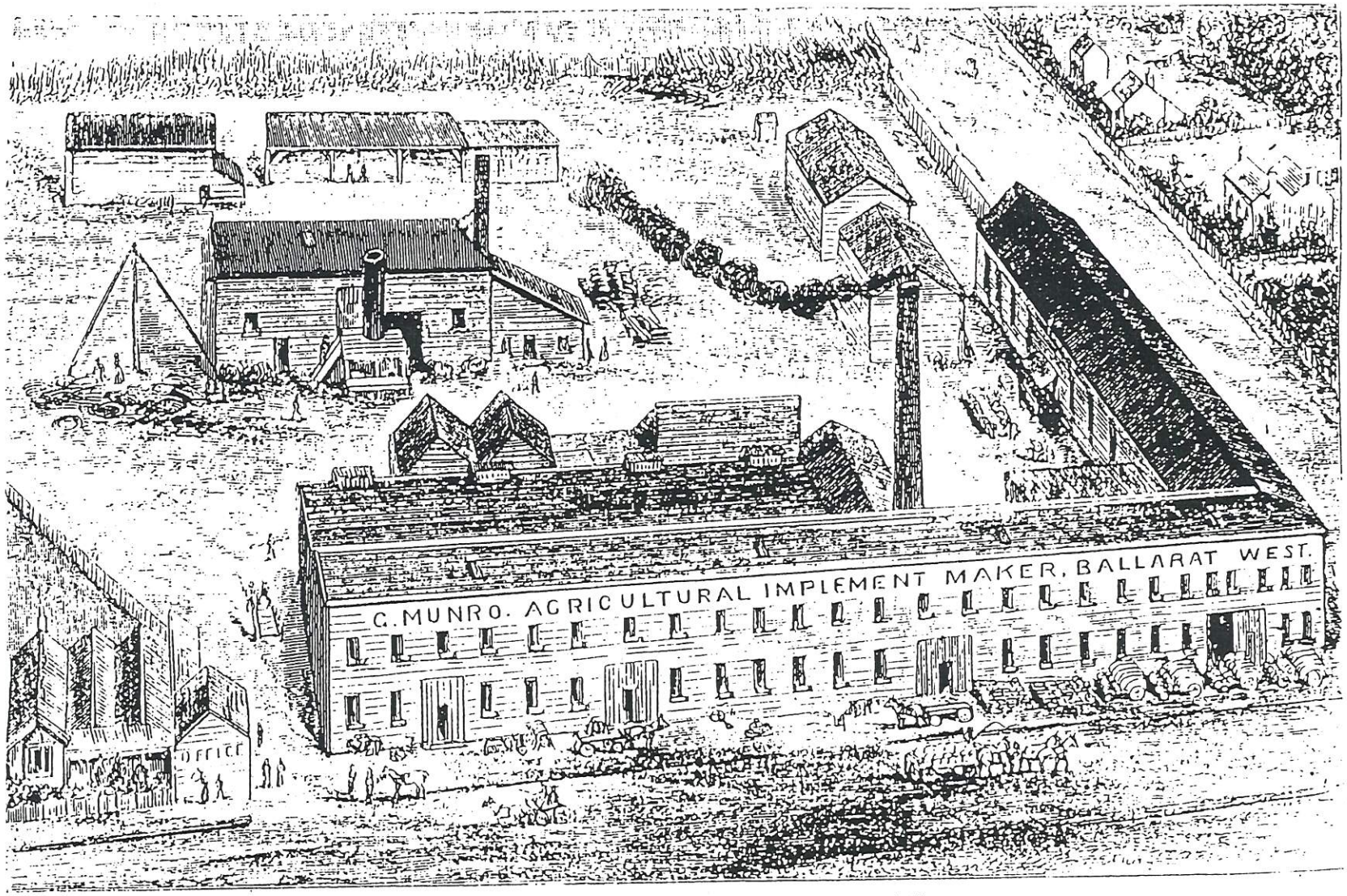

MR. GEORGE MUNRO'S WORKS, ALFREDTON, BALLARAT.

J. Hitchcock
10th Oct 1980

Surely this section of [illegible] railroad is deserving of a better pen than mine. There are other members more qualified to record this very important, and to my mind, fascinating board of Ballarat history. However I will try to do my best in a paper which could easily become a book. Allow me to quote an extract from a short article on the Phoenix Foundry in a Victorian Gov Railways publication, printed in July of this year.

The whole is a remarkable story of colonial industry, and many enthusiasts have wished that it all might be adequately told in book form.

