

the nearest approach to sunlight, with a power said to be 15 to 20 times as great as ordinary coal gas, and with six times less heat when used for illuminating purposes.

For the manufacture or gas-producing contrivances and the various acetylene-burning devices, Germany has about 235 factories, the most important being the "Allgemeine Carbid and Acetylen Gesellschaft, Berlin." This concern manufactures everything in the line of acetylene-producing machinery and the different gas-consuming articles.

The imperial testing station for marine lights, situated close to Stettin, has officially tested the lighthouse burner and reflector manufactured by the firm above named. The chief of the station, in a personal interview, expresses himself as follows:

For lighthouses out of reach of electricity, and easily accessible in winter or summer, acetylene would render good services, although it can in no way be compared with electricity in reliability, on account of the many details which must be looked after when burning this gas. I prefer electricity. Most of the French coast lights are electrical, while our lights are all petroleum.

The acetylograph, manufactured by the same concern, is a portable search or signal light, and can be used by day for signaling purposes. This apparatus, carrying its own generator, is mounted on three legs similar to those of a camera.

The hand search light for the hospital or medical corps has a small generator attached to a belt and connected with a reflector by a hose about three feet long.

Successful experiments have been made with acetylene as an aid for photographic light, when making time exposures.

Radenz Castle, at Koschmin, is lighted throughout with this gas. Many other instances can be quoted where acetylene is used for illuminating. In general, it is not believed that it will ever become popular or have great commercial value. The constant care required to prevent accident is an impediment.

Acetylene gas is used on several Swedish steamers for the toplight, the side lanterns, and for search lights. It has recently come into use at several railroad stations, and favorable reports have been made. The gas is furthermore used in carriage and bicycle lamps and hand lanterns in factories, and for small cooking and laundry stoves. It is considered that acetylene would also be adapted for lighting large country estates, churches, hotels, etc.

It is calculated that a factory using fifty lamps at 16 normal candlepower each, burning seven hundred and twenty hours per year, would have the following yearly expenses for lighting:

Using petroleum, refined, at present price..	\$149.97
Using coal gas in common burners.....	291.85
Using electric incandescent lamps.....	236.88
Using acetylene gas.....	125.53

These calculations are based on the average price of gas and electricity and counting calcium carbide at 27 kronor per 100 kilograms.

#### EDITORIAL NOTES.

The Oriental Annual Publishing Co., Seattle, Wash., have sent us a copy of their Oriental Annual, for 1902. It is a well-bound book of 375 pages intended for the use of manufacturers and merchants to whom a classified business directory of the Far East is indispensable. The information and suggestions it contains regarding correspondence, freight, consignments, packing, etc., are valuable. Mention is made of the possibilities of trade in Japan, Formosa, Eastern Siberia, Korea, China, Philippines, Tonkin, Cochin China, Siam, Straits Settlements and Netherlands, India; and the names of reliable mercantile concerns are enumerated, who do business in the chief cities of all the countries alluded to. The book should be of much use to all Canadian manufacturers who desire to do an export trade to those countries.

A few days ago Assessment Commissioner Fleming, addressing the Legislative Committee of the Toronto City Council, stated that he would urge upon the Council that representa-

tions be made to the Legislature to have the law regarding exemptions changed. By the old law, which had gone into effect in 1893, the city had the right to exempt manufacturers from taxes on their plants, tools and machinery, by a two-thirds vote of the Council. Two years ago the law was changed, so that the Legislature had to approve of any exemptions that were made, or these exemptions had to be passed by a two-thirds vote of the electorate entitled to vote on money by-laws. This new law, the commissioner pointed out, would go into effect on December 31. If it was not deliberately passed to hurt Toronto it would certainly have that effect. It would be impossible, he declared, to get two-thirds of the property-holders to support exemption by-laws. Many of these men did not live in Toronto. The new law, he thought, would not only hurt Toronto, but would affect the province. Manufacturers would be induced to settle in Quebec instead of Ontario. He referred to a case where a Toronto firm had been offered \$60,000 to move their plant to a place near Montreal. The commissioner again protested that the law was a gross injustice to Toronto. If it went into effect on December 31 it would mean a loss of \$40,000 to manufacturers. What he wanted was to have the old law continue in force, or to go even further, and make it possible for the city to exempt manufacturers on everything but land. The old law gave the city the right to make exemptions, renewable after ten years. The committee endorsed the commissioner's proposal, and sent it on as a recommendation to Council.

The Montreal Board of Trade, and the Montreal Chambre de Commerce are acting in harmony in an effort to have the City of Montreal made the meeting place of the next Convention of the Chambers of Commerce of the British Empire. Joint delegations were appointed to interview the Dominion Government in the matter.

The great problem of modern statecraft is the finding of new markets. Within the border of the Chinese empire lives one-third of the entire human family, and granting that the individual Chinaman does not have the consuming power of the average white man, still with this enormous population China possesses the greatest undeveloped power of consumption that exists on earth, and its enormous trade that is to be is recognized as the prize of future commerce. China offers a market so tremendous in its possibilities and a trade so rich in its promised rewards that all others fade into insignificance when compared with it. It is not, therefore, surprising that the powers have been striving to bring this last great unexploited market under their control, and that they are jealously watching each other while seeking to enlarge their own spheres of influence.

To those not directly concerned in the navigation of the great lakes the magnitude of lake commerce, surpassing in its growth even the ratio of the unexampled trade development of the United States, tells a story both startling and impressive. The Suez Canal is at present the great artery of trade between Europe and Asia. The volume of tonnage passing through it is enormous, yet the tonnage now passing through the Detroit River in eight months—40,000,000 tons—is four times as great as that passing through the Suez Canal in a whole year. London and Liverpool are two of the largest seaports in the world, but the yearly vessel tonnage of the Detroit River exceeds the combined entrances and clearances of both of them, and is nearly double the entrances and clearances of the port of New York as well, which amounted in the twelve months ending July 1, 1901, to 25,085,321 tons.