

## TORONTO INDUSTRIAL FAIR.

A stranger, being guided to Machinery Hall from the entrance next the city, might easily get a wrong impression as to the bent of the crowd to be seen around the eastern entrance on a busy day. On Monday last, at 4 p.m., there must have been several thousand people clustered at that end of the building. These were not machinists, however, nor scientists, nor students in particular of processes of manufacture. Nor was it the multi-colored electric light within, nor Northey's fire underwriters' pump, nor the Elora carpet loom that had brought them. Truth to say, it was negro comedy, skirt-dancing, bell ringing and a Punch and Judy show in the booth next door, that drew the people.

It was not very easy getting inside the door of Machinery Hall, so dense was the crowd, but once inside there was plenty worth seeing. Presiding over a little table, beneath a modest sign, was a representative of the Kerr Engine Works, of Walkerville, a concern which has made its merit known by honest work and steady growth. Their exhibit consists of a variety of modern valves for steam and water, among them the "Lunken" gate valve, with balanced disk and renewable seat; the "Weber" gate valve, technically described as a straightway valve; and a quick-opening valve for radiators, which is said to possess the very desirable feature of not admitting any condensed steam to drip over carpets in dwelling or office. The best commendation of these is that the makers of radiators are ordering them in quantity.

Without moving from the comfortable seat in the corner, one could survey the masses of inert metal, huge lathes, and planers and drills shown by the Canada Tool Works. One could see, too, what was as much more interesting than the dead machines as a tool in motion always is than a tool at rest, the cunning little shaper newly shown by the Messrs. Bertram & Son, at work fashioning metal. It planes twenty-three inches one way and eighteen another; but its stroke can be instantly reduced to a quarter of an inch. The advantage claimed for it is that it will plane up to line with a heavy cut, with uniform cutting motion. It has besides a steel tapering attachment for finishing keys or irregular pieces. The same firm exhibits a 20-inch back-gear new drilling machine. It shifts from back gear to single motion by lever and clutch.

It is by no means a bad plan of showing public appreciation of one's work, to place upon exhibits the names of firms to whom they are sold, for human curiosity is always at work to learn what one's neighbors are doing. The Toronto Motor Company have adopted this plan, and of the dozen machines they have whirling away there, the following are sold:—One to the Cork Co. of Canada; one to Oakley & Holmes, contractors, Toronto; one to Matthew Guy, carriage builder; one to the Carpet Cleaning Co.—these are of 12 horse-power each. The Brantford Bicycle Co. has ordered one of 25 horse-power; the Toronto Granite Co. one of 6; Park, Blackwell & Co., 18; J. W. Leister, city, 5; J. B. Davison, 3; P. M. Diamond & Co., 2; James Wollings, 2 h.p. This company is furnishing motors by the dozen, we are told, to Fensom, for running elevators, and indeed it is a comfort, if our intake water pipe is to break every year or two, to have electricity to resort to for our elevators. Duncan & McLennan, brass founders, of Campbellton, N.B., have ordered from this company two dynamos of twenty-five lights each, and the Pedlar Roofing Co., of Oshawa, has ordered one.

J. D. Ronald's Brussels steam fire engines, and J. D. Ronald himself, are very much in evidence at the west end of the building. Mr. Ronald is a free talker, and has usually an audience about him on crowded days. He shows one of his standard engines, such as was awarded first prize and gold medal at Chicago, also a chemical engine and a hose reel, both of his own make.

Not only a square but a complete cube may be said to be occupied by the revolving pulleys of the Dodge Wood Split Pulley Co. They have a row of pulleys close to the ground, another row in air; a high row at right angles to these, a low row at right angles to those—all connected, it appears, by their ingenious system of rope transmission, of which some 1,200 horse-power has been ordered by Eddy, of Hull. A handsome testimony has been borne to the Dodge Split Clutch Pulley by the Clark Electric Co., of St. John, as to the ready transference of power from dynamo to dynamo by its means.

## AGRICULTURAL HALL.

In the space which they usually occupy in Agricultural Hall, the Waterous Engine Works Company, of Brantford, have on view, among other things, one of their celebrated burr stone choppers, which is a handy grain grinder for farmer or dairy man, for it can grind 30 to 40 bushels of grain per hour. It can be run by a portable engine or by a horse-power. Besides half a dozen of their portable engines of different sizes, they have on view saw-mill machinery, such as head blocks for small mills, carriages, showing dogs, and practical parts with the latest devices. Close by is one of their No. 2 village steam fire engines, an

attractive machine for small places, likewise a hose cart of their well known make.

