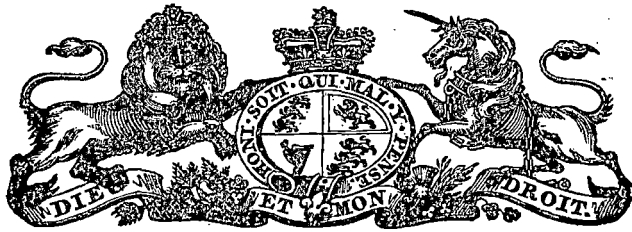


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1877.

SESSION II.

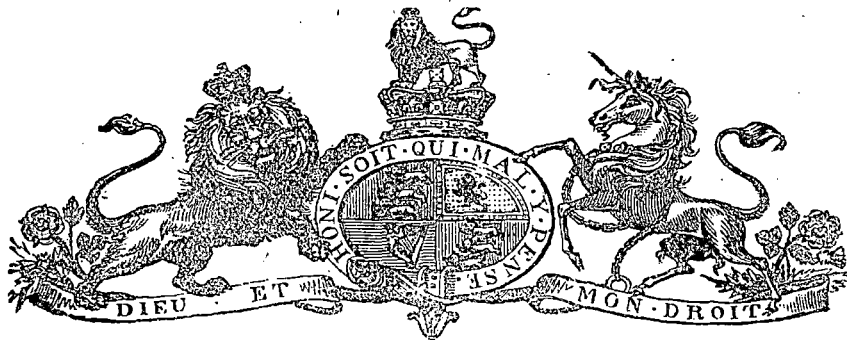
TASMANIA.

HOUSE OF ASSEMBLY.

METROPOLITAN EXHIBITION HELD IN
SYDNEY, 1877.

REPORT OF MR. COMMISSIONER JUST UPON CANADIAN
EXHIBITS OF MACHINERY, &c.

Laid upon the Table by the Colonial Secretary, and ordered by the House to be
printed, May 16, 1877.



Colonial Secretary's Office, 26th March, 1877.

GENTLEMEN,

THE Honorable John Young, the Canadian Representative at the Sydney Intercolonial Exhibition, has expressed a desire that the attention of the Tasmanian Commissioners might be especially drawn to the Canadian Exhibits.

The Government of the Dominion is anxious to promote the development of trade between the Australian Colonies and Canada; and I shall be glad if you will give your valuable assistance by particularly noting the several products and manufactures of Canada which might be advantageously imported, at the same time affording to the Honorable Mr. Young the fullest information in your power as to the resources of Tasmania.

I have, &c.

(Signed) THOS. REIBEY.

*Messrs. T. C. JUST, ALFRED HARRAP, & ADYE DOUGLAS, M.H.A.,
Commissioners for Tasmania, Launceston.*

Launceston, 7th May, 1877.

SIR,

REFERRING to your letter of the 26th March ultimo, addressed to the Commissioners for the Sydney Exhibition, in which you intimate that "the Hon. John Young, the Canadian Representative, has expressed his desire that the attention of the Tasmanian Commissioners might be specially drawn to the Canadian Exhibits, and requesting them particularly to note the several products and manufactures of Canada which might be advantageously imported, at the same time affording the Hon. Mr. Young the fullest information in their power as to the resources of Tasmania," I have now the honor to forward for your information a Report upon some of the Canadian and American Exhibits presented to the Commissioners by Mr. T. C. Just, the visiting Commissioner, and to inform you that Mr. Just presented Mr. Young with very full information regarding Tasmania and its resources in a printed form.

I have the honor to be,

Sir,

Your most obedient Servant,

HENRY EDGELL, *Secretary to the Commissioners.*

*The Hon. the Colonial Secretary,
Hobart Town.*

REPORT.

Launceston, 7th May, 1877.

GENTLEMEN,

PURSUANT to the request contained in the letter of the Colonial Secretary of 26th March ultimo, I have the honor, as visiting Commissioner to the Sydney Exhibition, to report to you upon some of the "products and manufactures of Canada which might be advantageously imported," and also upon some of the American Exhibits which I deem worthy of special notice.

