

MEMO.—Captain Greig is a master mariner of long standing, and was Harbour Master of Southland when the "Southland" steamer arrived here from Europe. Mr. Blacklock is a member of our local Flax Association, who asked Captain Greig for any information he could give on the subject.—D. M'A.

TESTS OF RELATIVE STRENGTH OF NEW ZEALAND AND MANILLA ROPE.

A MEETING of gentlemen interested in the flax industry took place at Messrs. Hay and Mentiplay's steam mills on Friday afternoon, 3rd, to witness the operation of testing the relative strength of New Zealand and Manilla rope. There were present a good many of our leading citizens, and a sprinkling of nautical gentlemen, all of whom watched the proceedings with much interest, and ultimately expressed themselves very highly satisfied with the result, the comparison showing a decided superiority in the local material. The rope submitted to the competition was of the dimension known as one-and-a-half inch (in circumference, not in diameter, as erroneously stated by a local sheet). The Manilla piece was selected from a coil of sound new rope, as perfect, to all appearance, as could be desired, and the New Zealand was a piece manufactured by Mr. J. Scott, precisely similar in size and make to the imported article. The *modus* was a stout triangle, a strong wooden platform or scale, and a pile of 56 lb. weights. Captain Green, of the "Harvest Home," was on the ground, and fixed the ropes as they were severally arranged for the strain, taking care that each should be tied in the same manner, to secure equal justice. Two trials were given to each rope, without altering the result. The point at which the cord gave way in each case was as follows:—

New Zealand rope, $1\frac{1}{2}$ inch in circumference	...	...	...	12 cwt.
Manilla rope, $1\frac{1}{2}$ inch in circumference	...	...	...	$7\frac{1}{2}$ cwt.

The length of rope on which the strain acted was about four feet, and the "snap" was shorter if anything in the case of the Manilla than in the New Zealand, which parted with a long gradual "tear" rather than a "break." The New Zealand was made from fibre dressed in the mode at present in use in this Province and generally throughout the Colony, and it will be observed that it stood over a half more weight than its rival. A number of other trials were made, all equally favourable to the local fibre. A piece of New Zealand rope of the same thickness, made from some old fibre, manufactured by boiling the leaf, which had been lying about for a considerable time, parted at a strain of ten hundredweight, and another piece, also of the same size, made from fibre manufactured by the Natives, and which had been rendered soft and pliable as kid by three years' wear and tear in a boat, astonished everybody by giving way only when eight hundredweight had been piled on the board. A piece of $1\frac{1}{4}$ inch Manilla broke short with fourteen hundredweight, only two hundredweight, more than the New Zealand rope of one-fourth inch less capacity.

No. XVII.

Messrs. LOWRY and Co. to NEWMAN and EWEN, Auckland.

GENTLEMEN,—

Manchester, 22nd March, 1870.

In reply to your kind inquiry, we beg to hand you annexed estimate for machinery to spin New Zealand flax and weave the same into sacking and bags. Of course it is only an approximate thing; we would have much preferred the exact particulars and purposes for which it is required. The prices we have quoted are delivered at our works. Should we be favoured with your esteemed order, we shall give our very best care and attention.

We are, &c.,
LOWRY & Co.,
Per J. THOMPSON.

Specification of Machinery from Lowry and Co., Salford, Manchester.

SYSTEM of longline machinery to spin New Zealand flax into coarse numbers, &c.:—

- One Lowry's patent hackling machine complete.
- One Spiral fill spreading frame, 4 stevers 32" reach.
- One do. second drawing, 4 stevers 26" reach.
- One do. third drawing, 4 stevers 24" reach.
- Two do. rovings, 48 spindles each, 4 heads each, 22" reach 10 x 5.
- Two dry spinning frames, 100 spindles each, $4\frac{1}{2}$ " pite., $4\frac{1}{2}$ " traverse, 9 to 12 reach.
- One warp winding frame, 20 drums.
- One weft winding frame, 20 spindles.
- One warping machine and creel.
- One dressing machine for warps.
- Eight beams for do.
- One yarn weft softening machine, one boss.
- Ten power-loom, 30 inches reed space.

£1,910.

No. XVIII.

FLAX MACHINERY.

THE various machines by which the fibre is separated from New Zealand Flax may be classified as follows:—

CLASS I.—WHERE THE LEAF IS OPERATED ON IN ITS NATURAL STATE.

Sub-Class A.—By Percussion on Elastic Metallic Surfaces.

1. Metallic beaters are fixed to a drum, and form right and left angles to the axis of rotation; the drum revolves at a high speed, and the beaters operate on one side of the leaf on revolving metallic