

wish to keep them before the public in the most advantageous manner. We learn that quite a number of sales have already been made through the method here indicated, and the concern is yet but in its infancy. The utility of this Permanent Exhibition, and the benefits that are to be derived from its establishment are apparent and real. It is a success.

THE British Government have granted a subsidy of £45,000 annually to the Canadian Pacific Railway Company for the establishment of a monthly mail service between Vancouver, B.C., and certain Asiatic ports. A class of steamers is to be constructed under Admiralty supervision capable of steaming eighteen knots an hour, and adapted for conversion at short notice into armed cruisers. By the new service there will be a great saving of time in communicating by mail between Great Britain and the East. It will be next in order to establish a similar line of steamers between Vancouver and Australian ports.

THE Saturday half holiday recently made legal by the legislature of the State of New York is working much hardship to manufacturers and other employers of labor in that state. The complaint is that it imposes a severe tax upon the employers, as it deprives them of fifty-two half days, or twenty-six whole days, or just one month of time that might be devoted to productive labor. The expenses of most of the large establishments continue just the same during these holiday periods as on working days, and it reduces New York State to eleven months of money-earning time in each year as against twelve months in other States. It handicaps New York City against Philadelphia, Boston, Chicago, Baltimore and other competing points to the extent of $8\frac{1}{2}$ per cent.

A wealthy syndicate has been formed at Sault Ste. Marie to construct a water-power canal 3 miles long, from the river above the city to the river below. Eastern and western capitalists have combined to construct this canal at a cost of \$3,000,000. The ground is ready for the engineers, who will commence work in a few days. The canal empties its waters into a number of flumes, from which the water is to be turned on to the water-wheels to run mills, factories, etc. The plan prepared by the water-power company is to give a free lease of the land to individuals or corporations who will build on their land, and to furnish whatever power is required at \$10 per horse power per annum. With the canal complete with 18 feet fall, and Lake Superior for a mill pond, an amount of power can be furnished almost beyond calculation.—*American Manufacturer.*

WHAT may be done on the American side may be quite as easily accomplished on the Canadian side. The source of the power is inexhaustible, and it would be interesting to observe a similar utilization of the advantages existing on this side of the river.

RECENTLY the Toronto Trades and Labor Council wrote to the Minister of Public Works protesting against the employment of convict labor in building the new dry dock at Kingston, Ont., and to which the following reply has been sent:

Ottawa, Sept. 10th, 1887.

SIR—I am directed by the Minister of Public Works to acknowledge the receipt of your letter of August 21st, stating that the Toronto Trades and Labor Council protests against the employment of convict labor on the proposed dry dock at Kingston, and to say that no decision has as yet been arrived

at by the Government with reference to the dock. The Minister wishes me to add, however, that inasmuch as there is a quarry in the Penitentiary grounds, and it would not be advisable to employ any amount of free labor inside of the Penitentiary enclosure, it is most probable that the stone for the dock will be taken from this quarry by convict labor, as it would be as inadvisable to employ convict labor outside of the Penitentiary as it would be to employ free labor inside. I am further directed to state that there is no intention of employing convict labor on any work connected with the proposed dry dock beyond the quarrying referred to.

A. GOBBIL, Secretary.

MANUFACTURERS' EXHIBITS.

A GREAT many of the displays made by manufacturers at the 1887 Exhibition in Toronto deserves more than a passing notice. The largest, most valuable and varied display at the happiest and most successful exhibition ever held in Canada, it would have been a tame affair if the manufacturers had not taken such hearty interest in it, and brought to the attention of the hundreds of thousands of visitors some of the results of their skill and ingenuity. Most of those whose exhibits are here noticed were rewarded with valuable medals and diplomas. In the following pages will be found descriptions of some of the more important of these displays.

HART EMERY WHEEL COMPANY.

THE Hart Emery Wheel Co., Hamilton, Ont., are to the fore as usual, and occupy their old location in the south-west corner of Machinery Hall. Their exhibit is much larger and more varied than any they have heretofore made, and besides a very large assortment of specimens of the celebrated Hart emery wheels, they are showing the Wray paper wheel, for polishing—a solid looking guide carrying two twenty-four inch wheels, and an assortment of smaller frames carrying wheels down to eight inches in diameter. They also show a machine for grinding iron hollow ware, two belt polishing machines, a planing machine knife grinder, etc. A special machine which this company are manufacturing and which is being most favorably received is the Rodger's patent adjustable saw filer. This tool though introduced only two years ago has achieved a splendid record, more than one hundred and fifty of them having already been sold, shipments having been made not only to parties in Canada, but also in the United States, England, Australia and India. The company inform us that they are in daily receipt of orders for this tool from large lumber manufacturing concerns who already have them in use and are desirous of having more of them. The fact that they are comparatively inexpensive is a strong inducement to mill men to have several of them in their mills, so that there may be as little delay as possible in sharpening saws. They are exceedingly simple in their construction and operation, and do as good and satisfactory work, and as quickly as machines costing four times as much money, and they save the whole cost of files wherever they are used.

It is almost needless to discuss the merits of the Hart emery wheel. All who have occasion to know the uses to which such tools are put, know and appreciate its merits, and they all buy it. No speciality manufactured in Canada has obtained a stronger hold.

In the company's catalogue a number of valuable hints are given to consumers concerning economy in the use of emery wheels, and as the true interests of both manufacturers and consumers are identical, they should be observed. These hints suggest (1st) that heavy and substantial grinders or machines be provided so that the wheels will not overtax them in running; (2nd) that curve pulleys be used so graduated that as the wheels wear down the number of revolutions of the mandrel can be properly increased; (3rd) that iron collars be invariably used on both sides of the wheel, and that rubber washers be used with thin wheels; (4th) that constant supervision over the grinder be exercised, so that the mandrel will not run out of true; (5th) that before putting a new wheel on the mandrel it be tested to see if it is perfect; (6th) before starting a new wheel to be sure and have the belt on the proper step of the cone; (7th) to see that the motion of the wheel is true and even before allowing it to go into work; (8th) that no wheel be allowed to get perceptibly out of true—there being both danger and undue waste when such is the case; (9th) that heavy pressure on the wheel be avoided in grinding, and, (10th) that the rests be kept