I premise by stating that up to the time of my leaving Sydney, twelve days after the opening of the Exhibition, the whole of the Canadian and American Exhibits had not arrived on the ground, and much of the machinery on view was in a very imperfect condition. The steam engines by which the machinery was to have been exhibited in motion had not been put together, and I therefore had no opportunity of seeing the larger implements at work.

The Canadians had a very large and varied collection of agricultural implements and general machinery; so also had the Americans, who exhibited through the agency of Messrs. R. Towns & Co., and Messrs. M'Donald, Smith, & Co., of Sydney. The makers of New South Wales and Victoria were not behindhand in these departments.

Ploughs.

There was a good display of ploughs in the Canadian department, but they call for no special mention. They were nearly all of wood, light and strong in construction, but without novel features.

A double furrow plough for turnips and potatoes, with a moveable point, constituting it an efficient potato-digger, was a novelty which attracted considerable notice, and would I think prove useful in Tasmania. Its price delivered here would be £10.

Reaping Machines.

The IXL combined reaping and mowing machine, made by Crawford & Co., of London, Ontario, attracted great attention. This is a remarkably light implement, made entirely of wrought iron of the first quality, manufactured from old car wheels and other scraps. Its strength and durability the makers warrant by offering a five years guarantee for any description of crops. It has taken many prizes in America, and is considered particularly suitable for the Australian Colonies, because there being no wood-work about it to warp, the bearings and working parts are not likely to get out of order. The machine has a side delivery with four rakes changing any way. The alteration for reaping or mowing is effected simply by moving the position of the seat. There is also a simple arrangement by which the driver can take up the knife without leaving his seat or stopping work. The price of this machine delivered in Tasmania would be about £40.

A light mower and reaper made by John Elliott, of London, Ontario, is also worthy of notice as simple and durable implements very suitable for cleared farms. The mower could be delivered in Tasmania for £26, the reaper for £34.

Threshing Machinery.

The Little Giant threshing machine, manufactured at Stratford, Canada, appears to be an admirable implement, much smaller in size and simpler in construction than those generally used in the colonies. It threshes, winnows, and elevates the straw right on to the stack. It is fitted for horse works or steam power, and can be delivered here for about £80. Unfortunately I had not an opportunity of seeing it at work.

Chaff Cutter.

A novel little implement is the hand chaff cutter made by Manville & Brown, of London, Ontario, and known as Anderson's patent straw cutter. This implement was awarded a first prize at Philadelphia, and also at Sydney. It consists of an ordinary handsaw blade having large waved teeth, fitted into a simple frame so as to give a peculiar diagonal action which is governed by an India-rubber belt. The result is great saving power, enabling a mere boy to cut up a large quantity of straw in a very short time. These implements can be sold in Tasmania at 40s. each, and would be of the greatest service to persons having one or two animals to feed.

Turnip Sowing.

Mr. Watson, of Ayr, Ontario, exhibits a very superior turnip sowing drill which is said to be much appreciated by Canadian farmers as a labour-saving implement. Its peculiarities are that it places the seed at a good depth, covers it, levels off and rolls the furrow.

There is also a large grain drill having ten feeds, which appears an implement likely to save time and prove economical to the farmer. Its price here would be £28.

Tree Pruners.

Messrs. E. S. Lee & Co. exhibit a very handy implement known as Waters' tree pruner. This consists of a long wooden rod, having at one end a scissors-like knife worked by a lever handle near the other end. A branch ten or fifteen feet high may be thus pruned by a person standing on the ground.

Field Gate.

Mr. Augustus Morris, of Sydney—the New South Wales Commissioner to the Philadelphia Exhibition—exhibited a light field gate, a model of simplicity and ingenuity. By a very simple lever arrangement the gate may be opened and closed in an instant by any traveller, without the necessity of alighting from horse or vehicle. There are no fastenings required, and the gate is never likely to get out of order. Knowing so much of the annoyance and loss occasioned to farmers and settlers in Tasmania by travellers and others leaving their field gates open, I have arranged with Mr. Morris for the introduction of the Canadian gate here, and trust shortly to be able to exhibit one in operation.

