Lilydale Express July 1891
Mr David Mitchell
His cement manufactory and sawmills

We reprint the following from "The Richmond Australia" believing it will be read by everyone in Lilydale and the district:-
A pedestrian passing along Burnley street, from Bridge road to Simpson's road and when half-way between the two main thoroughfares will casually observe something which would lead him to suppose that there are extensive sawmills and cement works situate on the land behind the villa residences, and which hide the abovenamed works from view.
Mr David Mitchell, the well-known contractor, is the proprietor and founder. Coming from Forfarshire in the year 1852, possessed of more than ordinary brain capacity, energy and determination, Mr Mitchell at once set to work to build his fortune. Attracted to the diggings, he remained engaged in "digging up nuggets" with varied success until 1853, when he determined to engage in his own pursuit, that of building and contracting, and his honourable career since has been one of success, his efforts having been rewarded with an independence which is far more creditable to him than it would have been had he unearthed the largest nuggets from the auriferous fields. Mr Mitchell quickly found an opening for his talents and energy, and he has constructed numerous building, amongst these standing our most prominently, and which must carry his name along through the ages, are the Scots' Church, Collins street, the Exhibition buildings, Prell's buildings, the Palace Hotel, Messrs Sargood, Butler and Co's, and Lang and Webster's offices and warehouses, the National Bank, and many other large business premises.
Mr Mitchell had purchased some 20 acres of land, off Burnley street, at different periods during the last 34 years, and finding that they very strong clay lying underneath the surface was suitable for the manufacture of bricks, Mr Mitchell at once engaged in the work which he carried on on a very large scale until about the end of the disastrous land boom. The rush for land during the two years of the existence of the boom and the rapid growth of buildings caused a demand for bricks that was continuous and extreme, and gave rise to the establishment of numerous brick manufactories, with the consequence that the prices for their manufacture was reduced to a minimum, and Mr Mitchell determined on relinquishing the industry. As showing the immense quantity of bricks that have come out of the Burnley street yards, it may be pointed out that the average bricks made per year for 35 years were 3,000,000, or in all over 105,000,000 bricks.
In the making of these bricks, Mr Mitchell had accumulated extensive machinery and pugmills, and he determined to adapt this plant as far as possible for the manufacture of cement. Securing the services of Mr R.D. Langley, an expert, who had had lengthened experience in large works in England, Mr Mitchell – of course having seriously considered the undertaking as to whether there would be a continuous demand sufficient to warrant the erection of additional machinery and plant, concluded to enter on the manufacture on a large scale. This was two years ago, and since then Mr Mitchell has expended over £10,000 on the works, which are also being daily extended. There has been a ready demand for the cement, which is of the highest quality, and equal to any that is produced in the world, which fact will be seen further on from the tests as applied and described in this article. At the present time a Government order of 10,000 barrels is being executed. This cement is being used in the construction of the viaduct between Spencer street and Flinders street. Between

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400 and 500 barrels are turned out per week, and the weight averages 400lbs each, and their production in Burnley street gives employment to about 60 men.
When first visiting the works the writer met Mr J.W. Mitchell, brother to the proprietor. This gentleman came to the colony in 1864, and since that period had been associated with his brother as general manager. In the most unpretentious manner, but with that honest glow caused by the knowledge that he could show his visitor something worth seeing, Mr Mitchell readily assented to take the writer over the works.
Mr Mitchell first explained that the two components used in the manufacture of cement were clay and lime, which are obtained from the proprietor's land and limekilns at Lilydale. On walking along, we find that the mills and storage sheds alone cover about two acres of land. The puddle mills were where we first directed our attention. There the lime and clay are wheeled in a wet state to the pugmills, and the stuff is at once converted into what is known as "slurry." From the puddling mills by means of barrows and elevators it is conveyed to the drying floors. These floors are composed of cast-iron plates, and have underneath them flues, which convey a regular heat; the waste heat from the kilns being utilised. The "slurry" takes about 36 hours to dry, when it has the appearance of large pieces of chalk, but with a very yellow tinge. The next process is that of burning. There are eight kilns, which resemble an egg in shape, and are 20 feet deep by 12 feet board. The dried "slurry" will almost burn itself, but a small quantity of coke is used, and after burning for two days it formes into cement clinkers. These are then conveyed to the grinding mills, two in number. The mills are of ponderous capacity and consist of a Chilian and English mill. The weight of each machine is no less than 15 tons, and it can easily be understood that, with the aid of sieves the cement clinkers are ground into an impalpable powder. The now almost finished cement is then conveyed by elevators from the grinding mills to a large chamber, where it remains to cool from two to three weeks. From this chamber it is filled and weighed into casks, the casks coopered up and then stored ready for transit. To drive all the machinery there are two engines, one of 50 horse-power, and a second of 20 horse-power. The machinery is connected by shafting and belting, and on all sides leaves the impress that the plant is well cared for. With regard to the additions going on, they include increased shed accommodation, which will give a capacity for the storage of 10,000 caskets. Two kilns are also being constructed, and such is the vigor shown by Mr David Mitchell and his associates in the production of this cement that the Victo4ian cement bearing the Emu brand is now most favorably known throughout the length and breadth of the colonies.
Before leaving the works, Mr Langley conducted the writer to a most important department – the testing room. Here it was explained that there were some 20 methods of testing the cement, but the most popular method was that of placing a bricket in the clutches of Dr Michaelis' cement testing apparatus. This machine gives a leverage power of 50lbs to one, and the machine works automatically. On this occasion a bricket was placed in the clutches, and the tensile strain was applied, but the bricket did not break until a weight of 668lbs to the square inch was reached. The break in the cement showed it to be clear and without a flaw. The Government test required is 350lbs, but the average of the Emu cement tests have been 550, thus giving a really large percentage about the required strength. Turning up the tariff, we find that there is a heavy embargo placed upon the importation of cement into all the other colonies, the amount being 2s per barrel, whiles in Victoria, the home of

