

NEW APPARATUS FOR ARTIFICIAL RESPIRATION.

In cases of apparent death from drowning, asphyxiation, or from certain kinds of poisoning, it is often a question whether animation is only suspended, or whether life is really extinct. The preservation of life is the strongest motive for action in all animate beings, and the restoration to consciousness and a normal condition of the apparently dead is always regarded of paramount importance in human affairs. Where there is life, or even the faintest suspicion that death has not really taken place, every effort is made, regardless of labor or expense, to save life; but it not infrequently happens that the means used are insufficient, or there is a lack of knowledge of what to do and how to do it.

Mr. William F. Desant, of this city, has invented an instrument for producing artificial respiration, which consists of two cylinders, a handle connected with two plungers, two inlet and two outlet valves, and rubber tubes and mouthpiece or tracheal tube, which may be regulated to suit the requirements of any case, both in the number of respirations per minute and the volume of air injected into and removed from the lungs. The

lungs and pure oxygen substituted until the lungs are able to act unaided. The apparatus has the indorsement of physicians and surgeons.

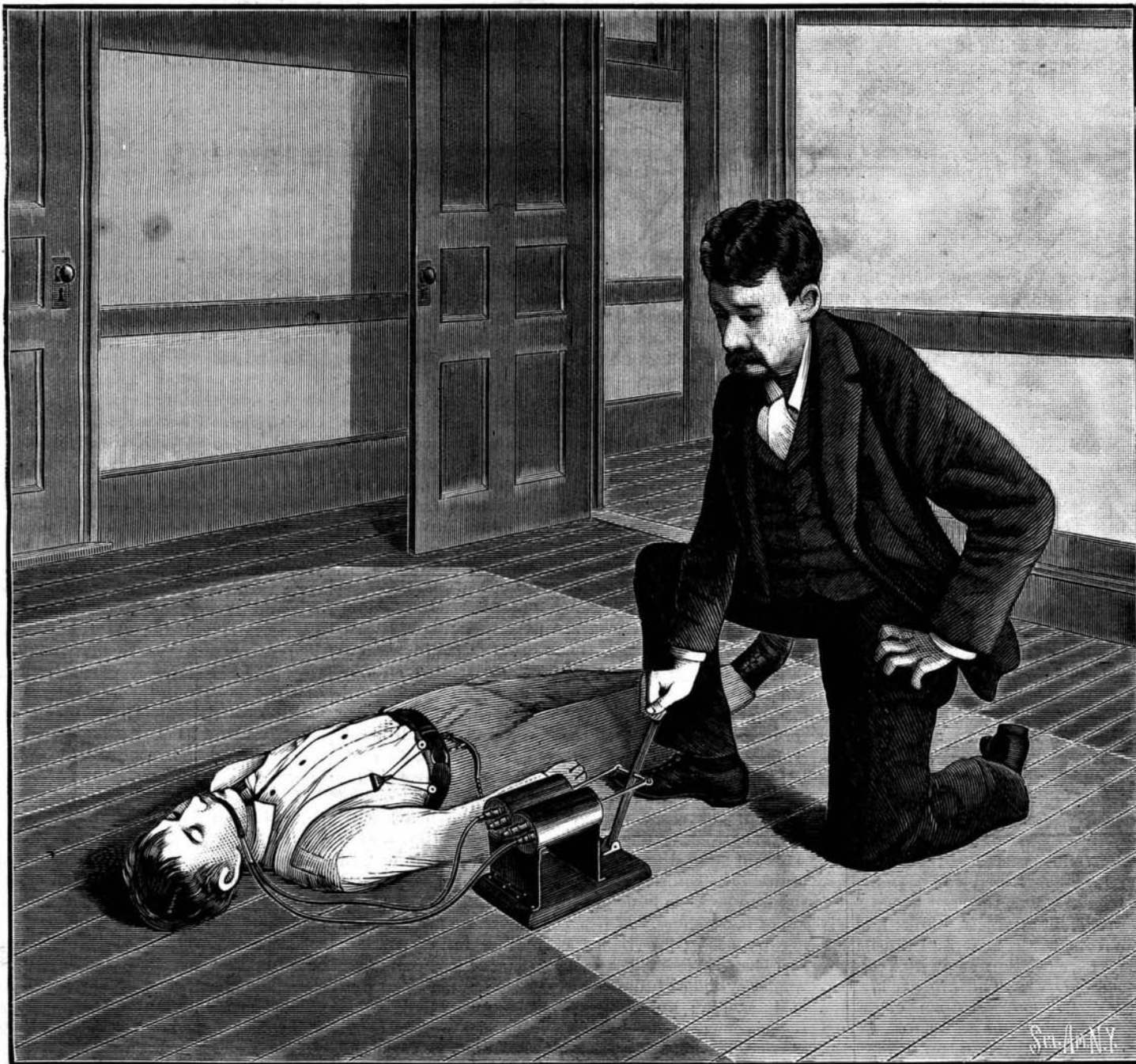
The address of the inventor is the Equitable building, New York City.

