

Our Industries.

No. XII.—THE WELLINGTON WOOLLEN MANUFACTURING CO., Ltd.

THERE are changes in contemplation in the working of the woollen mills of the colony, changes for the better which the public feels much concern in. The public is therefore very much interested in the business of the institution which flourishes so well at Petone. A few words about that institution will, then, not be out of place at the present moment.

The foundation stone of the mill was laid by Sir Robert Stout during his premiership of the colony, on the 28th of November, 1885. The institution has therefore reached its majority. On that occasion many things were said of the future prosperity of the institution which the managers can honestly declare, after twenty-one years, have been fulfilled.

For example, in 1903 the demand for worsted goods was so great that the directors were compelled to erect a worsted mill, which, with new engines, boilers, etc., cost £36,084. The plant, buildings, etc., stated in the last balance sheet at £68,263 8s. 9d., have been written down by £42,000, while their maintenance in an efficient state has been charged to working expenses. When it is remembered that £36,084, or just 53 per cent. of the total plant, etc., is new, being added since late in 1903 (and not worked for many months afterwards), the satisfactory position of the company's property asset is more clearly perceptible.

Also included in the above £68,263 8s. 9d. is the land at Petone, some 18 acres, standing in the books at original cost of £2409, although as a matter of almost common knowledge its value has increased enormously. Shareholders have received in dividends since 1889, £68,511, or only £11,489 short of the capital called, while £6765, the amount previously written off the then allotted shares, has been restored.

Although so large a sum has been written off the property, and no account taken of the increased land value at Petone, the reserves and undivided profit amount to £24,018. The assets at July 31st last totalled £168,982 7s. 7d. after being written down as stated, as against a debt of £60,000.

A notable event in the history of the company was the visit of the Duke and Duchess of York to the company's premises in 1901. On that occasion their Royal Highnesses were much surprised to see so flourishing and up-to-date an establishment so far away from the centres of the wool industry at home. It is a feeling shared by all who pay the works a visit.

Before visitors reach the place the well proportioned graceful chimney, the best of its kind in the colony, strikes their attention, preparing them for one of the best equipped and largest woollen and worsted mills in New Zealand. Two gigantic Lancashire boilers, 30 feet by 8, tested to a pressure of 340 lbs., fitted with every appliance up to date for economy and efficiency, give steam to the new engine, 500 h.p., which has replaced the old one of 240 h.p. This is of the horizontal tandem Corliss condensing type. It is fitted with all the latest improvements, including an electric stop motion which can be operated by the youngest employee from any part of the mill, in case of accident, bringing the engine to a standstill instantly. The fly wheel is 16 feet in diameter, weighs 16 tons, and makes 75 revolutions a minute. The power is transmitted by 14 driving ropes. The main fact about this engine, as the men say, and they are the people to appreciate for they work her every day, is that "she is built like a watch." In this connection there is a new fire pump of a capacity of 80,000 gallons per hour which represents a fire system comprising everything necessary in the shape of pumps, hoses, standards, etc., for the safe keeping of so large and valuable a concern.

The wool arriving is stored in the wool shed. There the sorters divide it up into the sorts required by the manufacture, and send it on to the scouring shed. The scouring process is automatic, the wool being placed on a tray at the entrance and sent going through numbers of troughs, from the last of which it emerges snow-white. Washed to the perfection of cleanliness and brightness a most neces-

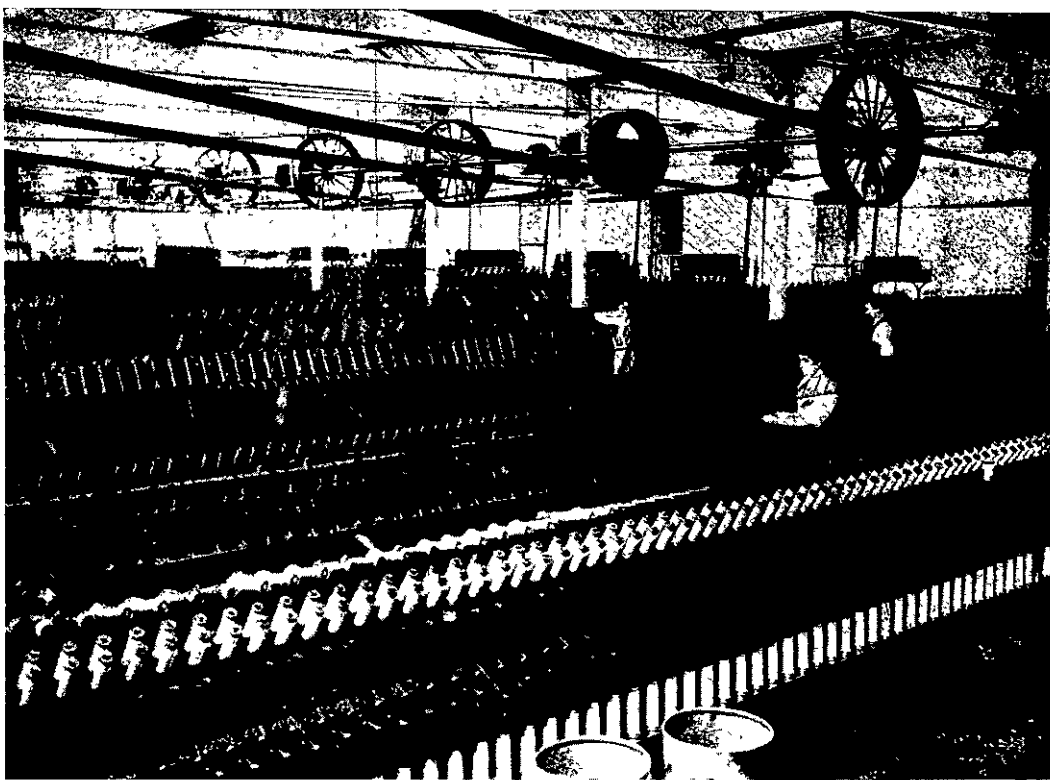
sary thing in wool, it is passed on, automatically also, to the drier. This is a patent continuous drying machine, heated to a heat of 180 degrees, which impels the travelling wool through many stories one after the other with a regularity most conspicuous, finally driving it through a hot-air blast, driving it through three compartments before delivering it at the far end dry and in the best condition.

