

Sanitary Matters.

All over the world marked and constantly increasing attention is being devoted to sanitary science. Scientists and technical journals are not alone discussing matters relating to health, but mere unpractical observers are considering the question. With rapidly increasing population, especially in large cities, no other topic possesses more legitimate interest than that of the public health and sanitary reform. It is a question of special importance, especially water supply, to the people of Winnipeg, and in dealing with the question the opinions of eminent sanitarians should be carefully weighed. Articles from two men who have given much study to the subject have recently appeared in leading magazines, a brief digest of which are at this season of the year particularly timely and valuable. Both writers urge the necessity of having the domestic water supply constant and pure as possible, and from a source entirely devoid of sewage contamination. This is the very beginning of sanitation. One writer notes that there is a prevailing impression that large flowing streams are selfpurifying, and chemical tests have apparently confirmed this belief from their failure to show serious contamination in the water at a considerable distance below the point where sewage or other polluting products were discharged into them. This, he says, is a mistaken view. Even though by oxidation, deposition and dilution the potency of many impurities may seem to be greatly lessened, yet this may be only because of the inefficiency of chemical tests. In view of the extraordinary vitality of disease-germs of all kinds, and the effect of impure water in promoting typhoid and other zymotic diseases, the conclusion of the best sanitary authorities seems rational, that it is not safe to use, for domestic purposes, water known to be seriously polluted. A further objection he urges to water supply from rivers is that they become turbid during freshets, and receive impurities from various sources, as dissolved vegetable matter, eroded and decomposed rock, the drainage from marshes and peat-beds, etc., according to the geological formation of the locality. Artesian wells are costly to bore, and often fail to yield good water, while their supply is not always permanent. Again, the water from deep wells is generally strongly charged with lime or more objectionable minerals, which renders it unfit for domestic use. Fresh water ponds and lakes he thinks are perhaps the best water supply. They are less apt to become turbid, matter in suspension being deposited as sediment, while organic matter in solution is purified by the oxidation of the air. Shallow ponds are not desirable, or those whose margins are liable to be exposed in seasons of drouth. Nevertheless, for many communities, wells, if properly located and guarded against contamination, may prove the best available source; but in the country the uniform nearness of wells, cisterns, stables, pig-pens and cesspools in the usually porous soil leaves no doubt of the contamination of the water supply. Bad drinking water is an ever-present peril to rural residents and an ever-occurring one to their occasional visitors. Hence, diseases due to polluted water prevail

as largely in the country as in the city, and are often imported from the former by the latter. A potable water should be soft and have little mineral in solution, while it should be absolutely free from organic contamination. The taste is not to be depended upon as a guide to purity; the most palatable water is often the most impure. Most persons will reject pure water which happens to be turbid in favor of sparkling, colorless water drawn from a polluted spring, provided it has no peculiar taste or odor; yet in localities where clear waters are hard and unfit to drink turbidity becomes a recommendation.

Mining as an Industry.

Under the caption of "A Better Knowledge" the Chicago Mining Review discusses the mining interests of America. At the present juncture, when so much interest is being taken in the development of the mineral resources of the North-west, its remarks are peculiarly appropriate. The better result, it says, now so apparent from the development of our mineral resources and the more profitable return from mining investments must be credited to a more complete comprehension of mining as a productive industry. An era of speculative activity prostituting the best features of a great industry for money has hidden from the eyes of the great majority of the people the true character of mining as one of the substantial industries holding in reserve immense resources of the most desirable kind which can be used to the advancement of a common and permanent prosperity. A better knowledge has been gradually obtained concerning the part that the mineral resources of the country are destined to play in its future prominence and power, and as men have comprehended the truth it has made them free from the toils of the speculator and gambler, and the real object of the possession and development of a valuable resource has rapidly come into the foreground. The change in public opinion and growth of knowledge, not yet complete, is shown in the general tendency to develop mining properties to a producing basis. As this predominates, the halls of the stock gambler are dull and deserted, and the field of development is stirring with the busy forces of energy and industry. People are just beginning to comprehend the real place and power of the mining industry. The work of placing our mines in a productive position, that the vast mineral resources in our possession may be utilized are but in the beginning, and the magnitude of the great storehouse of wealth that nature has so bountifully supplied is by no means yet comprehended or understood. The territory now known to be underlain with useful and precious minerals is sufficient to guarantee to a certainty that mining as an industry can and will become in this country one of the chief sources of national wealth and greatness. The legislators and the people of this day and generation may not possess sufficient wisdom to be able to grasp and use the immense advantages within their reach and build the massive bulwarks of security and prosperity upon a foundation that can never be removed, but the grandest and most wonderful

mineral-bearing territory the world has ever known waits and will wait to pour out the measureless wealth of its exhaustless treasure upon a people whose intelligence and industry has made them worthy to use to the best advantage the blessings of a permanent prosperity.

British Shipping.

Nearly another million tons of steam shipping has been constructed in Britain during the past year, and this comes up to the estimated amount of the beginning of the year. According to the returns of the various shipbuilding establishments in the United Kingdom, the exact number of ships amount to 674, measuring 982,961 tons, which, compared with 1881, shows an excess in number of 44 ships and 57,961 tons. Foremost comes the Clyde with 225 steamers, measuring 231,941 tons, followed by the Tyne with 132 ships of 208,406 tons, then the Wear with 112 steamers of 200,630 tons. The remainder is made up by ships built in sixteen other ports, Hartlepool and Middlesborough figuring conspicuously with 39 ships of 67,367 tons and 37 of 64,203 tons respectively. In spite of that enormous amount of tonnage turned out during the last two years, there appears to be orders on hand sufficient to keep all the principal yards employed during this year. At all events, only a few of them will take orders with delivery before September-October. That the prices under such circumstances have been fully maintained is but natural, and at the present moment there is no appearance of any reduction. Even good second-hand ships are in request, more particularly of a size varying from 1,000 to 1,500 tons, of which only a few have been built. Much, however, will depend upon the future state of the freight market, and whether there will be sufficient remunerative employment for the large amount of tonnage launched and still in the course of construction. The losses, on the other hand, have been extremely heavy, and there is much diversity of opinion whether the mode of construction is yet such as will insure stability and safety with cargoes of a precarious nature, such as iron, ore, grain, cattle, etc. Great losses have also been caused by collisions which have become of daily occurrence on the coast and in the rivers, and which must necessitate a better system of lights by electricity or other mechanical contrivances.

Lake Superior Mines.

The Mining Journal publishes an exhibit giving the names of all the Lake Superior mines and their output in 1882 and the market value thereof. The names of 75 mines are given, which produced 2,943,314 gross tons of iron ore of the value of \$24,237,116, and of three quartz that produced 12,626 gross tons of ore worth \$63,115, making the total ore and quartz output 2,955,937 gross tons of the value of \$24,300,231. The same paper also gives a statement in gross tons of the aggregate product of the mines and furnaces in detail for each year since 1853, together with the value of the same, the aggregate being 20,585,757 tons of ore and