A book mark you on one foundry.

Be lenient with me, in my scant tribute of the lot in one paper.

The enormous gold yields undoubtedly make Ballarat the greatest provincial city in Australia; but the iron and other industries have made that greatness permanent.

The foundries helped considerably in the meteoric growth of this large and prosperous place, and are still a key factor in its economic stability. They played no small part in tiding it over the transition period when the large alluvial mines had exhausted their golden wealth in the 70's, to when the enterprising industrialists had taken over, and quartz mining had become a paying reality.

Many of the early gold fields were less fortunate in this respect. When the leads were worked out, most of the population of those places built on gold alone, drifted away when the mines closed down, leaving what were once busy and temporarily prosperous centres, mere ghost towns, and in some cases, non-existent.

I remember well, a very hot Sunday afternoon some years ago, when I payed a visit to such a place.

It was once a fair sized place on a very rich gold

only one hill left of the many it possessed in the gay young days, it presents a sad and sorry sight.

Yes Ballarat owes more to its foundries than most of us realise.

I find that many confuse foundries with engineering, boilers, and iron works, so a brief definition of a foundry may be of interest before proceeding further.

Found is coined from the French word "Fondre" derived from the Latin "Fundere", to pour. So a founder would be one who makes castings by pouring molten metal into moulds, and a foundry would be a place where this work is carried out.

Many works combine foundry, machine, fitting, and assembly shops as a whole, there I have listed as Engineers and Iron or Brass Founders or Iron and Brass when they make castings in both metals. In this I hope to have made myself quite clear. A business can not be properly termed a foundry unless it makes its own castings.

Let us view the conditions prevailing in Ballarat in the middle Fifties. The change that had taken place in the four years following the first discoveries, and the dire necessity for the introduction of foundries.

While the diggers (those ruffians we have all read of) held away in the shallow, or comparatively shallow ground of the early Ballarat finds, all was well. Even the "New Chum" soon learned to sharpen a pick, or repair the simple tools and equipment needed for that type of gold seeking; but as the golden streams of long ago, led them into the deeper ground, more than manual labor was needed in the struggle with the many difficulties encountered in getting to the bottom with its hidden treasure.

One called Peter [illegible] on the Red Hill, was the first to use pumping and puddling gear.

The diggers who had worked the rich ground on the "Point" and other shallow diggings resented this use of machinery.

For sentimental reasons, akin to those of the smashing of machinery by the hand operatives in the cotton mills of Lancashire in 1835, a party of irate diggers attempted to demolish a steam plant installed by a man named Talbot on the "Gravel Pits Flat" at a spot which is now the intersection of Peel and Bridge streets.

They were prevented from doing so, when the owner produced firearms. Despite these objections, the use of Machinery had to come.

As the sinking became deeper, and with greater quantities of water to cope with, more and more mechanical aid was called for, and as they progressed westward under the basalt of the "Plateau", its use became an absolute neccessity.

This in turn created a new difficulty. Breakdowns in plant frequently occured.

Even in present times, our ultra modern machinery running in totally enclosed and oil-tight cases, lubricated with special grades of oils and greases, lay down on the job. What then must have been the case with their early counterparts? Most times poorly designed (by our present day standards), open to all the dirt and grit met with in the conditions they worked under, and lubricated with tallow or the homely locally produced mutton fat.

When these breakdowns did occur, there were no local manufacturers or agents to replace broken or worn out castings. Duplication of parts [illegible] unknown, or if so was certainly not practiced. Engines and machinery of those days, were constructed as we now call one off jobs and one can well imagine the difficulty experienced in making repairs or replacements in situ. [illegible]

Ballarat. Richard some had returned with fortunes made in days. He then saw so many of his kinsmen, made up his mind to leave his trade and join the southward bound mercy throng.

With his young Bride, (she was still in her 15th year) he sailed in the True sense of the word for Australia. And arrived at the "Port of Melbourne" in the year 1853

It is reputed that Mr. R.H. Sutton, (of musical fame) was a ship mate, and came up to Ballarat with them in the same bullock waggon. At Bacchus Marsh, on leaving the waggon Richard Trahar became lost. Whether he went on a bender as the name of that place might suggest, or was just plain lushed I do not know; but reports state that it cost his young wife the sum of 50/- to recover him.

On arriving at Ballarat, he became a gold digger, and with the girl of such tender years, installed in a tent near the Caledonian Bridge of Today. The second Richard Trahar to come to Ballarat, was born in that tent.

