

understood, even among some of our best mechanics. But they will find, as I do, there is always something to learn, and one man does not know everything about pumps and pumping machinery.

FOR THE CANADIAN ENGINEER.

### TENNY CAPE MANGANESE MINES.

BY F. A. B.

The manganese deposits of Hants county, Nova Scotia, were first opened up in 1862, when John Brown began work at the now celebrated Tenny Cape mines. These mines have been worked almost steadily ever since. The Tenny Cape property passed after a few years into the hands of J. W. Stevens, who worked it until recently, when it was transferred to Messrs. Shaw, Churchill, and others.

In 1893 the Provincial Manganese Mining Co. was organized and purchased other worked and unworked deposits in the county, and did considerable prospecting and opening up. Early in the present year the Tenny Cape Manganese Mining Co. was organized and purchased the Tenny Cape property from Messrs. Shaw and others, and has since bought out the Provincial Co., so that all these valuable deposits are now under one management.

The new company has as president D. C. Fraser, M. P., J. T. Burgess being secretary and treasurer. The other directors are Geo. E. Boak and Lewis W. Desbarres of Halifax, Wm. A. French of Musquodoboit, Edwin Shaw of Walton, and W. F. Jennison, who is general manager. Mr. Jennison is a mining engineer of practical experience, and has a most intimate knowledge of the district and all its deposits. The most approved modern methods and machinery are being introduced in working the mines, and a greatly increased output will be the result. Hitherto the ore has been shipped from Nova Scotia in the raw state only, but the company intends shortly to erect the necessary machinery for grinding, sorting, and cleaning, so as to be able to place it on the market in the various states called for.

There are good facilities for shipping the ore, and the output this year is expected to be large; \$15,000 worth was shipped last year, and the production can easily be doubled.

The Nova Scotia and New Brunswick ores of manganese occur in a marine limestone, sometimes solid, sometimes brecciated, belonging to the lower carboniferous series. The ore-bearing limestone of Hants county is probably several hundred feet in thickness, and is overlaid by the immense beds of gypsum that are such a remarkable feature of the district.

The ore at Tenny Cape is high grade pyrolusite, and is particularly valuable for glass work on account of its freedom from iron, and takes the highest place in the markets of the world. The analyses show from 85 to 95 per cent. of manganese peroxide. The ore occurs both in the breccia and in the large masses of solid rock in the form of flat nodules, seams and pockets, the last being either isolated or connected by thin leads of ore. The seams vary in thickness, sometimes thinning to less than an inch, and at others widening out to six inches or more. The pockets are from one inch to several feet in diameter. Some of them produced as much as three hundred tons of ore, and occasionally more.

By far the largest consumption of manganese is in the manufacture of spiegeleisen and ferro-manganese

for use in steel making. Some is also used in making alloys, such as manganese bronze, silver bronze, etc. It is largely used as a deoxidizer in the manufacture of chlorine, bromine and iodine, and as a dryer in paints and varnishes. In glass making it is used in small quantities as a decolorizer, and in larger as a color. It is also used in the manufacture of Leclanché battery cells and disinfectants, and as a coloring material in calico printing and pottery; also as a paint.

### TO YE HOSTE OF ADVERTISERS.

We have been requested to reprint the circular issued a few days ago announcing the beginning of our new volume, and accordingly give it below with the compliments of our own antiquarian:—

GREETYNGE :

In y<sup>e</sup> merrie month of Maye y<sup>e</sup> CANADIAN ENGINEER beginneth hys seconde yeare, and full thankfulle are y<sup>e</sup> Publishers for y<sup>e</sup> Hoste of trustye Friends found in all Provinces of thys faire Dominion. "Tall Oakes from lyttle Acorns grow" is a sayinge both trite and trew. Y<sup>e</sup> CANADIAN ENGINEER began an Acorn of pages XXVIII., and now behold in y<sup>e</sup> Maye number soon to come forth an Oake of pages XL., besides y<sup>e</sup> bryghte cherry cover. Full many an Advertiser hath told us of riche Busynesse gotten from it; and lyttle marvaile they at thys, "Forbecause," they say, "we doe see it everywhere; in y<sup>e</sup> Office of y<sup>e</sup> Foundrie, in y<sup>e</sup> Shoppe of y<sup>e</sup> Mechanick, in y<sup>e</sup> Werkes whence comyth y<sup>e</sup> wonderfulle Electric Lyghte, ikewyse in y<sup>e</sup> Shoppe of y<sup>e</sup> greate Merchaunt of Metalls, and eke y<sup>e</sup> grimy Stoker in y<sup>e</sup> Engyne-roome taketh y<sup>e</sup> CANADIAN ENGINEER."

"And well doe they that take it," quoth they all, "for eche tyme it goeth forthe with stores of artfull Knowledge, how many thynges may be contrived ryght usefull to know, of Discoveries wondrous strange, of Devices very curious that have gotten Patents at Ottawa, and of all that happeneth in y<sup>e</sup> Factories and Mills throughout thys Lande, from Uncle Sam hys borthers to y<sup>e</sup> North Countrie, and from y<sup>e</sup> Cape of Breton to y<sup>e</sup> Isle of Vancouver. In Pryntyng y<sup>e</sup> ENGINEER is most excellent, eke it hath Engravynges many and faire to see; whiles in number of coppies spred abroad it surpasseth them all—eche month y<sup>e</sup> Prynters doe certify that .MM. go forthe from theyre Presse.

Wherefore y<sup>e</sup> makers of Cunnige Machines and usefull Tules, if that y<sup>e</sup> would sell 'em abroad and find a goodlye Openyng for Busynesse, send hither and make Covenant to gett an Advertisement with goodlye Cuts, so it shall much avance your Weal.

Then write thy coppie and straightwaye mail it by Her Majestie's Post; eftsoons thy Name and Goods shall be famous through y<sup>e</sup> Lande.

All Menne whose Eyes are open will find y<sup>e</sup> Price in y<sup>e</sup> Circuler inclosed, and maye Felicitie and hie Prosperitie wait evermore on all who take space, so much as 1 finger-bredth.

Done at y<sup>e</sup> office in y<sup>e</sup> Fraser Buildyng, Montreal (y<sup>e</sup> Hedde of Navigation), eke at y<sup>e</sup> office, 62 Church St., Toronto, (yclept y<sup>e</sup> Queene Cittie of y<sup>e</sup> West), thys month of Aprile, .MDCCCXCIV.

In a future number, William Perry, Montreal, proposes to give us some very interesting data with reference to friction in pipe, flow of water, etc., from practical experiments. The many readers of Mr. Perry's article on pumping machinery in this issue will be glad to hear from him again.