

FREMANTLE CITY LIBRARY

Oral History Project

I N T E R V I E W

Granville Reginald Hickling

Fremantle Foundries

10th, 24th and 28th Feb, 14th March 1995

Interviewed by
Margaret Howroyd

(Guide to Contents only)

six tapes -360 minutes.

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INTRODUCTION

Granville Reginal Hickling (Gran) was born at Birmingham in 1921 and came to WA when he was three. At 10 he was helping after school at Wilbur Furphy's foundry in Katanning and became apprenticed at 14. Wilbur Furphy became his mentor. When he was 16 his apprenticeship was transferred to Grey Street Foundry in Fremantle, owned by the Furphy family. Wilbur, Sam and Felix were brothers of the writer Joseph (Tom Collins).

During World War Two Gran was an essential worker at the Furphys' Grey Street Foundry, making castings for Bren Gun Carriers. After the war he and Jack Woods set up Universal and Brass Foundry at 96a Stirling Highway, North Fremantle.

They built up from scratch a thriving business until they accepted work from Joyce Bros to cast rotary hoist parts and went into galvanising. The business was sold to JC Lyons with Gran as manager. Finally he set up business again, this time with Eric Hogg at the Grey Street building, E and G Foundry, until Eric retired and then Gran continued by himself. The Foundry worked for eighteen years for six days a week for long hours and the business was a success.

Gran describes in detail changes in foundry processes, implements and machinery. His involvement with the Fremantle Sailing Club for many years is also described. A video tape of the casting of a replica of Paddy Hannan in 1983 at E and G Foundry has been placed in the Fremantle Library Local History Archives. Gran Hickling on tape six side two of these interviews has recorded a commentary as he watched the video.

INTRODUCTION

1. IDENTIFICATION AND INTRODUCTION

2 BIOGRAPHY

- a Born : 24th March 1921, Birmingham, U.K.
- b Father : Horace Hickling, sign writer and painter.
- c Mother : Lilian née Potter.
- d Health reason for migrating to Western Australia.
- e Grandparents brought all the family with them except for his father, who came later.
- f Family was at Mt Barker; younger brother Denis.
- g Father got a job in Mechanics' Institute in Katanning.
- h Father was also a book-keeper.

3 FOUNDRY AT KATANNING

- a Started to work for Wilbur Furphy in the foundry and he was apprenticed.
- b He saw the foundry being built when he was 9 years old.
- c Wilbur told him about the foundry and he was fascinated.
- d Gran helped them in the foundry as a child; tasks detailed.
- e Polishing the shafting described; changes in foundry machinery, only one motor in those days.
- f Wilbur and his precepts of always doing well.
- g At about 11 years of age he did moulding in green sand; gear was obsolete; conditions were hard; had to make do. He made stove top plates etc; he had his own little corner.
- h About 13 years old he was job moulding tractor grips.
- i By 14 he was about second year apprentice standard; used the lathe, details.
- j Les Radcliffe taught him blacksmithing.
- k Details of work done.
- l Gran became a strong solid young boy.
- m Wilbur Furphy was a nephew of Tom Collins (Joseph Furphy) and Felix and Sam were Joseph's brothers.
- m Gran had 3 brothers and one sister.
- m Wilbur's wife became ill and he had to go to Perth.
- o Foundry went down hill because of Wilbur's absence.
- p (Gran called Wilbur, Bill)
- q When Gran was 16, Wilbur got out of the Katanning Foundry.
- r Les took over and told Gran there would not be more foundry work. Gran was apprenticed at Katanning.
- s Gran went up to Grey Street Foundry where Wilbur was working for his uncle, Sam Furphy, to make fire bars. When the job was finished that was the end of his employment so he went out to a farm belonging to Wilbur's uncle, Lyell Furphy.

4 FREMANTLE, GREY ST FOUNDRY OF FURPHY BROS

- a Employees working at Grey Street foundry were amazed at Gran's ability to cast fire bars when only 16.
- b Times were bad; Gran tried Shell Company and four hundred men were waiting for the labourer's job for three months.
- c Lyell Fuphy's farm at Stoneville.
- d Sam Furphy at Grey Street Foundry decided to retire and Wilbur took Sam's share over on behalf of his mother. His mother bought out the share; the Furphy family was quite wealthy; they had made the money out of the Foundry game.
- e Wilbur invited him back to Grey Street Foundry and transferred the apprenticeship papers over.