For nearly two years, he dug for the allusive yellow metal; but like so many of the other diggers, his funds were very ordinary, and as time went on, with a wife and son to provide for, the need for a surer income than that of the unlucky digger, became apparent. As the gold fever began to wane, his thoughts were those of his old trade, and his former life in Cornwall. Surely he could make a go at blacksmithing if nothing else (In a very early directory I have counted no less than 150 blacksmiths in Ballarat)

In 1855, he set up a small smithy, on that famous old site where, only a few months before, Major General Sir Robert Nickle had camped his relief force, 2 days after the storming of the "Stockade". (This is now the site of the Bath Boy works)

In keeping with most Cornishmen, is that uncanny trait of being able to improvise or make do, which stood him in good stead and he soon had a fair business, making and repairing

had now become the rock and [illegible]. The digger save for the "Hatter", or an odd party [illegible] the old ground, had faded from the picture.

What a happy relief it would be to the harassed and worried miners, if the now so necessary machinery could be manufactured and repaired on the spot.

No irksome delays. No waiting for cumbersome mining gear shipped from overseas in slow sailing ships, or its tardy and expensive haulage by bullock waggons or drays from "Port Philip Bay".

What a golden opportunity for a foundry that could make and repair this urgently needed machinery, in Ballarat. Not all had struck it lucky. As the going became harder men lost the urge to become rich by the hit or miss method of gold digging, and were ready to fall back on the trades and callings they had followed in their native lands. Indeed many had already forsaken the hopes of "coming in it heavy" for the more sober and certain ways of industry.

An exiled iron founder had only to start the ball rolling and the game would be on.

Let us turn back the clock (eastern standard) 123 years to 1827, and pay a visit to Cornwall, that famous old county in England, where so many of our early pioneers came from. In a homely cottage of a blacksmith, in a town called Truro, the smith is nursing a babe, his first borne, after the late evening meal. Little does the proud sire realise as he jigs his son and heir, that he is fondling one, who in some 28 years time, is destined to make history in a far away "Eldorado of the South". Yes Richard Trahar was to be the first man to smelt iron in Ballarat but that is getting ahead of my story.

Before reaching the age of ten years we find him working with his father. Later he aspired to the higher planes of the iron worker and became an iron founder, then, as most young men do in a weak moment, married.

He erected a crude furnace with hand operated blower for air blast, using charcoal for fuel. He smelted a few lbs of may be ⅓ cwt of scrap cast iron.

The molten metal that flowed when that crude furnace of 1855 was tapped (just a mere trickle of liquid iron) proved to be the forerunner of the stream that would shortly flow, nay the mighty torrent that was needed to slake the thirst of the cadernous sand moulds in the numerous foundries of Ballarat. Not the glamorous golden metal so much talked about and sought after; but iron, the very life blood of the heavy industries.

With the demand, then existing for castings, success was assured, and business steadily increased. ~~After 1855~~, after negotiations with the newly formed Gas Co., he shifted over the creek to the present Bonnell sheet site, where he made all kinds of castings, large and small, in both iron and brass, for the mining and other industries. The mechanical ingenuity of the first Richard Brahan in Ballarat, is most apparent. He is credited, ~~1866~~ with making the first steam engine to be made here. (until quite recently it was still in operation at Lilydale). He also made the first penny farthing bicycle made in Ballarat. This cumbersome iron tyred contraption, remained at the foundry for many years, but eventually went the way of most scrap iron.

Like "Ayesha" of old committed to the furnace to be reincarnated, in this case, perhaps to start life anew in the form of a battery shoe, or ornamental freeze on a street verandah. Who knows?

A portrait of Richard Brahan, hung in the "Art Gallery" for many years, and the claim of being the first man to smelt iron in Ballarat, which was printed beneath it was never disputed.

Within a stone throw of the place where we are now assembled Obey Kreber & Co. started the "Victoria Foundry" also in 1855. It was situated next door to, and on the north side of the Town Hall Hotel in Armstrong street south. Like the Phoenix, it went through to Dawson street. It can be seen in a view of Ballarat looking south west, taken from the then new Town Hall tower about 1872. A fine collection of these views of Ballarat of that time, are worthy of a look see on your next trip to the museum.

Some time in 1869 it changed hands, and became the property of Hunt & Opie. It is possible that Hunt operated this foundry on his own account from late in the sixties until it closed down in the 1875's. During the first few years of being, it was styled iron works, although castings in both iron and brass were made there.

