers to rest a heart the ventricle of which is either too feeble to charge an arterial system, the aorta of which may be dilated and inelastic, or the vaso-motor control of which may be defective, and whose own blood supply may be rendered insufficient in consequence, and its nutrition enfeebled. After the intrinsic muscle of the heart has been fed by this increased arterial tension of expiratory and apneal periods, forced inspirations begin again, and the heart contractions are stronger, but they fail to fill the dilated aorta, till the forced expirations, by making pressure on the ventricles, come to their aid again. The most typical and pronounced forms of Cheyne-Stokes' respiration were to be met with in alterations of the heart and aorta produced by degeneration and disease. The form of it met with in cerebral disease or injury, and in apoplexy and uremic coma, without any primary engagement of the heart, he regarded as due to direct interference with the respiratory in the medulla, either by pressure or poisoned blood, and the phases of it were never so well marked as in those cases of the affection depending primarily on alterations of the heart. Owing to its dual origin in this way comes the differences of opinion as regards its pathology. As regards its treatme it, Dr. Boyd found so much improvement following the inhalation of oxygen in all the cases where disease or degeneration of the heart produced it, that he urged a trial of this remedy in all such cases, and ventured to suggest, from his experience of the remedy, it should be tried not alone in this affection but in all cases where degeneration of the heart existed from any other cause.—*Lancet. Am. Practit.*

SANTAL OIL FOR COUGH.

Curtin finds that sandal wood oil often gives relief to the cough in phthisis, catarrhal pneumonia, chronic bronchitis with asthma and influenza. It is given on sugar or floated on water. *Am. Pract.*

HOW TO TEST THE VISION—TEST TYPES.

It is often a matter of great importance to determine whether a person sees perfectly or not. If a person has normal or perfect vision, the conclusion naturally follows that the eyes are not diseased. On the contrary, if the vision is found to be defective or imperfect, then there must be either congenital defect, some anomaly of refraction, or some inflammatory or organic disease, which causes the defective vision. In the latter event the examination must determine to which class the trouble belongs. But how can we determine whether the vision is perfect or not? For this purpose some one of the numerous test types must be used. All are based on the same fundamental idea, so it is immaterial whose test types are used, but Snellen's are in most general use. Experiments with normal eyes have proven that two points, such as two black dots, must be far enough apart to subtend an angle of one minute at the macula lutea before the eye can determine that there is any space between them. Further experiments have proven that block letters—as high as they are wide—must subtend an angle five times greater than that of the two dots to enable the normal eye to see all their parts distinctly. Consequently the test letters must subtend an angle of five minutes at the retina. This is the fundamental principle of all test types. Some letters of the same height and width can be seen distinctly much farther than others, but the principle holds good. It is immaterial how far the letters are placed from the eyes, since their size must be proportionately greater or smaller according to their distance from the eye. Suppose two straight lines start at the retina and diverge, as they extend, so as to form an angle of five minutes. Now, test letters, at whatever distance from the eye they may be placed, must be just large enough to fill the space between these diverging lines. If close to the eye, they must be very small; if twenty or more feet away, they must be proportionately larger. If one hundred feet away they must be proportionately larger. In this way it is easy to see that the same principle—an angle of five minutes—covers the test at all distances. As a matter of convenience, the test is usually made for the distance, say from ten to twenty feet from the patient. The test letters are numbered from one upwards, according to the distance in feet they should be distinctly seen by an eye with normal or natural vision. Suppose a patient wishes to know whether he can see perfectly or not. Place him, say ten feet, before a card of test types of large and small letters. Cover one eye (for in all such tests only one eye must be tried at a time) and ask him to run over the line of letters numbered X; if he does so readily, that eye has normal vision. If he reads readily still smaller