- f This foundry was very different from the one in Katanning; description of goods made; Instone Stoves, grave rails, stove parts. Gran was not allowed to do brass work.
- g By the age of 17 Perth Technical College course came in for one day a fortnight under Sid Jackson.
- h Sid Jackson said he agreed with Wilbur's opinion that Gran had a good set of hands as a moulder. Education was lacking in sums and writing. Could read a plan and mould anything.
- i Classes were discontinued and he was disappointed; Wilbur suggested he help him study with books on schoolwork and metallurgy and gave him work to do, spelling and sums etc.
- j Sid Maine, Wilbur's nephew, and Wilbur quarrelled.

TAPE ONE SIDE TWO.

- k Wilbur became strange when Gran was 19; they had lived together in Russell Street and elsewhere for two or three years.
- l Gran met his first wife, Dorothy, and Gran loved dancing and swimming and fishing.
- m Wilbur had a girl friend and Gran moved out and went to a place in Wray Avenue, just around the corner from Grey Street Foundry.
- n Wilbur left Grey Street Foundry and went to Tomlinson's, Perth.
- o When he left there he started a travelling library in Capel and Gran lost track of him.
- p Gran was still working at Grey Street Foundry for Sid Maine, Wilbur's sister's boy.

5 WORLD WAR TWO

- a Gran did not get on with Sid Maine; he decided to leave but World War Two was on and he was an essential worker and could not change jobs. He tried to join the services, but was not allowed.
- b Unable to join forces because he was an essential worker; felt out of it; unable to get a dance at local dances.
- c Gran took over the Grey Street foundry for a while; supposed to be his business but Maine was apparently cheating him.
- d Foundry was a haphazard affair.

6 UNIVERSAL IRON AND BRASS WORKS 96a Stirling Hwy, North Fremantle

- a Jack Woods with whom he worked at Grey Street and Gran started this business from scratch.

7 APPRENTICESHIP CONTROVERSY

- a Apprenticeship credit given to Gran at Grey Street; controversy described in detail.
- b Court case described; he had to serve 6 years and 3 months apprenticeship. Wilbur paid him full rates at the end of 5 years.
- c Time off for time at Tech; Gran used to make it up voluntarily.

8 UNIVERSAL IRON AND BRASS WORKS (CONT.)

- b No money, they started from scratch and got equipment adapted etc.
- c Foundries were in demand at this stage; Sandover's helped them out with equipment and backed Gran and Jack.
- d Gran and Jack agreed to make castings of propellers and magneto cylinders and other parts for PUT boats for Sandover; demand for these was from returned ex-servicemen.

- e Other work was required to survive. They also made irrigation parts in brass.
- f Machining was done outside; eventually they got a lathe and Gran did machining.
- g Gran's versatility of experience was valuable in this new business.
- h Made chills for castor beds for Joyce Bros.
- i Jack had a car accident which impaired his sight; off work for three months.
- j He then suffered from epilepsy fits; not safe for casting. He decided to get out of founding.
- k Gran took his share over for £800; effort to pay him out.
- l Gran's reputation was increasing; got Co-op Bulk Handling for Wheat foundry work and continued to get this work for forty years.
- m Foundry work for shipping meant he needed to employ more men; he finished up with 2 men, an apprentice and himself and on Saturdays brought in moulders on contract.

9 GALVANISING

- a Joyce Bros gave Universal Brass and Iron Works orders for rotary clothes line hoists.
- b No one in WA was doing chill cast aluminium; gear case covers. No one in WA knew about these castings. Many failures.
- c Aluminium had to have silicon in it. Air freight of this type of aluminium from Eastern States and Gran did the castings successfully.
- d Joyce Bros could help with finance over the aluminium.
- e Gran had a very successful business at this time.
- f Cross-arms were not being galvanised properly and Joyce Bros said unless they improved they would have to send the contract over East.
- g Gran decided to go into galvanising himself. £18,000 on credit to set this up; galvanising bath done and a man who could galvanise successfully galvanised thousands of them on the first batch.
- h Second batch not needed for some time; when half a ton of hoists were ready for galvanising it was a failure.
- i State Engineering Metallurgist friend analysed the castings and found the proportion of pig iron was incorrect.
- j Could be dangerous too ; a weight mixture for a Brunell Hardness of 14 was required.
- k Next batch was successfully galvanised; error cost £18,000
- l Gran decided to utilise the bath for other work; bank was not happy and amount of galvanising work became excessive; Gran worked his guts out.
- m He had too much work and the payers were poor; margin of profit was not great.