Obey Kreber & Co made mining gear of all descriptions, and on the 3rd of Jan. 1860, a new bell weighing 336lbs for the East Fire Brigade, was cast in the presence of members of that brigade. Apparently this bell was not good enough for another, the "Lady Barkly" weighing 1943lbs, rang on the 21st of July 1863 at the Station on the east side of the creek.

To the Victoria Foundry run by Hunt & Opie, must go the credit of making the first locomotive to be made in Ballarat, (probably the first in this state) (not so eh)

This "old iron" was christened the "Lady Barkly" by her Excellency Sir Henry Barkly in 1860. It was constructed for the patentee (a Mr J. A. Davis, an engineer on the Geelong to Ballarat railway line, then being built) Records reveal that it was not finally finished until Aug 1861, and the owner did not take delivery until Nov. of that year, when it was given its trials on Mr. Davis's property at Lal Lal. He offered the engine to the Board, but it was not accepted, because of its unorthodox design, and it was sent to the Southland Railways, (Invercargill District) New Zealand. A photo of the "old girl" can be seen in the museum.

made for contractors engaged in building new lines. They made 3 steam tram motors for the Bendigo (steam) Tramway Co Ltd also a small number of passenger carriages for the V.R. Many of you will remember the fine old steam roller used by the City Council many years ago. The engine is still in service although steam is supplied from an outside source; but this is going over ground covered by the late Mr Barrow, in his very fine paper on the Phoenix Foundry. Comparisons are odious; but let me make one or two in an attempt to impress upon you, the prowess and capacity of this great foundry.

One of this State's largest and most modern foundries, boast of the fact, that it casts 48 tons of iron per day. The Phoenix made the beam engine and pumping plant for the "South Star Mine". The beam for that engine was cast in two halves, each half weighing 23 tons. 48 tons a day 23 tons in one casting. Another large casting made by them was a spur gear weighing 20 tons.

Ballarat's largest foundry of today, made its heaviest casting some years ago. It weighed 4½ tons, all the office staff were taken out to the foundry to see it cast. 4½ tons - 23. Need I say more?

Imagine if you will, those "Tubal Cains" of old, all dressed alike in white moleskin trousers and caps, stained crimson by the glow of 20 odd tons of moulten iron. What would I give to see that scene re-enacted! Certainly more than the price of a theatre ticket.

Sad was the day for Ballarat when this famous old foundry closed its doors for ever, on the 31st of July 1906 after 50½ years of operation. The effect of its brilliantly trained tradesmen, has been felt all over the Commonwealth. Some of the remaining old Phoenix apprentices, hold down executive positions in engineering works in present times. A few years and they will be just a memory.

The din cre[illegible] ...ron workers on either side, could [illegible] ... [illegible] to a client suffering from the effe[illegible] ... the night before, to say nothing about the [illegible] ... smell of oyster shells, used to flux the iron in the furnaces, or the pungent odor of gasses liberated from the burning loom cores being a poor substitute for roses on the dining room tables. However the pub is still there, the foundries have gone long since.

Another interesting foundry born about 1855, was the "Soho". Robinson Thomas & Co started in business at the South East corner of Eyre and Errard streets. They catered for the mining and general engineering demands. About 1864 Joseph Bishop and Co. took it over. Their adv. in the 1865 directory states, Soho Works, hitherto conducted under the style of Robinson Thomas and Co. will, in future be carried on under our own name, Joseph Bishop & Co. — ~~[illegible]~~ The Soho Foundry was transferred from its Eyre St site to Dana Street, opposite ~~[illegible]~~

~~Bye~~ the 14th of May 1864. The "Soho" turned out two locomotives built to the same design as the "Lady Barkly" (made by Hunt & Opie in 1860) These also were delivered to the Southland line in New Zealand. These Engines were much larger (built by Robinson Thomas & Co)

Joseph Bishop's foundry made the first steam powered boat to be launched on Lake Wendouree. This was in the year 1865, and strangely enough, they christened it the "Victoria", the same trading name as the rival foundry in Armstrong street, and like that foundry, it went out of business before the 80's. The Victoria Foundry was Atkinson by the P.O. Dir 1875

