

being 6d. to 14d. per lb., shows its cheapness for consumption generally. The Manchester goods are exchanged in Germany for long hair, which is sold in London. There are 3,500lbs. in seven bales, and insured in the Manchester Fire Office for £200; so any one can test their existence by policy 180, 631. The manufactured goods can be shown at the Great Exhibition in 1862! and if it were collected in factories the value would be quarterly-divided, and added to the saving's bank deposit. At the conclusion Mr. Danson suggested that specimens of these works should be placed in every museum in the kingdom, and trusted that the Smithsonian Institution would give the question their ablest support. Dr. Lankester observed that he thought the adoption of that manufacture would be a source of profitable industry. The girls in Germany and France looked forward every year regularly for pocket money by the sale of their hair, considering it as a harvest. The French girls, with their dark hair, usually got from 30s. to 40s., whilst the lighter hair of the Germans realised less. Mr. Danson said the human hair was capable of being made into the finest fabrics for ladies' wear.

#### British Railway Statistics.

Returns just issued cover two years—1859 and 1860—and show the annual traffic of all kinds, and the annual working expenditure, in the bulk and in detail. There were at the end of 1860, 10,433 miles of railway in use, or 431 miles more than in the previous year. The total passenger traffic over these lines was 163,435,678, or 13,678,384 more than in 1859.

The total returns from all sources of traffic in 1859 was £25,743,502, and in 1860 this was increased to £27,766,662. If we turn to the table showing the working expenditure, we find some striking figures. The actual cost of working 10,433 miles of railway in the United Kingdom is £13,189,368. In this item are included £2,437,362 for maintenance of way; £3,801,282 for locomotive power; £3,699,708 for traffic charges, (coaching and merchandise;) and no less than £181,170 for "compensation," a charge alone of 1.37 per cent. The great items of expense are thus:—maintenance of way, locomotive power and traffic charges; but repairs and renewals of carriages and waggons swallow up the £1,118,784, and there is a comprehensive item for our old acquaintance, "sundries." Thus it comes about that the proportion per cent. of expenditure to the total revenue is, in England, 48, in Scotland, 44, in Ireland, 49, per cent. Scotland, therefore, seems to have the most cheaply managed lines, and Ireland where railways pay no government duty, exceeds by one per cent the Scottish cost of management. These enormous figures explain the comparatively low dividends of railway companies; for the £14,561,118 available for division has to be distributed among the shareholders who have contributed the £330,000,000 of capital sunk in our railways.

#### A Canadian Flax Mill.

The Paris *Star* contains an account of a visit to the flax mill of Mr. J. Brown, situated in Warsaw, township of Bleinheim, near the Richwood Station of the Buffalo and Lake Huron Railroad. The

*Star* says: Mr. Brown has cultivated 180 acres of flax this year, and two hundred and twenty acres more; so that when the season's operation are complete, he will have prepared for market the product of four hundred acres. The Wolverton Mill is in charge of Mr. William Armour. The flax-straw comes to the mill in small bundles or sheaves, denuded of the seed, and with the pith so much decomposed as to be easily separated from the fibre. In this state it looks very much like hay tied up in small bunches. The first process through which it is put is one designed to break the pith into fragments. This is done by passing the straw repeatedly through heavy-fluted iron rollers. When the pith is sufficiently broken, the straw is taken to another machine, consisting of a series of knives about two feet long, made to revolve rapidly, each knife striking the straw as it passes and pulling out the pith from the fibre. This has to be done repeatedly, handful by handful till the whole is reduced to a bunch of soft silky fibres. In the last mentioned process a quantity of short fibre is pulled out with the refuse pith, this is tow and is used in the manufacture of coarse cloth.—*Essex Journal*, December 14th, 1861.

#### TO INVENTORS AND PATENTEES IN CANADA.

Inventors and Patentees are requested to transmit to the Secretary of the Board short descriptive accounts of their respective inventions, with illustrative wood-cuts, for insertion in this Journal. It is essential that the description should be concise and exact. Attention is invited to the continually increasing value which a descriptive public record of all Canadian inventions can scarcely fail to secure: but it must also be borne in mind, that the Editor will exercise his judgment in curtailing descriptions, if too long or not strictly appropriate; and such notices only will be inserted as are likely to be of value to the public.

#### TO CORRESPONDENTS.

Correspondents sending communications for insertion are particularly requested to write on one side only of half sheets or slips of paper. All communications relating to industry and Manufactures will receive careful attention and reply, and it is confidently hoped that this department will become one of the most valuable in the Journal.

#### TO MANUFACTURERS AND MECHANICS IN CANADA.

Statistics, hints, facts, and even theories are respectfully solicited. Manufacturers and Mechanics can afford useful coöperation by transmitting descriptive accounts of LOCAL INDUSTRY, and suggestions as to the introduction of new branches, or the improvement and extension of old, in the localities where they reside.

#### TO PUBLISHERS AND AUTHORS.

Short reviews and notices of books suitable to Mechanics' Institutes will always have a place in the Journal, and the attention of publishers and authors is called to the excellent advertising medium it presents for works suitable to Public Libraries. A copy of a work it is desired should be noticed can be sent to the Secretary of the Board.