

# UNITED STATES PATENT OFFICE,

JOSEPH LLOYD MARTIN, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN OXYGEN AND OZONIZED COMPOUNDS FOR HYGIENIC AND THERAPEUTIC TREATMENT OF DISEASES BY INHALATION.

Specification forming part of Letters Patent No. 123,714, dated February 13, 1872.

*To all whom it may concern:*

Be it known that I, JOSEPH LLOYD MARTIN, of Baltimore, in the State of Maryland, have made a new and useful Improvement in the Preparation and Application of Compounds for Use in Treating Diseases, which I term "Combined Oxygen or Hygienic Gas for Inhalation or Ozonized Oxygen;" and I hereby declare the following to be a full and exact description of the same.

My invention consists in producing highly-oxygenated and ozonized gases by decomposing any of the compounds commonly employed by chemists for that purpose, and combining with such gases minute portions of the various remedial agents, either gases, liquids, or powders, necessary to be employed in treating particular diseases; the gases rich in oxygen serving as vehicles to convey the remedial agents into the system, and to give the proper invigorating action to the several organs of the system, so that they may have their curative effect. Nascent or ozonized oxygen is that which acts most readily on the living system. It is only within a few years that the attention of the medical profession has been directed to the discovering of a preparation of oxygen gas which would prove soothing and salutary in its effects upon the delicate respiratory tissues, and at the same time perfectly harmless, even when those tissues were in a state of irritation or inflammation; and the fact that such investigations have been energetically pursued is evidence of the great importance which medical men have attached to inhalation as a means of directly reaching the respiratory organs and circulation, which could only be accomplished indirectly by any other process. It is well known that oxygen gas is the life-imparting and sustaining element of the common air we breathe; and by the introduction of greater quantities into the system we increase in the same ratio the more perfect functional action of each organ in the body. And as the healthful integrity and harmony of those organs depend upon the perfect oxygenation or arterialization and uninterrupted perfect circulation of the blood effected by oxygen, we can readily understand why its presence in sufficient quantity is so necessary to the animal economy for recuperation and

sound health, and why a deficient supply should originate impairment of health and confirmed disease. Its action is therefore not limited to particular organs or portions, but the entire organism is dependent upon its operative influence; and hence a great variety of maladies not amenable to the usual methods of medical treatment are curable with the aid of this great hygienic agent. In all debilitated states of the system, arising from whatever cause and requiring the tonic effects of sea or mountain air, change of locality and scene, or other hygienic measures, this combined oxygen proves eminently curative. Any limit to its potent power for good can scarcely be conceived; and among the many in which it has been known to exert a curative influence, a few only need be named—such as pulmonary affections, consumption of the lungs and bronchitis, dyspepsia and different forms of indigestion, diseases of the kidney, diabetes and even Bright's disease, rheumatism, neuralgia and nervous affections, hypochondriasis, hysteria, and paralysis. Its general effect upon the system is to increase appetite and promote digestion, equalize the circulation, producing natural warmth and removing congestions or undue pressure from the heart and lungs, and greatly strengthen the nervous system.

There is a number of oxygen compounds, such as nitrous oxide, that may be used in carrying out my invention; but I prefer the modified oxygen known as ozone, or mixtures of ozone with other forms of oxygen. It has been ascertained that "ozonized air" is the real "vital air" or oxygen in an active and not in a passive state. Any of the methods now known for producing ozone may be employed, and need not be particularly described. With the oxygenated and ozonized gases I combine the following remedial agents, viz.: Chlorine, iodine, bromine, sulphureted hydrogen, and phosphoreted hydrogen, in the form of gases or vapors. The liquid remedial I apply by means of the well-known atomizer or nebulizer, using the combined oxygen-gas to atomize the liquid. When the additional therapeutic agents are to be used in the form of powders, the gases are charged with them, and then inhaled in the ordinary manner. The oxygen and ozonized gases may be compressed

into any suitable liquid solvent, such as water, in the apparatus known as the gasozone or fountain, and drawn off in the form of gas as wanted. By this method the gas is very pure.

The proper apparatus for nebulizing or atomizing liquids by means of vapors and gases, and the devices for administering gases, liquids, and solids by inhalation, being already known, need not be described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The method herein described for applying oxygen or ozonized compounds, either alone or in combination with one or more of

the therapeutic agents herein specified, by inhalation.

2. The combination of sulphureted hydrogen with ozone or other oxygen compound, substantially as set forth.

3. The method herein described for administering the medicines used in inhalation by charging the same under pressure in water or other liquid, substantially as set forth.

4. The combination of ozone or ozonized oxygen with nitrous oxide, substantially as herein set forth and described.

Witnesses: JOS. LLOYD MARTIN.  
T. C. CONNOLLY,  
C. H. FOWLER.