

ercise being among the most important functions by which the depurative process is performed, in the absence of such stimuli, another auxiliary, viz., the atmosphere, having an affinity for the exhaling matter, is required. In a healthy state of the atmosphere, such affinity is an active positive force of great power, but it may be sated in various ways; this occurs when the temperature of the air and the dew point approximate. An excess of carbonic acid has also a powerful effect in satisfying the power with which the atmosphere is otherwise endowed, of carrying of the effete carboniferous matters. During the spring and early summer, carbon is assimilated by the luxuriant vegetation, and the atmosphere is purified, but later when plants begin to decline in growth, the air becomes charged in larger proportions with carbonic acid; to this, and to the fact of the greater amount of aqueous vapor in the air at this season, is due the prevalence of malarious diseases during the fall of the year. In crowded hospitals or ships, the atmosphere becomes charged with the refuse matters which have already served their purpose. The deleterious effects of inhaling these matters are small compared with the effects of depriving the air of its absorbing tendency. The conclusion, then, seems evident that malarious diseases are caused by the effete excrementitious matters of which the system has failed to be properly depurated, on account of the lack of an atmosphere having an affinity for such excretions, and the consequent deprivation of this auxiliary in the performance of the perspiratory functions. Any thing, then, that tends to desiccate or dry the air, or to enlarge its capability of absorbing and dissolving the fluids of perspiration, is a true disinfectant. Fire increases the power of evaporation; chloride of calcium and other deliquescent salts, by their attraction for moisture, tend to dry the air, and hence stand so high as purifiers. By the application of water the pores of the skin are opened, and thereby healthy action in the performance of its excretory functions is stimulated.—*Scientific American*.

American Commerce.

The New York *Times* in a recent article upon American commerce asks the question, "Is American commerce to be extinguished?" and goes on to show that at the present time England monopolizes the carrying trade of the world. He quotes from the report of the Secretary of the Treasury, and proves that the diminution of our carrying trade and ship-building has steadily fallen behind Great Britain at the rate of fifty per cent., and if this continues we shall soon cease to be a maritime nation. To quote from the report, we find that in 1860 the tonnage of American vessels engaged in the foreign carrying trade which entered United States ports was 5,921,285 tons; in 1866, it was 3,472,060 tons. The tonnage of foreign vessels that entered our ports was, in 1860, 1,353,911 tons and in 1866 it amounted to 4,410,424 tons. In 1860 the United States tonnage exceeded the foreign by 3,567,374 tons, but in 1866 the foreign preponderated by 1,038,364 tons. The tonnage of American vessels that cleared from American ports was, in 1860, 6,165,924 tons, and in 1866 it was 3,383,176 tons. The tonnage of

foreign vessels that cleared in 1860 was 2,624,005, and in 1866, 4,438,384 tons, showing a balance in favor of American vessels of 3,541,919 tons, but in 1866 showing the amount of 1,055,204 tons excess of foreign clearances.

In speaking of the fact of the approaching sale of two steamers of the Havre line, the *Times* says:—

"They are apparently the last American steamers on any great line between New York and Europe. So ends our expected great commerce in American-built ocean steamers. Great Britain has a vast fleet of iron commercial steamers plying over every sea, built so cheaply and ingeniously as to drive out all competition. In the grand business-struggle of nearly a century to get possession of or to lead the commerce of the ocean, the United States, that seemed once on the point of victory, must now own to defeat. She is not only a commercial power second to Great Britain, but she seems destined to still further inferiority, and to be almost driven from the seas."

We must add the melancholy fact that, of about a dozen lines of ocean steamers that ply between our ports and the European cities, not a single vessel is now owned by Americans or sails under the American flag. England has quietly maintained that she was mistress of the ocean, and it has as quietly been laughed at upon our side of the Atlantic, thinking it was a foible of Britannia, but as facts and figures are stubborn things, then we have no longer any occasion to laugh, but to wake up to the sober reality.

The *Times* mentions that the orders for machinery from the Southern States and South America, that used to come to Northern manufacturers, are now filled in England, and it is said that soon river steamboats made in Great Britain, will be plying upon our rivers:—

"Mr. McCulloch wisely remarks," says the *Times*, "this is a direct effect of the high protective system, especially as applied to raw material. It must be remembered that such a tariff as we have now weighs upon every article that the manufacturer uses—his iron, brass, steel, wood, coal, and tools; and he not only has to compete with the cheaper labor of England, which he might do with the aid of ingenuity, but he has to work on raw products which are all far dearer than in England, owing to our exorbitant duties. More than this, the effect of such a high bounty as the present tariff offers is to encourage, with the American producers of the raw material, a carelessness, extravagance, and want of business prudence and saving which gradually render their production more expensive. There is nothing which stimulates economy, ingenuity, invention, and care like open competition. The moment Government comes in to back up an interest with excessive duties it becomes wasteful, and soon loses the watchful care which before made it successful."—*American Artizan*.

Workingmen's Strikes and their Cure.

For some time back, a contest has been going on between the iron manufacturers in the North of England and their workmen. When, some time since, the price of iron became materially reduced,