TAPE TWO SIDE ONE

- n Equipment was deteriorating; roof was collapsing and ammonium chloride was an environmental annoyance.
- o Gran decided to close it down; Allan Lyons of JC Lyons offered to buy him out.
- p Gran was to be manager of the new firm; Gran finished up with only his house and £2,000. He was about 30 at the time.
- q He had been in the Universal Iron and Brass since he was about 20 years of age.

r He was buying the premises at 96a Stirling Highway. Business arrangements; his brother worked in the foundry and Gran rented the house in the front of 93a to Mervyn, his brother. They had had five men in the foundry and three in the galvanising shop.

10 JC LYONS

a Later JC Lyons closed the galvanising shop down, ordered to do so by Council.
b Environmental issue; Gran had put up the galvanising plant without getting permission. He did not even know he had to have permission.
c Gran became Fremantle Manager for JC Lyons.
d JC Lyons decided to build in O'Connor and to build the foundry first.
e Galvanising plant to be at the back; criticism of the foundry building and set up.
f Problems arose with heat because roof too low.
g Transfer of all plant for 96a was a huge job organised by Gran.
h A furnace was bought from Joyce Bros, a five-way balance furnace. Joyce were closing down their foundry.
i Price of furnace discussed; worth £2-3,000 but he got it for £100.
j Dismantling the furnace by Gran and the move to O'Connor.
k Incinerators for Olympics, other work; took work from Scandia Foundry. X
l System in the foundry changed by Gran; got green sand casting instead of synthetic sand. Castings of incinerators greatly improved.
m Orders from Olympic; Alan Lyons Director was very pleased.
n 20 men in the foundry; heat excessive; Gran ordered all the perspex off the roof.
o Foundry described and his set up in an office; railway contract for brake shoes; story of inspection of brake shoes and how he solved it.
p Orders were 50,000 at a time; tenders out to others as well as JC Lyons.
q Arrangement made with competing firm.
r Inspector of brake shoes and the tongue fitting test; Gran got some of the tongues and every one of the brake shoes was perfect.
s Business was going well; JC Lyons group were a family and there was a worry about what happened with a death in the family.
t Decided to put business on the market and sold it to an English firm.
u Gran worked for JC Lyons for 10 or 11 years.
v New boss and owner not satisfactory to Gran; he decided to resign; Allan Lyons persuaded him to re-think but Gran left this firm now named , Cast Craft, which had begun to deteriorate. Cast Craft was to be sold.

11 E AND G FOUNDRY

X a Scandia wanted him to help them get out of a financial problem.
b He decided not to accept this post; reasons given.