At the North East corner of Drummond and Eyre street is the birth place and burial ground of Ballarat's second largest foundry. The Union Foundry was started by [illegible] Walker & Co. in March 1863. (They also opened a branch in Maryborough Queensland which, incidently is still in being, and in a big way). In Oct. of 1872, Mr. John Hickman bought half of the Ballarat business and it then became Walker, Hickman & Co. John Hickman became the sole proprietor in Nov. of 1879, and Hickman's Union Foundry

the age of fifty five he was ... his life
[illegible] in the Old Cemetery. His was a [illegible] but very full
life. He literally lighted a fire 95 years ago that still burns
brightly to this very day, and thousands of tons of castings
in every conceivable size and form have been made by the
business he founded in 1855. His two sons, Richard (born in
a digger's tent) and William (born in the house his father built
shortly after starting the foundry) (this house is the very
first house over the bridge on the left hand side of East ward
street.) carried on the work he started. Before leaving this
illustrious old "Yarrowee Foundry", may I be permitted
to wish those of the third generation with an interest in the
foundry, again a Richard and William aged respectively
73 and 66 years. (they have recently retired from active
management), many years of health to enjoy the fruits
of their labour. May fortune continue to smile on the fourth
who have now taken over control, and also many others to
follow. *

Let us return again to the Fifties.

After the initial start had been made, other founders soon
made their appearance.

On the west side of Armstrong street south, directly opposite
Eureka street, (we now call it Phoenix Lane) R. Carter and Co.
in Feb. of 1856 began what was to become Ballarat's largest
foundry, meeting any demand made by the mining industry
and other local requirements. In 1878 it became an
incorporated company under the management of W. H. Shaw
one of the original members of the old firm. It changed its
name to the "Phoenix Foundry Company Limited", and probably
encouraged by the success of two other Ballarat foundries,
built the first locomotive in 1871. This engine was made
for a Western Australian timber company and cost £2,344
the price being £12 lower than that of Walker & Co's (Union —
Foundry) Estimate. The Victorian Gov. Railways gave
the Phoenix their first order in 1872 and no 5. A.P. on the
4th of March 1873, the first of a total number of 353 loco-
motives for the V.R. left the works. Five other locos were

Jo[illegible] am. built the first conventional type [illegible] late [illegible]. and it was ceremoniously named "[illegible]" [illegible] running on March the 14th 1871. Hunt built this engine for the "Ballarat Timber Company" of Boorabbin W.A. and it was the very first locomotive to run in the Western State. The remains of this early loco. still stands at Busselton W.A. as a much prized historical exhibit.

Don't be deluded into thinking this foundry was only interested in locomotives. In the archives, records will be found of its commitments to the important miners in the 60's, the Great Redan & Glendale being a valuable customer.*

Mr. Jenkins will tell you, (probably from memory) that the Prince of Wales Company's No. 3 shaft, had four cast iron puddling machines, each 16ft 6in in diam x 2ft 6in deep, arranged in a square and driven by Hunt & Ophir's patent chain and pulleys. The Victoria closed down in the 70's 1875 ~~early 80's~~, and as we leave this old foundry slip back into the past you will probably wonder as I do, why this works which made such a brilliant start, should fail when others which started later should flourish. The Phoenix may look over the Victoria in

Hotels seem to creep into most talks on Ballarat's past. This paper is not ~~[illegible]~~ immune.

Where ever an old foundry was located, you can be sure there was a "Pub" not far away, to claim the hot and tired foundry workers when the knock off whistle blew. In a view taken from the tower in 1873, there are three hotels on the west side of Armstrong ~~[illegible]~~ Mr. [illegible]'s Bar near and the Phoenix. In the 1857 directory, The Victoria Foundry advertises its location as being at the rear of Bath's Hotel, yet it was right next door to the Town Hall Hotel. (I have my suspicions which came first.) One would imagine this pub was much too close for comfort, literally sandwiched as it was, between two large foundries.

[illegible] only to the Phoenix in [illegible] foundry in the quality of [illegible] manufactured. They made some of the large [illegible] manufactured in Ballarat. Its [illegible] Main. The most wonderous pumping, hauling, and other plant being supplied to mining companies all over the colonies. This company's wage sheet was £1000 per month when the 1887 edition was published. Like most of the other foundries they did not rely on the mines alone to keep them going. Besides large cast iron pipes for water and gas mains. They supplied what I will call the some of the ornamental requirements of Ballarat. Reputed to be made of Lal Lal iron, the cast iron fence enclosing St Patrick's Cathedral, is but one of many fine examples of their work. (This was made by Walker & Co.)

John Buckman died in 1890 whilst being in office for the second time, as mayor of the City. (C.C. Shoppee finished the term. The foundry was carried on by Dingle and Evans until it closed about 1909 Kennedy, Millet & Spilman were then in the building.