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protection, there is no import duty at all. This is a matter for Mr Turner, the new Commissioner of Customs, to consider.
From the above facts it will be apparent that Mr David Mitchell has, if benefiting himself by the establishment of this industry, also introduced a new sphere of labor and enterprise into the colony, of which not only Richmondites, but Victorians generally, can feel proud, and the manufacture of the cement added an industry which will help to lessen the need for the imported article, whilst at the present state, it afford employment for about 60 men.

The Saw and Planing ills, blacksmith's shops etc

Bidding good afternoon to Mr Langley, Mr John Mitchell led the way to the sawmills, and on the road we learn that in the execution of his large and numerous contracts the proprietor of the works has always almost entirely manufactured his woodwork and rough ironwork. The sawmills have grown in extent as the years rolled on, but two years ago a fire broke out in a portion of the sawmills and caused considerable damage. This was, however, more than made up for by the addition of a larger mill, fitted with machines of the latest design, ad imported by Mr David Mitchell when on a recent tour through England. In this branch of industry Mr Mitchell is most extensively engages, the large stock of cedar, deal and other woods to be seen representing whole cargoes, and proves the large amount of work turned out from the mills. The foreman of the mills is Mr James Murray, and on entering the shops we find some 40 men busily engaged in the various branches of the trade; the revolving saws and moving machines, all driven by steam power, causing that buzzing sound which indicates at once that this is no ordinary workshop. Glancing round we saw some splendid specimens of workmanship, in the shape of the office fittings for the Bank of New South Wales, Collins street, and Prell's Buildings. The timber used is cut up from a log, and anything that modern science and the skill of the artisan can do is perfected here. A moulding machine (by Fay and Co., of Boston and New York) was seen in full operation. An ordinary batten was placed in this, the machine set in motion, and at the rate of 20 to 30 feet per minute the rough batten had been converted into a complete moulding. This machine, as is the case of all the others, can be easily and quickly regulated according to the size or dimensions of any particular woodwork required. It is also interesting to note a door-planing machine by Woods and Co., of Boston. When the doors are clewed up and clamped they are readily placed on the machine, and come our perfected and ready for sand-papering. With this machine 1000 doors per day can be finished. An automatic morticing saw relishon and sash-punching machine, the invention of Greenless Brothers, of Chicago, was then viewed. This machine is work by three men, and the rapid and effective manner in which it did its work was very apparent. Thee are also a large number of other machines and appliances, indicating that the enterprising proprietor has spared no expense in obtaining every modern invention to facilitate him in his successful endeavours to turn out every description of cabinet and woodwork of the highest description, and which desire has gained fro Mr Mitchell the enviable notoriety that whatever he undertakes he perfects and completes so that the most exacting cannot find the slightest reason for complaint. No work is allowed to leave the shop with it is perfect. A 30-horse power (nominal) engine drives the machinery, and an inspection of the engine and boiler houses show that every attention is paid by the engineer (Mr George Euston) to his charge. Under Mr Euston's direction the whole of the engines, machinery, etc. have been erected, and the skill shown is evidenced from the faultless manner in which the machinery works.

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Almost immediately adjoining the sawmills are the blacksmithing shops. On an average 10 men are employed here, and all Mr Mitchells' wrought ironwork is undertaken. Repairs to the lorries, drays etc. used at the contract work and elsewhere are done, and plenty of work is found to keep the men busily engaged.
The eight hour system is in vogue throughout, and we are happy to say that Mr Mitchell's relations with his employees have always been of the most happy character, and we trust that in the future no frictions will arise between "master and man," which always carry in their train a state of things that are not desirable.
With a hearty shake of the hand, Mr John Mitchell parted with his visitor, who wished both him and his borther, what we are sure all our readers and friends of progress will wish them. "Every success and prosperity, and that the Emu Cement and Sawmills will long exist to help to build up Richmond as a flourishing city, and Victoria as the leading manufacturing colony of the Southern Hemisphere.

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