TAPE TWO SIDE TWO

- c Cast Craft was not sold and he had to give three months notice so he told Cast Craft he would think about it then.
- d Eric Hogg with whom he had worked was leasing the Grey Street foundry and he offered him a partnership at Grey Street Foundry.
- e Eric was about 62 years old; suggested when Cast Craft was sold they get some of the equipment.
- f Eric's wife Beryl did the bookwork; Gran's wife, Greta, got finance for him.
- g Gran took the work with him to Grey Street and some of the men.
- h Allan Lyons allowed Gran to buy equipment from Cast Craft; Gran had arranged the original buying of equipment.
- i Greta had a hairdressing salon in Cottesloe and she was able to get finance.
- j E & G Foundry, E for Eric and G for Gran.
- k He got all the gear for £1500 from Cast Craft and worth £15,000. Allan gave him machine tools etc, very generous.
- l Grey Street Foundry was in a poor state; Eric did not want to spend money on it; he would not get value for money at his age.
- m Further work came in form State Implements and Engineering.
- n E and G Foundry, known as the EGG foundry, began to lose work because they could not deliver.
- o Eric reached 65 and due to retire.
- p Gran had the support of all the workers in Grey Street Foundry.
- q Greta agreed they set up under Gran.
- r Finance arrangements detailed.
- s Bank arranged loan; Eric refused any payment for his share.
- t Eric did not have a lease, only a gentleman's agreement with Furphy's for the premises.
- u Eric was to have a few days work each week.
- v Finance was arranged; Eric retired and Gran took over at about 50 years of age.
- w Changes effected in the foundry; Gran's son came in too.
- x Wilbur Furphy supplied material to do up the building and Gran supplied the labour; three of the family owned the building in Grey Street.
- y Gran got a verbal agreement about the premises from Furphy's who owned the building but not a written lease; three months later; Wilbur Furphy came to visit; Wilbur not well, heart trouble; he wanted to sell the property.
- z Agreed to sell it for \$14,000 to Gran; a very low price because he wanted Gran to have the building. A year to get finance. Bank agreed it was a good buy. Gran had to find \$7,000 and was able to sell house at Dunsborough.

12 E AND G FOUNDRY UNDER GRAN

- a They paid the building off in five years.
- b Price review; prices increased considerably and they did not lose one client.
- c New price list was 50 per cent increase.
- d Gained more clients; foundry began to boom; paid better wages.
- e Gran was very happy and even took a day off a week; but worked every Saturday. For eighteen years that foundry worked six days a week. Hours detailed.
- f Made own incinerators, camp ovens, etc; all were profitable.
- g Staff conditions and morale.
- h Gran retired at 65 years of age.
- i Eric's wife did the book work.

- j Eric had made only a small profit in 22 years.
- k When Gran retired he gave £1,000 to Eric because he had not charged for the business eighteen years before.

TAPE THREE SIDE ONE

13 FURPHY FAMILY AND FURPHY BROS FOUNDRY

- a Katanning Foundry was started and owned by Wilbur Furphy.
- b Sid Maine was Wilbur's sister's boy.
- c Wilbur's story was that they came from Bairnsdale and were water tank makers. One of these tanks is in Kalbarri.
- d Two brothers came to WA, Felix and Sam Furphy and bought a block with small building in Grey Street in Fremantle. Here they started the foundry as they had all the expertise except that they needed moulders to help them. Felix looked after the patterns. Bill Calder was their moulder from Scotland and he was very experienced. Bill Monahan was another very good moulder.
- e There was a glut of tradesmen due to the depression and they could choose the best.
- f System of giving 10 per cent to those who got orders for them. This brought much work into the Furphys.
- g They made Instone stoves and then started making grave rails.
- h Sam Furphy looked after the machining, drilling and fitting of the castings. They made the fittings for three brands of windmills, Hyatt for J & W Bateman, Samson and Monitor Mills.
- i Felix looked after the patterns and the moulders and the brass work. Their work was excellent and they only used green sand; hard coke was imported from Germany and Holland.
- j The Furphys began to employ their sons, Lyell, Wilbur and Alvar as apprentices; Alvar and Wilbur took on moulding and Lyell took on turning and fitting.
- k Wilbur broke away from the family business first, went East and then began the Katanning Foundry.
- l Wilbur became Gran's role model at this stage. Description of Wilbur.
- m The Katanning Foundry did not do well in competition with Wilbur's father's 10 per cent arrangement.
- n Grey Street flourished until there were 14 men employed there.
- o The brothers decided to build another foundry over the top of the old building; it took up almost all the area of the land except for the laneway.
- p Description of layout of new building. No welding in those days. Gran pulled down the jarrah shelves later to make more room.
- q Stocks were held so that delivery was immediate and first class work.
- r Furphys had a beautiful home in Swanbourne, a boat on the river and they did well.
- s Felix came down and said that the Katanning foundry could not do well.
- t Gran when he came to Grey Street foundry learnt from these excellent tradesmen; Alvar was the only Furphy there other than Wilbur and Sid Maine who was Wilbur's sister's son.
- u Sidney was an excellent turner; Gran did not like him. Sam retired and then Wilbur took over and ran the foundry for his mother. Squabbles and arguments between them. Alvar bought a chicken hatchery in Stoneville and a farm; windmills from the parts in the foundry and eventually lived there.
- v Felix was Wilbur's father; Sam was his uncle and the other uncle was Joseph Furphy who was Tom Collins the writer whom Gran never met.