After scouring, dyeing, unless wanted in white state. First the wool is worked through baths of bichrome, in preparation for the dye, which it duly gets in the proportions decided upon by the operator. When dyed it falls into the embrace of a hydro-extractor, which whirls it around until every drop of moisture is extracted, it then goes to the "Willey," known to the trade as "the Devil." This opens up the wool and removes any stray particles of dirt which may

And the most interesting of all the processes is the spinning done by self-acting "mules." After spinning, the wool is twisted, in special "twisting frames." Spun and twisted, the yarn is ready for the warper and weaver. To see the girls and women starting the looms, stopping them, working amongst them with the utmost cheerfulness and unconcern, is an experience of things marvellous. The woven product is passed to the "burlers." These are girls, armed with tweezers and other instruments, whose duty it is to look over the fabric and pick out foreign matter, or remedy any faults there may be. In this department one sees heaps of tweed, flannel, blankets and rugs (there is no finer rug than the Petone) waiting for the attention of the "burlers." The blanket whipping machine is a simple but ingenious invention, which puts the coloured binding on the blanket edges at a rapid rate.

After the "burlers" comes the "milling"; this washes and shrinks the fabric, sending it on to be "finished," a work consisting of a marvellous medley of processes, raising, cutting, brushing, pressing, and rolling. There is incidental to the finishing processes a hydraulic hot press capable of a pressure of 3 tons per sq. inch. It puts what is called the "high gloss" on tweeds, ending the manufacture. All this turmoil ended, the finished fabric enjoys the rest of the warehouse where it is packed and ticketed and made ready for beginning life as a manufactured article. The rest of its history does not belong to this department.

Hard by, in the same building, is the Knitting



WORSTED SPINNING.

have been overlooked by the cleansers, blending and oiling is done at this stage, and the wool is then put through the teaser and made ready for the carder.

The worsted mill is a room 244 by 88 feet beautifully lighted with Hellwell's patent sky-lights. Business begins in an automatic feeding and weighing attachment it goes on upon a table on which the wool is placed ready for rollers which draw it through at a regulated weight, and pass it on after various delicate operations to the carding machine. Finally it is reduced to "shiver," passes in that state through various machines more or less intricate, and at last, after back-washing gilling, combing, drawing, spinning, roving, and a host of other processes too numerous to mention is changed into yarn ready to be woven.

One of the processes is combing. It is interesting enough to have a special description to itself. The comb is a circular machine of wonderful construction, and its duty is to separate the long staple wool from the short staple, which it does in a most bewildering manner and is a wonderful illustration of what ingenuity can do. After the wool is treated in this room by the foregoing machines this ends the process of worsted yarn making, and the subsequent treatment is the same as for woollen goods.

On the woollen side the processes are somewhat similar except that the wool is scribbled and carded and condensed into threads, instead of combed.

Department, where all sorts and conditions of knitted goods are made. You will see lying around the best samples of stockings, jerseys, sweaters, bloomers, and a host of other things, well known in the hosiery trade. The machines are the very best procurable for the manufacture of these garments, and the foremen here, as throughout the mill, are all experts, most of them specially imported from the old country.

In addition to the 240 hands employed, more girls and boys could be put on, but this class of assistance is hard to get. Much of the work is only suitable for girls, the male fist being considered too large and clumsy. The mill outbuildings and residences stand in 12½ acres, which the mill manager says he hopes to see entirely covered by buildings before many years.

The company's head office and warehouse are in Wellington, where there is also a clothing factory for the making up of the company's tweeds, etc. into garments. In Wellington there are some 200 hands engaged, so that the Wellington Woollen Co. is no small factor in the lives of our work people. It is surprising to see the variety of goods displayed by the firm. The flannels, blankets, rugs, tweeds, hosiery and clothing are fit to compete in any part of the world. The tweeds now made at Petone are second to none.

Wellington should on the whole be proud of its woollen mills, of the extent and value of which few of its citizens have any conception.