## STOVE BUILDING.

The modern system of hot water heating is based on the law of gravitation, and consists of the circulation of water through coils and radiators, caused by the difference in weight of two columns of water at different temperatures. A constant circulation is obtained as long as the generative force of heat exists, and even longer, for it will continue to circulate until the water in the system is the same temperature as the surrounding atmosphere.

The system being open to the atmosphere through the expansion tank, the temperature of the pipes, etc., cannot exceed 212° Fah., and the formation of steam is therefore impossible, so that a perfect system of heating is thus secured, free from danger and noiseless in operation. To make hot water heating economical and effective, a powerful heater is necessary—one which is not over-rated, but that has sufficient grate area and fire surface; then attach sufficient radiation in a proper manner, and you will have a satisfactory heating system.

In the stove building there is shown by R. McDougall & Co., of Galt, the Eclipse Hot Water Boiler, with Plaxton's patent improvement. These boilers, which are made in ten different sizes, consist of what appears a very simple arrangement of hollow castings filled with water and having a great extent of fire travel, giving good results from fuel. From Welland to Sault Ste. Marie, and from New Brunswick to British Columbia, testimonials to the value of this furnace have been forwarded.

Not so much of ornament is perceptible this year in the stove building as at some former times, but the place is full to overflowing of exhibits of stoves and furnaces. The first that one sees, entering from the west door, is the ten different-sized "Daisy" Hot Water Heaters, like steps of stairs, from little to big, shown, as in former years, by Warden King & Son, of Montreal. A good, solid-looking display they make, though hardly to be termed ornamental. Across the way from them is the temporary booth of the J. F. Pease Furnace Co., of Toronto, Winnipeg, Vancouver, Montreal, St. John and Halifax, who make the well-known "Economy" Heater, of which we are told there are now some 30,000 in use. This company uses Gurney radiators.

Buck's Brantford stoves, the Radiant Home for the parlor, the Honor Bright or the Happy Thought Range for the kitchen, and many more, are sold in Toronto by R. Bigley, agent for this city. But Mr. Bigley deals also in furnaces, having a base-heating furnace of his own invention, which has been selling since 1892, and which he claims is based upon a new and original idea. The combustion chamber of cast-iron and the radiator of steel are, he says, a combination that give superior diffusion of heat for the fuel used, while the simplicity of construction lessens trouble from ashes or dust. We observe that this maker, as well as Warden King & Son, of Montreal, and R. McDougall & Co., of Galt, uses the Safford Radiator.

## BICYCLES, ETC.

In gazing at the display of bicycles in the Carriage Building as closely as the crowd—for there is invariably a crowd around it—will permit one to do, the question comes into mind whether the name of the "Monarch" bicycle is derived from the noble lion, of which there are a number of pictures in frames, or whether the 6-foot unicycle is meant, which excites curiosity as to when and by whom it is to be ridden. The Chicago Company, with a branch on Adelaide street, Toronto, which makes the Monarch, boasts of many contests in which its machine has come out ahead. For instance, it boasts a record for Canada of 2.10 1-5 made by Bliss, of Chicago; and also records of firsts made by Cooper, its Canadian rider, at Montreal, Peterboro, London, Stratford and Brantford.

A visitor would miss a good deal that is interesting if he confined his visits exclusively to the big buildings. There are a number of the smaller ones that should not be missed. For example, that of Rice Lewis & Son, next the Press Building, is always tastefully fitted up; the Canadian Pacific Railway Company's display is always instructive, and the Dominion Organ and Piano Company's building is always worth a visit. In this temple of music, with its rich curtains and Chinese lanterns, we counted twenty-nine instruments, pianos and organs of the company's make—some great, some small, some gorgeous, some plain. And an agreeable feature compared with some other places and previous years: There was no banging or blowing of six instruments at once. When a caller wished to hear the tone of an organ the piano that happened to be going was stopped, so that the rich tones of the organ could be heard, and vice-versa.

Close to the C.P.R. exhibit is a modest building devoted to the purposes of the Metallic Roofing Company. Besides roofing sheets, which they have shown before, this company makes fire-proof shutters, for which there should be a good sale. They are composed of wood, asbestos paper and tinned steel, and we are told there is a large contract for these on hand. They make, besides their known brands