- w Wilbur's mother had great faith in her family; some of them bludged on her while Gran and employees had to work extremely hard.
- x Furphys were hard task masters; examples given.
- y Furphys were mean; examples given. Wilbur was generous and Sam had one generous action every week; described. Bill Calder described, moulder, and how Gran helped him; then he helped Gran learn the trade all over again etc.; piece-work in Scotland but never in WA; when Bill left there was no parting gift and yet he had been the backbone of the business.
- z Character description of Sam. Felix was more of a business man; the brothers always wore their ties; precepts from Sam. Furphys were perfectionists.

14 PEARLING LUGGER CASTINGS

- a A great demand for these while Sam and Felix were at Grey Street Foundry making frills, pinions, divers' toe plates of brass and heel plates of cast iron, parts for the divers' suits and helmets.
- b They cornered the market and supplied them for blacksmith Les Cook in Marine Terrace in Fremantle; he did the forging for all these castings. Anchor winches in those days and sail.
- c Lugger named 'King Bay' and Furphy's devised a new method of putting copper in cupolas instead of in crucibles.

TAPE THREE SIDE TWO

- d Cupola was necessary to cast the big castings necessary; method described.
- e No one in Fremantle other than the Furphys could do this; patterns seen by Gran, all one off.

15 ITEMS MADE IN THE GREY ST FOUNDRY

- a System for making grave railings described; Furphy family foundry in Queensland. Detailed description of method.
- b Grave railings made by the hundreds, bootlasts described.
- c Work ethics in the foundry described.
- d Rates of production described; boxes of items and time allowed for each type. During depression there were plenty looking for jobs.

16 FURPHY FOUNDRY BUILDING AT GREY STREET

- a Gran was not there when the new building was erected; it was built by a friend of the Furphys; jarrah beams, good height, roof described; lane way for coke and supplies etc.
- b Corrugated iron painted both sides before being erected; lasted many years until it began to deteriorate when Gran had the foundry.
- c Building was designed for a foundry with no oil furnaces; two coke fired pit furnaces; one toilet for 14 men. Clad in sheet iron with opening roller doors each side made of timber which were kept oiled.
- d Only part of the old foundry left was where Sam used to work at the back.
- e New building was built over the smaller one which was only an old shed or cottage with a skillion at the back for casting.
- f Front of the building has a brick façade as it has now; it never had a name when it was erected for the Furphy Bros; they said they did not need a name on the front.

17 WORLD WAR TWO IN THE GREY STREET FOUNDRY.

- a All foundries governed by central body involving inspections etc.
- b Contracts for war castings took priority; other items cast only if time after the contracts.
- c Furphy Bros had the contract to make the exhaust bends for Bren gun carrier parts.
- d Agricultural items were next on the priority list; pearling took a back step. Pleasure boat castings were not done.
- e Bearings in bronze for Bren gun carriers.
- f Bootlasts were not permitted to be made; grave rails were out unless the quota was complete for war and for agriculture.
- g Gran was 18 or 19 during this period of the war; he was called up and rejected for two reasons, he was manpowered as a moulder.
- h No recognition for manpowered work during the war; ignominy of being picked up one night to check him out. Later there were forms to carry showing that worker was manpowered.
- i Tried to get into Air Force later but was not successful due, he believed, to Sid Maine's intervention.
- j Gran tried to move to the State Engineering but as he was the only moulder at the Furphy foundry he was not permitted to move.
- k At one time a nurse helped with the work tapping the furnaces; she had been put into the foundry game during the war. Women were beginning to filter into foundry work.
- l Gran had an apprentice and one other moulder, an old man, so he did all the moulding, only four of them.
- m Materials were getting scarce, copper, tin, cast iron, phosphorous, all being used in the war effort.
- n Inspectors of castings and anecdote of one inspection detailed.
- o Bren gun carrier castings continued until the war finished.
- p During the war Gran used to do a few castings for his friends' boats when he could and he filed them up at home etc.
- q War ended and Gran set up with Jack Wood for the Universal Brass and Iron Foundry.
- r That came into the era of castings for ex-servicemen and boats for which there was a huge demand after the war using deferred pay.
- s Sam and Felix were dead by the end of the war; Wilbur came back and set up a library at Capel.