Farmer's Waggon.

A farmer's waggon, built by Peter Adams, of Paris, Canada, is worthy of attention. It is extremely light, but being constructed of oak and maple is very durable. Its peculiarity is that it may be contracted or expanded to suit circumstances, and made to carry from two to five tons. This is accomplished by altering the position of the bolsters or bars which support the body, and fitting in a second reach or under-pole, and also by altering and expanding the box or carriage of the waggon. This waggon received a first prize at Philadelphia; at Sydney it was "highly commended" by the Judges. Its price delivered in the colonies would be £35. That it was appreciated by the New South Wales farmers is proved by the fact that many could have been sold on the spot, and that orders have been taken for a considerable number of them.

Butter Worker.

A. H. Reid's patent butter worker is a labour-saving machine likely to be of great value in the dairy. It is exhibited by Messrs. R. Towns & Co., of Sydney, and is made in Philadelphia. It is said that a child can manage it, and that it will work from twenty to thirty pounds of butter in from four to five minutes, thoroughly pressing out the butter-milk and mixing the salt. The price in Philadelphia is from 7 dols. to 10 dols., according to size. The largest size will work 50 lbs. of butter at one time.

Post-hole Digger.

Messrs. McDonald, Smith, & Co., of Sydney, exhibit a post-hole digger which was a specialty at the Philadelphia Exhibition. It consists of a couple of scoops resembling garden trowels mounted in handles, working on a pivot. When the handles are closed the scoops are open, and they are then driven into the soil. When the handles are closed the scoops are drawn together and hold the soil until the operator lifts it out. The implement will work in any soil, and it is said a man of ordinary strength can dig twenty post-holes two feet deep in an hour with it.

Carriages and Carriage Ware.

There were a large number of carriages and buggies exhibited in the Canadian section, the main features being lightness combined with strength of construction. One or two light buggies for two persons, having sheet iron bodies and seats and single leaf springs, were especially worthy of mention. The Guelph Carriage Goods Company, of Guelph, Ontario, exhibited a great variety of carriage fittings, the most noticeable being their patent cast-steel single leaf springs, which for light vehicles are said to be more durable than the ordinary three or four leaf springs. The Graham patent sheet-iron seats and bodies for buggies were also much admired. They claim to be twenty-five per cent. cheaper than wooden bodies or seats ironed off; there are no joints or cross-grained wood to open and split and mar their appearance; they are lighter and stronger than any other seats or bodies of the same size; and they require less filling by the painter to obtain a surface, as the iron is smooth, and rubbing through does no injury. Seats with handles are made for 2 dols. 50 cents each, and buggy bodies with seats from 10 dols. to 12 dols. each.

Horse Bits.

Mr. Augustus Morris exhibits a case of American manufactured flexible India-rubber bits, made by Messrs. Crane & Co., of Newark, N.J. These bits are worth the attention of owners of horses. They are of soft black rubber, moulded by heavy pressure over and around and between the links of a strong steel chain. All descriptions of bits are shown, their specialty being that they are soft and comfortable to the horse's mouth, saving the pain which the presence of the hard metal must frequently inflict.

Rational Horse-shoeing.

The Goodenough horse-shoes are another very important novelty. They are manufactured by machinery in Canada, and are applied to the horse's feet cold, being accurately fitted without burning on. They claim to be very light, not above half the weight of an ordinary horse-shoe; to give an equal bearing on all parts of the hoof, and the great principle is that of frog pressure. Mr. Goodenough holds that the frog of a horse's hoof is intensely vital and vigorous, that it is the spring at the immediate base of the leg, relieving the nervous system and joints from the concussion when a horse thunders along over the hard ground. He holds that it is necessary this elastic spring should bear upon the ground evenly with the shoe, and in this lies the main secret of his rational system of shoeing. The shoes exhibited in Sydney attracted

much attention; and Sir Hercules Robinson—a thoroughly experienced sportsman—was so pleased with the system that he at once had a number of his horses shod on the Goodenough method. Mr. Goodenough promises to pay Tasmania a visit, and to introduce his system here so soon as he shall receive a further supply of shoes.

