JOURNAL OF THE AMERICAN PUBLIC HEALTH ASSOCIATION 615

Not only is it made apparent from the table that with the small number, relatively, present and the most favorable weather and wind conditions, the compartment hour by hour became increasingly foul, but a careful estimate made of the accumulating air pollution shows it has also something of a geometrical ratio of progression up to a point where an equilibrium is established between the polluting influence and the fresh air introduced.

2

But though it is true that the short residence on shipboard in an overcrowded apartment in the stormy weather of the spring, made more foul through seasickness, cannot be productive of the same constitutional evils as continued residence in unventilated guarters, yet the records of immigrant detentions on arrival at our seaports have shown that it is only necessary under such conditions to have a case of infectious disease present in a compartment, such as measles or ophthalmia, in order to have the infection disseminated throughout the whole compartment. Hence it is apparent that in the interests both of the steamship companies and of the emigrants, either one of two methods should be adopted for increasing the amount of fresh air available per capita in the sleeping quarters on board ship. These are: Increase of air space per person. or, increase in the amount of fresh air introduced. While the first method may or may not, for financial reasons, always be possible in practice, yet it is certainly possible, by mechanical appliances, to increase very greatly the amount of fresh air driven into a given cubic air space. What is urgently needed is the adoption on the older ships, and indeed even on some of the newer and smaller vessels, of mechanical fan ventilation

The actual condition of a single ship which arrived in the St. Lawrence this year was as follows:

The ship left Rotterdam on June 13, and arrived at quarantine on the 26th. One case of measles occurring on June 14, was immediately isolated with the members of the family to which it belonged. In the compartment where the case occurred there were 279 individuals, married persons and members of families. The compartment consisted of two decks connected at each end by a small stairway, and these compartments were ventilated by means of these stairways and by a portion of the hatches being left open during fine weather. The beds were set up all around the sides and the eating tables occupied the centre of each deck. On the morning of the 26th (exactly 13 days after exposure on the 13th, when the first rash appeared), several cases of measles were discovered by the ship's surgeon, who continued to find others every hour of the day, until on arrival he reported 21 cases. By 9 p. M. a dozen more were