Part of a brick wall can be seen at the rear of the tennis courts in Drummond St. and is all that remains to mark the site of this once large, and famous foundry.

Some of the ornamental work made by the foundries in early times is really remarkable. The entrance gates to the Old Cemetary were made by Stamp and Son of Pleasant Street South. and any one in the trade to day, will tell you that despite our machinery and modern methods, we would be hard pressed to reproduce this fine example of the iron workers artistry. Made by Blomely's Foundry. the gates at the New Cemetary were destroyed by an unfortunate car smash some time ago. (in old iron founder's opinion (expressed in true foundry man's esperanto) of the modern replacement, is perhaps better not said. Some of you while shopping on of your own suburb in the good old days, may have been forced to climb one of the old gas lamp-posts. by a rival gang. Many of these posts were made by this old

Windermere's [illegible] Incidentally it is one of the few [illegible] of [illegible] that started in early times. In [illegible] Blomeley's [illegible] was shifted from Windermere Street to its present [illegible] in Dawson street in the same building that H. V. McKay used for their foundry before going to Sunshine. The business is now run by N. L. Blomeley a grandson of the original founder.

The next time you go to the West Railway Station, maybe to meet your mother-in-law travelling on the late evening train from Melbourne, you will probably rush down at the last moment, and arrive there just in time to hear an amplified voice announce that the Melbourne train due to arrive at 10.23 P.M. is running 40 minutes late. As you grope for smokes and lean heavily against one of those four large cast iron supports just inside the entrance give a kindly thought to the old Albert street foundry which made that comfort possible. (The primary intention for placing these columns is to support the tower.)

Two brothers Charles and Andrew Brown started the Albert Foundry early in ~~the~~ 1862. (Charles Brown is credited with melting iron in Main Rd, near the Charlie Napier theatre before the sixties.) They did not last long together and dissolved partnership. Charles opened up at the rear of the Albert street foundry in Grenville street, later shifting to Grant street, just west of the Yarrowee Creek, on the south side near White Flat, or as an ad in the 1865 directory states Charles Brown and Son. Grenville Foundry. Grant street west near the Sir John Franklin Hotel.

Andrew Brown carried on the Albert Street Foundry, making Mining battery pipes, pumps, Spider wheels on poppet legs. Stanchions, ornamental work for verandahs and balconies etc.

He was a director of the famous "Band of Hope" mine, a Member of the Caledonian Society. Life Governor of the Orphan Asylum and a member of the Ballarat East Fire Brigade.

He died on the 12th of March 1885. Investors bought the business in 1886, and Harrison, Henna, and Moule took it on doing mining and general engineering work. In 1888 John R Harrison took it over on his own account. He was a

[illegible] engines, and [illegible] winding [illegible] [illegible], and other mining gear especially [illegible] appertaining to batteries. He taught his three sons, James, [illegible], Arthur the trade and with a son in law Mr James Gilchrist, they carried on the Albert Foundry until it was sold up and pulled down in 1932. Deck and Grigsby used a small portion of it as a brass foundry from 1929 to 1931, When Grigsby shifted to Main St. west, next door to Gilbart's office building.

The Grenville Foundry grew to be a large concern, making mining and other machinery, of every description, boilers, steam engines, etc. An extensive fire burned out the pattern shop and did other damage to this foundry about 1880; but they carried on until 1887, when Charles Brown died (I have suspicions that a man called Armstrong ran this foundry after this date; but can find no definite proof.)

Loney and Dingle's Foundry on the east side of Humffray St and south of Cameron street, was a large foundry, worthy of more than the short description space permits.

Starting very early, it, like the other foundries with machine and fitting shops, relied on the mining industry for most of its work. They made a particularly fine winder engine comparable with anything used on the field, pumps and puddling gear, battery machinery and cast iron pipe in all sizes kept them going until the turn of the century. Dingle after dissolving partnership with Loney had gone up to the "Union" in Drummond Street. Thomas Body, con[illegible] a director of the Phoenix Foundry, joined up with Loney but the old foundry had seen its best years, and after several others had tried to keep it going it closed up about 1900.

An interesting foundry "The Tubal Cain" was run by Joseph Thomas and Co. in Urquhart street on the north side, next door to W. S. Round's Chain Works on the corner of Lyon street. J.K. Ralston ran it later, on the corner premises. Many old founders call this the "Lal Lal"; but I cannot find this in any authentic reports.