The Goodenough Horse-shoe.

(From *The Sydney Morning Herald*, 23rd April.)

“Visitors to the present exhibition doubtless have observed that horse-shoeing and horse-shoes are among the numerous objects which attract attention there. The Goodenough horse-shoes occupy a prominent position in the American Court, and during the past fortnight Mr. W. A. Goodenough, a son of the inventor, aided by an American farrier, has illustrated the Goodenough system, by shoeing horses daily in the temporary forge on the eastern side of the park. Mr. Augustus Morris, during his late American tour, was impressed with the superiority of the Goodenough as compared to the old-fashioned mode such as is at present practised in the colony, and successfully used his influence to bring about the formation of a branch of the Goodenough Company in this city. The head-quarters of this company are in New York, where they have thirteen shoeing shops. They have branches in nearly all the cities and towns of America, and establishments in England, France, and Germany. Horses used on 300 lines of tramroads are shod on their system, and on one of these—that of the Brooklyn Horse Rail Company—2100 horses are worked. Some of these companies have given the shoe over eight years trial, and it is said with the most satisfactory results, lameness on their lines being almost unknown. It will therefore be observed that the Goodenough shoe arrives here with a very excellent character. It is very light, scarcely half the weight of the shoe commonly used. The foot surface is rolled with a true bevel, making that portion of the web which receives the bearing of the hoof the width of the thickness of the wall or crust. The ground surface of the shoe has also a true bevel following the natural slope of the sole and bringing the inner part to a thin edge. The outer portion is thus a thick ridge, and this is dentated or cut out into cogs or calks, allowing the nail heads to be countersunk. There are five calks, viz.—a wide toe calk, a calk on each side midway between the toe and heel, and two heel calks. The shoe has no clips, is fastened with eight nails, and all the preparations allowed is the simple paring or rasping the wall until a shoe of the proper size, laid upon the prepared crust, gives an even bearing with the frog all over the foot. The knife is never allowed to touch the sole or frog, for the latter holds an important place in the system, and, in the case of a sound horse, is supposed to touch the ground as the animal stands newly shod. To have natural action, uncontracted heels, and to keep sound, the advocates of the system say “the bearing must be on the frog.” To restore the natural action of the foot in the case of horses which suffer, or have suffered through bad shoeing, Mr. Goodenough has various plans, but they all aim in the one direction—that of gradually bringing down the heel until the frog assumes its natural state, or the crust of which the unskilful farrier has robbed it. Leather and bar shoes are entirely eschewed by the system, and, it is said, with complete success. The shoes are of several sizes, and the nails used are not unlike the common nail but on the head, which is improved. The latter are manufactured specially, and the cost of the shoeing under the system does not amount to more than the average rate. With the directions any stockman of ordinary intelligence can shoe, and the iron used is of a quality which will bear “cold working” without injury. The system has already attracted attention. Among those who have critically examined it is His Excellency Sir Hercules Robinson, who, being impressed with its worth, ordered Mr. Goodenough to shoe the horses at the Government House stables. The shoeing took place on Saturday morning, a part of it in the presence of His Excellency. The eight horses which passed under the hands of the farrier were not, as regards their feet, in good condition. four had bar shoes on, one suffered from thrush, a disease which Mr. Goodenough declares, with ordinary care, cannot occur under his system, and all had leather under their shoes, and signs of contracted heels. Mr. Goodenough’s shoes are now on these horses, and as they will be worked as usual, a fair trial will be afforded the system. His Excellency expressed himself highly satisfied with the appearance of the horses after they had been shod, and intends introducing the Goodenough shoe into his racing stables. It would be premature to hazard an opinion at this stage, but it may be safely stated that the horses at the Government House stables seem more at ease in their new than in their old shoes. One of them which was more than slightly lame before Mr. Goodenough’s farrier operated, exercised very freely in the hard court-yard on the Goodenough shoes. The company intend opening four or five shoeing establishments in this city, and it is probable that the Sydney United Omnibus Company’s horses will be shod under the system.”

