

Policy as to cause them to hope that this policy will be perpetuated in Canada for many years to come.

Let me add that here, down by the sea, there is still room for capitalists to come in amongst us and make investment in their several lines. There is not a small town in the Maritime Provinces having any manufacturing facilities but will meet the capitalist half way, and afford every encouragement compatible with the people's means to establish factories in their midst. I have in my mind now a flourishing town in the Province of New Brunswick, where every facility offers for the erection of a Woollen Mill, and any capitalist or company of capitalists can be sure of meeting with most favourable concessions on condition of erecting such an establishment. Should this meet the eye of any person or persons experienced in the woollen manufacture, and wishing to invest, all necessary information can be had by addressing "Maritime, care of the Editor of the CANADIAN MANUFACTURER," and it will have prompt attention.

In my next and future letters I will treat more fully of the manufactories now in existence and in course of erection, trusting that some good may come of these crude remarks in the near future.

MARITIME.

## Selections.

### WOOL AND COTTON ON WOOLLEN MACHINERY.

A very large and rapidly increasing class of fabrics is made in and near Philadelphia by the use of both wool and cotton, carded and spun on woollen machinery, says the *Textile Record*. It is difficult to get a proper understanding of this industry, on the part of those accustomed only to New England cotton mills, the processes differ so widely, and the fabrics are themselves so unlike. Of the 350,000 woollen spindles now in operation in Philadelphia, scarcely 50,000 are used exclusively on wool, although, in many cases, the admixture of cotton is small. A large range of hosiery and carpet yarns is made in this way, and all of the immense product of jeans, cassimeres, suitings, coatings, flannels, blankets and dress goods are now better, in fact, and preferably made, of some portion of cotton. The mixture is universal in English, as well as American uses, but the best effects of a soft, elastic, full, yet wool-like quality in all its characteristics, is only obtained by the skilful use of the best woollen machinery.

The known aggregates of woollen spindles in use within the city limits of Philadelphia at the first of June, 1880, was 314,371, and of worsted spindles 61,652. In the near vicinity there were 46,200 more, or altogether 422,223 spindles consuming wool and its substitutes. A moderate estimate, which is fully sustained by the opinions of leading manufacturers and machinery makers, adds 20,000 spindles to represent the increase since the date named, and to the close of 1881. These 442,223 spindles produce one pound of yarn each daily, or 300 pounds per year—in the aggregate 132,266,000 pounds for the year. To supply them, the best estimate of those who deliver cotton is that 15,000,000 pounds of cotton on bales is worked upon woollen spindles, while scarcely so much is spun on cotton spindles; 50,000 bales being the consumption, or 25,000,000 pounds. For wool, the most careful investigation showed 74,000,000 pounds of domestic fleece and imported wool delivered to the mills for the year ending with June, 1880, exclusive of receipts by manufacturers direct; perhaps 80,000,000 pounds in all for that year, and 85,000,000 pounds for 1881, would be a fair estimate for this class of wools, to which 10,000,000 pounds should be added for pulled and inferior wools. This would leave for all kinds of mixtures and wool substitutes, used in carpet and jacket yarns, feltings, cloakings,

skirtings and cheap suitings, about 35,000,000 pounds of wool extract, woolloid, shoddy, etc. The staple yarns spun from the best of this material can not be distinguished from ordinary yarns made of new wool when in actual use, and they cheapen a large class of fabrics to the advantage of all concerned. A vast stock of such material has, for a long period, been used in Bradford and other English districts, and their use is claimed by Ferrar Fenton to have been a great economy and a great blessing to both consumers and manufacturers in that country.

These are the leading facts in regard to the woollen machinery in use in the circle of localities of which Philadelphia is the centre. The proportions of the materials used cannot be far from correct, and the finished goods produced here could not otherwise be supplied. In Boston it is stated, on the best authority, that the consumption of wool in that market was 120,000,000 pounds in 1881, as compared with 114,000,000 pounds in 1880, and the statements appear to be sustained by the known amount of machinery in motion. There are fully 1,500 sets of wool cards in the towns and localities receiving their supplies from Boston, much less cotton being used than in the Central States, and on fine clothing and delaine wools the rate of production is much less in weight per spindle than on knit goods and carpet yarns.

At New York at least an equal quantity of wool enters into consumption, although the mills are widely distributed in New York State, New Jersey and Connecticut. In fact, the Boston aggregate of 120,000,000 pounds is a fair third of the entire consumption of fleece and foreign wool; New York and a part of New England making the second portion, and Pennsylvania, with the Western and Southwestern mills, of all classes, making the third. It is not possible to avoid the conclusion that 350,000,000 pounds of wool are consumed, with at least 50,000,000 pounds of cotton and wool substitutes worked up on woollen machinery.

In the face of this proved capacity and actual execution of the woollen machinery in use, and of the careful statements of actual sales for consumption, which reach 200,000,000 pounds in Boston and Philadelphia alone, we have an official absurdity put forth from the census office showing only 155,000,000 pounds of wool grown in the United States in 1880. For California, the quantity is given at 16,000,000 pounds, while the actual weights sent out of the State exceeded 46,000,000 pounds. In fact, the census returns cover but little more than half the actual quantity grown, the whole system of census inquiries proving valueless for such results.—*Manufacturers' Gazette*.

### KRUPP AND ESSEN.

Although continually turning out immense castings of iron and steel for various purposes, it is for the noted cannon that the great establishment at Essen, in Rhenish Prussia, has the widest reputation. Alfred Krupp is a native of Essen, and is seventy years old. In 1826 the elder Krupp died without leaving any considerable fortune to his widow, who, with the assistance of her son, carried on a small foundry until 1844, when she retired in favour of her assistant. Herr Krupp continued to make great progress with his foundry, but without attaining international reputation until the great Exhibition of 1851, when he attracted attention by sending to London a single block of steel weighing 1,500 kilogrammes. In the 1862 Exhibition Herr Krupp was a most successful exhibitor, showing, among other samples of his skill, a cast steel block of 100 cwt., which, being broken into halves by a steam hammer of 1,000 cwt., was found to be perfectly clear and free from flaws.

One specialty of Herr Krupp's exhibit in 1851 must not be passed by without mention, and that is—his cast-steel guns. The attention of the French Government was particularly at-