There were many other foundries of this type. Hunt's Globe, Martin Higgin's Queens, Tregaskis's Axle, Nettles and G.G. Norman to name but a few.

for mechanical aid was felt by those of the mining community. The rich outlying agricultural areas were slow to realize the greater output gained by the use of machinery, and a crop of agricultural implement makers sprang up in the early 60's. Starting as blacksmiths catering for the simple needs of the farmers of the early days, they became foundries in the true sense, when the design of machinery became too complicated for forgings, and castings in both brass and iron became necessary.

One of these early firms to start up in business was Geo. Munro. Early in the 60's he established a blacksmiths shop at Alfredton in Raglan Road. (We now call it Sturt street)

His wife, besides being the striker, was also the office staff. She could neither read nor write; but made a form cross as signature to every paper she had to sign, and could calculate with anyone. The business managed by this pioneering couple grew rapidly until the large works, (An acorn to a mighty oak) took up the full block contained in what are now, Sellers to Langley streets, and from Sturt St to Arthur street, employing 150 hands all the year and 200 at busy periods; but listen! At this time the office staff consisted of 1 clerk and an office boy.

They made reapers, horseworks, chaffcutters, knifers, harvesters, winnowers, and at one stage even railway trucks, and took twice as many prizes as all the other makers put together, at shows and exhibitions in the 70's.

A familiar sight to residents in Sturt Street, was an old grey horse called "Bruton", pulling 12 strippers or some such load behind him, on his way to the Ballarat West Station.

Geo. Munro died at the age of 50 years, and his two sons carried on the business. The City of Melbourne Bank [illegible] and the old works and the building were pulled down and sold in parts. Later the sons opened in Peel street N^th and manufactured on a much smaller scale, until about 1911, when W. Bishop and three partners bought the business and shifted to H. V. McKay's old premises in Guille Street; but it has not been a foundry

since that date. (... in.)

W. Bishop carried on the business on his own account shortly after shifting to the Yuille street site, and his family still operate under the old name of Geo. Munro.

Many fine tradesmen learned their trades at the "Alfred ton Works", some of you will remember Mr Don McGregor, for many years, manager of the Ballarat North Railway Workshops, Mr T. Hynam.

Another Scot, James Smith from Aberdeen, established a black-smith's shop in Creswick Rd. early in 1865, and like Geo. Munro was quick to realize the ready sale of agricultural machinery. This works did not have its own foundry until Joseph Osborne bought the original owners business in 1903. Prior to that date, all castings were made by Benoit and Williams in their foundry at the rear of the main works.

Joseph Osborne operated two other foundries before taking over Smith's. The first one was in Creswick Rd. about 4 doors north of the Canberra Hotel. In 1899 he shifted to French street, at the rear of his home in Creswick Rd. He did jobbing work for the smaller implement makers, and retired in 1920 and sold the James Smith works to the Company which still trades under that name.

When Osborne took over Smiths in 1903. Benoit and Williams transferred to Alfred Davey's (successor to Geo. Davey by the way) foundry next door to the Grenville College in Mair Street west. When the old wooden foundry was burned down, Benoit built a new brick building, which was then called Benoit's Sun Foundry. It was eventually taken over by M.G. Taylor motor sales, Benoit's son Mr N. Benoit having in the mean time established a foundry at the rear facing Davey street, where he still makes, grates, copper frames, etc. besides other jobbing work.

You all know of the famous H.V. McKay works in Yuille and Davey streets. At least, a full paper would be necessary to record the activities of this progressive company, before they moved to Sunshine in 1906-7. They had one of the few foundries which cast steel in Ballarat

I could be called disloyal if I did not make some mention of the company which has given me the option of reserving my old clothes for the past 30 years.

Two brothers, David and Adam Ronaldson (sons of a Moreton farmer) and John H. Tippett (a farmer from Bleam), recognised the usefulness of the internal combustion engine as a prime mover for the farmer and other small power users. Early in 1903, the three partners started up in business in a small works at the south east corner of Brunswick Rd and Haworth street, Berwick, Iron Foundry supplying them with castings until 1908 when they installed their own foundry. From that small beginning 47 years ago, it has grown to the large business of Ronaldson Bros and Tippett Bros Ltd which makes claim to being the largest manufacturers of internal combustion engines in the Southern Hemisphere, employing more than 380 employees and pay out over £3,250 in wages every week.

Their new foundry beyond the bowling ground in Brunswick Rd, will shortly go into production, and when finished will cost in the vicinity of £100,000.

Dingle and Laverick were another old firm making agricultural implements in Brunswick Rd.