Railway Car Wheels.

The Toronto Car Wheel Company exhibit several sets of wheels suitable for passenger and freight cars on railways. During the last five years this company has manufactured over 60,000 wheels, principally for Canadian railways, but also for South America, India, France, and England, and wherever used the wheels seem to have given satisfaction. The wheels are cast solid, having no spokes, being smooth on the outer side and strengthened by ribs on the inner side. The company use nothing but the very best brands of cold blast charcoal iron; the wheels are very equally chilled, and numerous testimonials from Canadian engineers give them the very highest character.

American Dredges.

Mr. Augustus Morris specially desired me to call the attention of the proper authorities to the steam dredging machines built by the American Dredging Company, of Camden, New Jersey, and which are suitable for improving rivers and harbours, excavating canals, reclaiming and filling low lands, &c. Dredges built on the same principle have been in use in the United States of America during the past twenty-five years. These dredges are built of varying dimensions and power, and are adapted to excavating material ranging from loose rock, gravel, compact sand and clay, to ordinary river silt or deposit. No. 3 dredge will excavate such deposits at depths varying from 3½ to 20 feet; will elevate the excavated material

to a height of 15 feet above the surface of the water, or 12 feet above the level of the deck of the dredge, and will deposit the material directly from the dipper or scoop, to the right or left hand at pleasure, without change of machinery, at distances varying from 10 to 20 feet from the side of the dredge, according to the length of the crane used. The operations of hoisting and lowering the dipper, swinging the crane, and moving the dredge forwards and backwards, are performed by one man designated the engineer, who uses therefore three levers, one treadle, and the throttle. The dipper is regulated in its movements up and down and in the discharge of its contents by another man designated the dipper tender; and two men with a fireman or stoker and a deck hand constitute the ordinary working crew. These dredges are constructed on a much larger scale than the above, running through seven sizes.

Gunpowder Pile-driver.

The patent gunpowder pile-driver is another useful implement to which Mr. Morris calls special attention. "By it a pile forty feet long and fourteen inches in diameter may be forced its entire length into firm ground in one minute, by the successive explosions of cartridges composed of an ounce to an ounce and a half of common blasting powder, without the slightest injury to the pile; obviating entirely the necessity of banding the pile before it is driven." Mr. W. G. Turpin, engineer of the James' River Improvements, says of this pile-driver: "Probably at no point in the United States has it been subjected to so severe a test as on James' River, where the material is sand (in many instances the most trying material in which piles have to be driven), then sand, gravel, and boulders overlaying granite in a decomposed state. In all the varying and hard material it has met my expectations. On one occasion I drove 240 piles through from 7 to 8 feet of sand overlaying decayed granite, making an average penetration of 11 feet, in 26 *working hours*. With my old machine—one of the best of its kind—I would have been well satisfied to have done the same work in *twenty days*."

Mr. Morris will be glad to afford full information respecting these machines to anyone requiring it.

Quarry Drill.

Mr. R. Gardiner, an old Canadian, now resident in Sydney, exhibits a quarryman's fatigue-saving drill or jumping machine, which is effective and ingenious. It consists of a triangular iron frame with a socket in each corner. From these sockets spring three stout saplings each about 10 feet high, inclining inwards. Three short pieces of chain fitted to the top of these suspend the drill, which passes through a guide in the centre. The elasticity of the poles gives an enormous spring, affording the relief required. The drill may be almost said to work itself.

American Post Office.

Mr. J. B. Holdsworth, of Sydney, exhibits the plan on which the post office private-box system is worked in America. The boxes are of metal, having glass fronts, and all are fitted with a simple kind of lock, no two keys being alike. They are thus self-delivering. The owner of a box of a certain number comes up to the window, sees that there are letters in the box, applies his key and takes the letters himself. This system saves work to the post office officials, and is said to act admirably in America.

Surgical Operating Table.

