

distinctly proven that compressed and rarified air, when respired from a Cohen and Richardson apparatus, the body remaining in the normal air, can be made productive of the like results. The real question is the comparative density of the breathed and periphery air. Under ordinary circumstances of respiration, the pressure within the lungs and external to the body is equal. But if compressed air is breathed, the external air is more than balanced. The blood rushes from the thorax toward the surface, the chest enlarges, the blood pressure is diminished, and positive pneumatic differentiation produced.

On the other hand, let the patient breathe rarified air, the periphery pressure being normal, the blood rushes to the thorax, the lungs are compressed, inspiration is labored, blood pressure is increased, and negative differentiation is the result. All too without the assistance of the pneumatic cabinet.

The especial chest affections, in which inhalations, of one kind or another may be useful, are asthma, emphysema, bronchitis, catarrhal and fibroid pneumonia and certain stages of phthisis. In cardiac affections, their use would in many cases be worse than useless. So also in pleurisy; Donaldson however relates two cases where compressed air broke up old pleuritic adhesions.

It may be laid down as a rule, that in all diseases, where the expectoration is profuse and exhaustive, steam or watery inhalations are contra-indicated; while in the opposite conditions, accompanied by hacking cough with dry vesicular and bronchial membrane, the like inhalations properly administered may prove in the highest degree beneficial.

**Asthma.**—Among the many recent methods of treatment, for this seemingly intractable disease; besides the inhalation of oxygen, is the inhalation of compressed air. This has been practiced largely at Montpellier and Nice, and on the whole with beneficial results. Theoretically, however, the results would be still better, if, after inhaling compressed air for a considerable time, so as to expand the lungs to the utmost, this was followed by rarified air, so as to force out as much of the residuum as was possible. The expansion and contraction would thus be beyond the normal limits, with a possibly beneficial effect upon the ultimate nerve filaments.

**Bronchitis.**—In bronchial affections, particularly of a sub-acute or chronic character, medicated

inhalations are frequently very beneficial, more particularly when the atomization is carried to such an extent as to completely vaporize the medicament to be applied. Dr. Shurly, of Detroit, has devised an apparatus by which this can be accomplished in a very admirable manner.

With ol. Petrolini, also introduced by Dr. Shurly, as a menstruum, carbolic acid, naphthalin, thymol, ol. picis, benzoin, eucalyptol, etc., can all be administered in such an attenuated state, that a microscope would hardly succeed in discovering the atoms.

In caseous phthisis, or what is sometimes called chronic catarrhal pneumonia, inhalations of the stimulating balsams and oils, often prove beneficial. In this and all other lung cases however, care should always be taken, never to make the inhalations strong or continuous enough to be irritating.

In chronic fibroid pneumonia, or fibroid phthisis, with its dense nodular pigmented tissue, surrounding the bronchioles, when taken before any tendency to hemorrhage has occurred, compressed air inhalations are often productive of good results. In commencing tubercular phthisis also, prior to general miliary deposit, compressed air will frequently swell out the lobules, and help to expel the little plugs of mucus, which so frequently help to solidify the lung.

Barnes' Spirometer, although condemned by some, who probably have given it an insufficient trial, often serves a useful end in cases of this kind. Not only is it a direct index of the vital capacity of the lungs themselves, but it is also a means of utilizing the muscles of the chest, in expanding the lobules, and expelling detained mucus.

Except in the earliest stages of phthisis, medicated air is much preferable to compressed air in the treatment of this disease. Beverly Robinson, of New York, is enthusiastic in his praises of dry medicated air, through one of the many varieties of ori-nasal inhalers. He gives among its advantages, its low cost, freedom from risk, perfect applicability, and its adaptation to all forms of irritative disease of the respiratory passages. By means of it carbolic acid, creasote, thymol, etc., etc., can any of them be made to impregnate, to a more or less extent, all the air breathed while the inhaler is worn. Rumboldt's method of passing dry air through balsamic preparations of heated vaseline, is still strongly favored by some; while Shurly's