18 METAL MIXTURES AFTER WAR

- a Mixtures were all made on the job, no ready made mixtures for sale until after the war.
- b Discussion on copper and tin mixtures etc and strength and quality and on brass mixtures
- c Some of the firms began to sell mixtures already made up into ingots but quality varied.
- d Scrap metal was being used and sorted out by filing a piece off the scrap and this was unreliable.
- e Ingot Metals material was not reliable for their work at Universal Brass and Iron Factory.

TAPE FOUR SIDE ONE

- f Gran continued to mix their own metals, did use scrap for certain castings; but mixed own for bronze.
- g Later Ingot specified metals came out and these were excellent.
- h Firebars for shipping described; specification sheets came out and were many times incorrect.

- i Harbour engineering work of arms for lifeboats used Ingot specified metals.
- j Excellence of castings described.
- k Specified metals were expensive however.

19 CASTING SANDS

- a Midland Junction sand mining was affecting grape harvest and Labour Government was approached to stop the mining there.
- b Gran found a source of the sand in Yarloop; difficulties described; this happened when he set up business alone at E&G foundry.
- c Synthetic sands described. This took the skill out of casting. It was expensive because it was not then possible to recycle the sand.
- d Green sand method he had been using gave a better finish; green sand described, this was the Midland sand.
- e Scabbing in green sand problems described but it could give a great finish.
- f CO2 gassing with synthetic sand did not scab; Gran got a method of avoiding scabbing in green sand; details given.
- g Synthetic sands could be used by any unskilled person; SGI (cast iron made into a semi steel with an additive) work required synthetic.

20 CASTING REPLICA STATUE OF PADDY HANNAN 1983

- a Gran was not keen to accept the job; it required special one off boxes and he had plenty of work. He was selecting customers and refusing bad payers.
- b Sculptor Geleneser had been commissioned to make the replica; he returned with Bob Gablesen from Wembley Tech to ask Gran again to do the job.
- c Bob Gablesen persuaded Gran to accept the job and promised to be present while he was working on the job.
- d Zircon faced sand had been developed by Gran for aluminium; he had experimented with this sand from Capel.
- e Mixed with other ingredients which are detailed he had great success with zircon sand.
- f This mixture was used for casting Paddy; amount of work involved was enormous.
- g They worked long and extra hours over the Christmas holidays.
- h Description of casting Paddy Hannon; successful casting.
- i Boxes came from State Engineering and a makeshift crane was organised
- j Description of order for the casting; finish was excellent and sculptor was very pleased for his work was reduced.
- k Bob Gablesen was convinced the zircon sand method was excellent and probably used it with his students later.
- l The casting of Paddy Hannon took at least six weeks.
- m Sand at Yarloop was used by old foundry there; located with help of another man.
- n Midland source of sand found and used; description of getting this sand.
- o This sand was better than the sand at Yarloop. Taking sand from the Midland area was illegal.
- p Payment for 100 tons of this sand which could be recycled and lasted them a long time. Gran continued to use the green sand method but added a little bentonite. Other sand was used for backing.

- q His two furnaces could produce four hundred pounds of molten metal at a time.
- h Method used described for casting in green sand.
- i Used Specified Ingot metals.