A surgical operating table exhibited by Mr. Augustus Morris, and obtained by him from the Surgical National Institute of Philadelphia, appears an admirable invention, which should find a place in every hospital. It is constructed of iron, comfortably padded, and so designed and jointed as to accommodate every possible movement of the human body. The joints are all governed by screws and ratchets, so that the sufferer's limbs may be moved about in the most gentle and gradual manner. The facility too with which the operator can reach any portion of the subject's body must be of great advantage to him. The construction of these tables is most ingenious. The price is £20.

Ice Bandages.

Mr. Morris also exhibits a number of surgical ice bandages from the National Surgical Institute of Philadelphia, where they are said to be much used.

School Requisites.

The Canadian and American Courts are strong in school requisites. A number of maps and charts published in Canada are exhibited by Mr. A. Morris, as suitable for use in colonial schools. They are extremely well got up, and are, I am informed, very cheap. Mr. Morris would be happy to furnish information respecting them.

A patent map stand for schools and libraries is also worthy of notice. It is a Canadian invention, very simple, and is manufactured in brass and nickle plated rod. It will carry a map of any size, is capable of being raised or lowered at pleasure, and has a stand attached at the back for rolled maps not in use. I would especially recommend it to the notice of the Board of Education as likely to preserve their school maps, keep them clean, and enable them to be much more readily used in the classes.

The American progressive writing and drawing slates, exhibited by Messrs. M'Donald, Smith, & Co., of Sydney, are also worthy of attention by the Board. There is a metallic case attached to the slate containing specimen copies of letters of the alphabet, numerals, &c., in different styles of writing, and also sheets of

elementary drawing lessons. These are clearly traced in white on a black background, and form an admirable series of copies. The slates have a pencil and 8-inch rule attached, and can, I understand, be supplied nearly as cheap as ordinary school slates.

Domestic Novelties.

There are many domestic novelties in the Exhibition, but only one or two worthy of special mention. Anderson's patent bread-cutter is a useful little implement, suitable for public institutions and hotels where bread has to be cut in large quantities. It is guaranteed to cut a clean smooth slice of any thickness, without loss of crumbs, and to save labour, save table-cloth, save bread, &c. It is a Canadian notion, exceedingly simple, cheap, and effective. Cost 10s.

The Burlington patent adamant lamp-glasses are a valuable invention, and may be obtained from Mr. J. B. Holdsworth, of Sydney, in any shape. They will not break by a fall unless they come in contact with iron or stone, and they may be heated red hot, and cold water poured over them without the least injurious effect.

Canadian Timber.

The Canadian Commissioners called my special attention to the suitability of Canadian timber for colonial purposes, as being light, well seasoned, and easily and cheaply worked. They gave me the following as the prices, free on board at Canadian ports:—

	per 1000 feet.
Flooring, 1 × 8 to 12 inches—12 to 16 feet lengths, planed, tongued, and grooved to $\frac{7}{8}$ inch thick	s. d. 87 6
Shelving, 1 × 12 inches and up to 12 to 16 feet lengths, planed and edged to $\frac{7}{8}$ inch thick	96 0
Carpenter's clear timber, 1 × 10 inches to 14 inches, and up to 12 to 16 feet lengths, planed two sides to $\frac{7}{8}$ inch thick	147 6
Clear timber, 1 $\frac{1}{4}$, 1 $\frac{1}{2}$, 2, & 3 inch stuff, 8 to 24 in breadth, 12 to 16 feet lengths	156 6
Spruce flooring, 6 inch face, planed, tongued, and grooved to $\frac{7}{8}$ inch thick	79 6
Laths, 4 $\frac{1}{2}$ feet, 10s. per 1000 pieces.	
Spruce deals, 3 × 9 × 11 inches	54 6

In concluding this report, I desire to express my warmest acknowledgments of the courtesy extended to me, as representing Tasmania, by the Government of New South Wales, the Council and Officials of the Agricultural Association, the Officers of the Exhibition, and the Commissioners representing Canada and Queensland.

I have the honor to be,
Gentlemen,
Your most obedient Servant,

THOS. C. JUST; *Visiting Commissioner.*

To the Commissioners Sydney Intercolonial Exhibition, 1877.]