Infectious Pneumonia.

Dr. Orranos, of San Luis Potosi, Mexico, read an interesting paper before the recent Pan-American Congress, Washington. His subject was "Pneumonia: its Dangers as an Infectious Disease." He referred to the three climates of Mexico—Tierra Fria, Templado, Caliente—or its cold, temperate, and coast or tropical climate. He dwelt on the distribution of pneumonia from Zacatecas in its highlands to Campeachy on the Gulf of Mexico. March and April, at the close of the Mexican winter, gave the heaviest death rate. In some places it was more fatal than others. He cited much of general interest regarding infected houses, citing case after case in the same house, visitors to pneumonics having contracted the disease and taken it to others. In other words, its propagation by individuals and air. Malaria and pneumonia had a role

22,079 craft conducting transportation on what may be called "domestic waters." Of these 2,282 were steamers and 6,837 were sailing vessels engaged in carrying freight and passengers, their united tonnage being 2,912,693 tons; 455 were ferry steamers, with a tonnage of 146,099 tons; 1,944 were steamboats engaged in towing freight-laden barges, with a tonnage of 145,805 tons, while the barges so towed numbered 10,561, with a tonnage of 4,008,847 tons. The total tonnage of this traffic fleet of 22,079 craft was 7,213,434 tons and its value \$184,126,053.

As may be imagined, this great fleet did a business proportionate to its extent. According to the report of operations made to the authorities, 168,078,320 tons of freight were moved in a year, while the passenger list numbered 199,079,577. It may surprise the reader who does not realize the extent of navigable waters within the bounds of this country to know that in the pursuit of business these busy craft traveled 107,456,164 miles. Besides possessing the largest lake system in the world, Uncle Sam has a glorious waterway of 23,505 miles of navigable rivers—which only lacks a little, as Mr. Vivian says, of being long enough to belt the globe. Under



THE DESANT RESUSCITATOR.

cylinders have a capacity of 20 to 30 cubic inches, which is about the range of the capacity of human lungs. This being the maximum, the amount of air is reduced more or less, according to the requirements, by simply reducing the stroke of the pistons. The instrument is constructed so that it can be easily and quickly taken apart after use, and disinfected by immersion in a solution of carbolic acid or chloride of mercury. The respirator not only forces air into the lungs, but also draws it out without volition on the part of the patient. For this reason it is especially useful in advanced stages of phthisis, where the effort of breathing is exhausting to the patient. In cases of anæsthesia resulting from the use of ether, morphine, cocaine, or other drugs, also in asphyxiation from illuminating gas, poisoning, or electric shock, this respirator is effectual in restoring the patient by maintaining respiration after the lungs are incapable of performing their proper office.

In cases of still birth, where all other methods have failed, it is said to give excellent results. In case of diseased lungs, the device is used for applying medicated air, ozone, or other remedial agents. It is also used to give relief in cases of emphysema and asthma. In cases of drowning, the water is drawn from the

frequently observed in Mexico. He deems the disease highly infectious. He cited a case of a man who died of pneumonia. A month later his clothing was sent to a family. Soon after two children in that house were ill with the disease. Another illustration was that of a woman who nursed a pneumonic—sleeping in the same room; she likewise contracted the disease.

An examination of records of cases of pneumonia in given localities had proved very instructive. In two years thirty-one cases had been traced to infected houses, case after case in the same house. The germ of the disease, the pneumococcus, he deemed almost indestructible in Mexico.

Our Domestic Water Commerce.

A man must travel up and down the Great Lakes and navigable rivers of this country to gain even a faint idea of the extent of America's domestic water commerce. Some very interesting facts and figures, however, bearing on this matter were cited by Mr. Thomas J. Vivian, of the Census Bureau, in his recent address before the World's Water Commerce Congress at Chicago. According to the traffic records compiled by the census there were in 1890 no less than

these circumstances it isn't strange that our domestic water commerce has boomed in the past, and is destined still to boom.—*Boston Globe*.

A 1,200 H. P. Turbine for Niagara.

Another immense water wheel has just been shipped to Niagara Falls by James Leffel & Co., of Springfield, O. It is a duplicate and of nearly the same power as one which was shipped some six months ago to the Cliff Paper Company, and is intended for the same parties.

The wheel is of the new type on horizontal shaft, and is known as the James Leffel double discharge turbine, the entire weight being thirty tons. The water will be conducted to the wheel from a canal near the top of the cliff by an eight-foot pipe, extending downward until it reaches the mill, located near the foot of the cliff. The water will enter the cylinder casing of the wheel from below, passing upward a few feet, filling the case, and thus obtaining the head pressure.

The head will be about 130 feet; the wheel being some 67 inches in diameter, a speed of 225 revolutions will be obtained, and almost or quite 1,200 h. p. developed.