TAPE FOUR SIDE TWO

- j SGI Iron described compared with grey iron; comparison.
- k SGI Iron good for toughening work such as for gypsies.
- l Method of charging furnace described; he could read metal well and he could see the difference between grey iron and SGI Iron.
- m CO2 process was a god-send for the unskilled; his son did this and he came from Bradford Kendall.
- n Gypsies described.
- o Grey iron described, pig iron and scrap iron and cap limestone flux.
- p Coke made from pulverised coal; imported coke was better, reasons given.
- q BHP got onto better class of coal and improved methods made better coke and this was cheaper and supplies were more reliable than importing coke by ship.
- r Charging the furnace described.
- s Three-way balance furnace with tuyère to bring in the air. Furnace described.
- t Gran seemed to be the only one to manage this furnace and he was extremely busy looking after the bronze and the business.
- u Cupola furnace, one tuyère, replaced with three-way balance furnace, reasons given.
- v Gran actually built this three tuyère furnace.
- w Installing the furnace described.
- x First cast went well and used until he retired; when he left he used to be asked to come in and operate the furnace.
- y Electric type furnaces were very expensive; properties of this furnace described. Conversion furnaces.
- z Two oil-fired furnaces also installed, description.

21 CAMP OVENS MADE IN THE FOUNDRY

- a Camp ovens at Grey Street foundry; did not need this work and as kitchen ware, sales tax was involved.
- b He was approached to make them by Wellington Surplus Stores; reluctantly he accepted an order for a few.
- c He thought of an easy method of making these camp ovens.
- d Method described; made a few for friends; Scandia Foundry which had made them had gone broke.
- e Prototypes made of camp ovens using green sand method.
- f Client was pleased but price high, he thought.
- g Demand was great and placed an order for 50.
- h Description of handles being made.
- i Camp ovens of various sizes became one of their lines.
- j Demand fell off; foundry had lots of other work; described.
- k Then another client and camp ovens boomed and exported even to the Eastern States.
- l Suddenly Taiwanese camp ovens were on the market at a cheap price.
- m Made of thinner iron they were fragile in a hot fire.

TAPE FIVE SIDE ONE

- n Foundry was busy with other work; new orders of camp ovens came in again because Taiwanese ovens split and he had to replace them.

- o 'E and G Foundry' on top of each lid of the camp ovens with phone number.
- p Request from government department for promotion of West Australian goods; 10,000 camp ovens for an order from Japan.
- q Gran due to retire in two or three years and he felt that he would not get his money back on the equipment required to make such an order.

22 STATE ENGINEERING WORK DONE BY E AND G FOUNDRY

- a Connection was a fluke, they had a foundry employing 120 men.
- b Gran went to get J incinerator patterns made there.
- c A look at the foundry described; poorly run, he thought.
- d Jack Mariner made the J series for Gran.
- e Second in charge asked to see him one day.
- f He wanted manhole covers made as big demand from developing north of WA.
- g Builders were getting his manhole covers; and the ones cast in the State Engineering, poor quality, to the Sewerage.
- h Bronze work moulding was done by Tim's Craft for State Engineering; delivery was poor.
- i Request to make four small bronze fittings for SEW.
- j Jack Mariner came down to see E and G Foundry.
- k Comments on improvement to his foundry.
- l Offer of bronze work for SEW previously done by Tim's Craft.
- m Then an offer to make bushes; 350 lb weight etc.
- n Many patterns made for him by SEW.
- o Problem of casting badly scored and due to go out on the boat in a short time.
- p Gran was able to fix it for SEW manager.
- q Gran refused to take order and money for this work.
- r Offer of present in kind of bronze bush but too big to melt and Gran eventually sold it for \$450.
- s Christmas gifts for employees and party.

23 INSTONE STOVES

- a Furphy Bros were making these when he was an apprentice.
- b These stoves were in great demand and there were three types.

TAPE FIVE SIDE TWO

- c These stoves were a big part of Furphy Bros work.
- d Rat tails in the casting when supply of green sand stopped.
- e Enamelling of the stoves came in.
- f Instone was supplanted by Metter's.
- g Sales dropped off and their main work was supplying replacements for worn-out parts for Instone stoves.
- h Universal Iron and Brass Foundry began and Instone asked them to make the stoves.
- i Still the same problems arose about the sand.
- j Instone stoves work went to Eric Hogg in Grey Street.
- k Instone's had closed but there were many of the stoves still at Grey Street.
- l Patterns sent away.

24 CHANGES IN THE FOUNDRY WORK, PROCESSES AND IMPLEMENTS

- a All moulding done by hand, jobbing moulding; plate moulding came in.
- b Plate moulders; core moulders and jobbing moulders.
- c Core moulders did everything; later labourers came in to do some of the heavy work.
- d Moulding machines came in and machine moulders came in.