So far I have made no mention of non-ferrous founders. Most of the large early foundries made castings in both iron and brass; but there are some that specialised in brass only.

John Mann established a brass foundry in Armstrong street south, very early in the 70's. The business is now run by his son S. Mann. Records show that they made their first fire hydrant in 1873, and the foundry was in existence some years before that date. James and Winter, brass founders and finishers in Dana Street, where Oliver and Stephens boot factory now is, were also going at that time.

J. Mitchell established a gun and locksmiths business, complete with brass foundry, next door to R. McGregor's Produce and Poultry auction in Lydiard street north, (now Lawless and Kay). This was about 1870, and he retired about 1900, when S. McIvor took over to start his O.R.B.

iron foundry [illegible] at the Bridge street.
The [illegible] emblazoned on the entrance gates to the Botanical gardens, and a very fine model of an oscillating steam engine now to be seen in the School of Mines Museum, are but two examples of this brilliant old craftsman's work.

M.B. John arrived in Victoria from Wales about the year 1870. After working as a journeyman at several local foundries, he took the position of foreman brass moulder at the Phoenix Foundry, and remained there for eighteen years.

In 1895 or 6, he established a brass foundry of his own, in Armstrong street south, (I think it was at the rear of Parker's locksmith business). After a few months, he found the available space inadequate, and moved to Lydiard street south opposite the "Gaol" and next door to the "City of London Hotel". He was a shrewd business man as well as ~~[illegible]~~ an excellent tradesman and soon had a good business, manufacturing engineer's, plumber's, and ornamental brass work. On his death the works was managed by his son William and of late years by his grandson's, it now being an incorporated Company.

All jobbing and other brass work excepting the manufacture of valves has been dropped, and today they are the largest manufacturers of all types of valves in Australia, and compare favourably with any works of their kind in the world. A few years ago, they installed an iron foundry and, then became, the only iron and brass founders in Ballarat in present times. The Company is building a large works opposite R.B.&T.'s new foundry in Creswick Rd., and it is estimated to cost more than £400,000. Space does not permit me to include the other brass foundries

Even the housewife has not escaped the careful attention of the past and present foundries. From the early days when the camp oven held pride of place, to the present day modern fuel stove, copper frames, flat irons cooking utensils, and what have you. Mitha Bros., S. McIvor O.K.B., Benoit's S.U.N. and C.C. Harding. are only a few who,

have specialised in these very necessary articles.

You may well ask where all the raw materials used by the foundries come from.

Until fairly recent years most of the pig iron has come from England and India, the best part of it at cheap cargo rates and in some instances as ballast in the sailing ships bringing out migrants, or the wind jammers trading in the wheat and wool industry, some of this iron being bought for as low as £3 per ton.

The Lal Lal Iron and Foundry Co produced large quantities of pig iron, chiefly for the use of foundries engaged in the mining and treatment of gold. It was used extensively for battery shoes and heads, owing to its long wearing properties.

Because of the prohibitive cost of treatment, the vast iron ore deposits at Lal Lal have been barely scratched.

If Dame Nature had granted one more blessing to this already liberally bestowed district, could easily be as great (industrially speaking) as any of Britain's famous manufacturing cities.

If the large deposits of poor grade lignite were instead of bituminous coal seams in the same quantities, what might this city be today?: but this is history, and time alone can show what will happen to the valuable iron ore deposits within 9 miles of Ballarat.

Hundreds of thousands of tons of sand suitable for use in the foundries have been taken from local natural sand deposits. The huge excavations in Bond St. & Mt. Pleasant alone, bear mute evidence of the work that has been done in quest of this very essential commodity.

Burrumbeet also, has supplied its quota for special uses, and is destined to play a greater part in the near future.

[illegible] on [illegible], let me try to illustrate [illegible] [illegible] [illegible] what the foundries have don[illegible] [illegible] towards [illegible] the prosperous and [illegible] Ballarat's [illegible] [illegible] today.

Take a look around the built up area, and see how often you can be out of sight of their [illegible] in some form or other. On the rare occasions, when it is not readily visible, you can be reasonably sure it is not far away underfoot in the water and gas mains of the city.

Rich as Ballarat is in the doings of the stirring events of the past, it is only natural that many citizens have left behind, their footprints in the sand of time. There are many foundrymen included in these worthy departed pioneers, besides they have left their imprints in the more concrete, or tangible form, of monuments in iron and bronze, made in the moulding sands of Ballarat's past foundries.

P.S. See list of Foundries of Ballarat for complete record

JES