- e Synthetic cores, shell sands; many changes.
- f Many foundries had difficulty getting labour; average man didn't like the dirty game of foundry work.
- g Machines improved production and quality.
- h Universal Iron and Brass Foundry had a moulding machine.
- i Easy to operate. Gran used this one successfully.
- j Vibrators used so no need to shake castings.
- k Sand problem brought in synthetic sand, then shell and self setting sands.
- l Description of shell sand. Used for cores and centrifugal pumps.
- m Cast Craft closed due to lack of margin of profit.
- n Fremantle Foundry, Beach Street, mostly shipping work.
- o Only two privately owned foundries in Fremantle when Gran retired.
- p Perth Foundries closing.
- q There had been 50 foundries when he opened Universal Iron and Brass Foundry at North Fremantle.
- r SEW closed and now a housing estate.
- s Joyce foundry was very small and closed when beds made in steel.
- t Gran was a moulder in his own right and he trained apprentices and this helped the foundry to prosper; he also had reliable senior staff.
- u Names of staff and apprentices.
- v E and G Foundry did a good job, staff were happy and the foundry succeeded.
- w Reasons for success continued. Coke furnaces were reliable.

25 RETIREMENT

- a He was 65 on retirement; foundry taken over by Hydraulics before retirement; superannuation money.
- b Retirement celebration described. Tributes from firms he dealt with etc.

TAPE SIX SIDE ONE

26 FREMANTLE SAILING CLUB

- a Gran was made a life member in 1984 and was Social Club man of the year in 1983.
- b Fishing with Steve and Tony Cicerello led him to the club.
- c Gran had made the castings for his boat, listed items.
- d Sailing did not attract Gran although he went as sheet hand for a while.
- e Saturday afternoons he used to work at the foundry.
- f Meeting at old boatshed about building a new club house.
- g Means of raising money by giving dances at RSL Club and Gran was MC as voluntary work; Gran had been a good dancer and attended many dances.
- h Using a microphone he was MC; it was successful; band, singer and all the men about when the war was on, the dances were a success.
- i Funds were raised to get rest rooms off the wharf after the war, put up voluntarily.
- j Opening night of the club Gran was MC.
- k Dances run every Friday night for many years.
- l He had started his new business and had no time to continue.
- m When he returned after he began to work for JC Lyons and he bought his boat for fishing.
- n Fishing Harbour eclipsed entrance for sailing boats to club.
- o Ramp of Fremantle Harbour used.

- p Gran rejoined the club and went to the next meeting; power boat owners mostly.
- q Socials in the old club building and Gran was MC again.
- r He had met his second wife Greta; socials were a great success.
- s Women brought a plate; own alcohol. New Club built and social committee did well raising money.
- t Special nights run but not successful; social side of club went down.
- u Gran took the job of deputy chief duty officer with 60 duty officers.
- v Christmas party for Duty Officers; another great success with all the club coming.
- w Management suggested they continue such dances every six weeks; but new manager and new policy stopped these dances and introduced charging for a meal.
- x Attendances dropped. Gran went onto the Angling Committee as Social Convenor. Resigned after about three of four years.

26 PADDY HANNAN REPLICA 1982/3

- a Original statue described.
- b Method described in detail of casting replica.
- c Made in pieces, Bob Gablesen from Wembley Tech and Gran cast it.
- d Sculptor Gelenser had very little to do when they finished.
- e Details of casting with drawbacks..

27 COMMENTS MADE WHILE WATCHING VIDEO OF PADDY HANNAN REPLICA CASTING

- a These comments were made by Gran Hickling as he watched the video.
- b There are two pauses in the video, while comments were made on the sound tape, when Gran Hickling explained more about the video.
- c The video has been copied for the Library Archives from clippings from a Channel Seven News production in 1983.
- d The commentary is on side two of tape six after the details of casting using drawbacks.
- e With the sound of the video turned off, it is possible to listen to the taped commentary by Gran Hickling on sound tape. This sound tape commentary contains an extension of, and in a couple of items a correction of, the commentary of the video tape. Turn sound off on video and listen to Gran Hickling's comments while watching the video.