

Australia's
First
Electric
Tram



*Australia's
First Electric
Tram*

by J. K. MOIR

With Compliments.

J. K. Moir

MELBOURNE
1940

Foreword

By mere chance I became acquainted with Mr. H. J. Hilton, whose story is recounted in these pages.

The contents of this little booklet should not only interest those of an historical turn of mind, but all Victorians, as it is the story of the first electric tramway in Australia; indeed it is claimed to be the first in the Southern Hemisphere.

Certainly it was the first in Australia. In N.S.W. the first electric tramway along Military Road, North Sydney, was opened 20th September, 1893. Adelaide did not convert her trams to the electric system until 9th March, 1909. Perth electric tramways, run by an English Company, were opened 24th September, 1899. Tasmania was early in the field. In 1893, Hobart was served by an electric system owned by a private Company. The scheme is now operated by the Hobart Municipal Council. Brisbane changed over from horse-drawn to electric trams in 1896-7.

The opening of the tramway between Box Hill and Doncaster seems to owe its origin to the Land Boom existing at the time. Those who were not alive in those stirring days can have little conception of the conditions ruling. Fortunes were made — on paper. The frenzy culminated in the Bank Smash. Chaotic financial conditions prevailed and it is no source of wonder that the tramway closed.

Too much credit cannot be given to Mr. Hilton for his fight to keep it running. His faith was almost akin to his ability. So that there can be no question on the latter score a testimonial is included, and by its contents it can be gauged that Mr. Hilton is a man not easily discouraged.

Mr. Hilton introduced and worked electric tramway traction in the Chiltern Valley gold mines, and this is claimed as being the first occasion in Victoria that such traction was used underground.

This booklet is a tribute to him and at the same time is a true record of the vicissitudes of the Box Hill — Doncaster electric tramway companies, and as such I offer it.

J. K. MOIR.

The Genesis

An extract from the Official Record of the Centennial International Exhibition, opened in Melbourne on 1st August, 1888, reads —

“An electric railway exhibited by Messrs. W. H. Masters & Co. was opened to the public on 19th November, 1888. It ran for fifty-eight days and by agreement the Executive Commissioners received 50% of the gross receipts or £106. (The exact amount was £105/15/11). It was constructed south of, and parallel with, the Switchback Railway. The site was at the northern end of the Gardens and the line ran parallel to Carlton Street, but although most interesting as an exhibit, did not appear to meet with the patronage from the public that was anticipated.”

Another extract from the same record reads —

“Another form of electric action is propulsion which within the last few years has been carried beyond the experimental stage. A great stride forward in this branch of electric enterprise was the system of accumulators which last nine hours at a stretch. Locomotives based on the latter principle are doing work daily in a satisfactory manner on the section of the London Metropolitan Tramways between Stratford Church and Manor Park, the length of which is five miles out and five miles in, which occupies twenty minutes each way, with five minutes allowed for stopping and turning.”

The Judges at the Exhibition — or Juries as they were termed — awarded the exhibit a First Order of Merit and their report reads —

“Electric tramway, motors and dynamos. This is a most complete exhibit, and deserves great praise for its completeness of system lighting (arc and incandescent) motors and traction.”

WHERE THE EXHIBITS WENT.

To place all other electrical exhibits on the close of the Exhibition was a simple matter: the car was another

matter. The problem was solved when Mr. T. T. Draper came into contact with a land syndicate in the eastern suburbs, and The Box Hill Doncaster Electric Tramway came into existence, as set out hereunder.

The plant taken over from the exhibition consisted of — **An open six "bench" car**; wooden framing, running boards both sides, backs of seats reversible; and equipped with a doubtful 12 H.P. motor, double reduction, with rawhide pinions; a rheostat operated by a leather strap encircling a wooden barrel, a reversing switch of two-leg, and three-contact type, two main switches over the driving ends, and a fuse placed on the main framing on side of car. This completed the equipment. The spiral springs of the trolley were placed vertically, and the trolley pole of four feet six inches in length, as used at the Exhibition, was built up of four $\frac{3}{8}$ " iron rods extended apart in the centre. This was discarded for use at Box Hill, and a trolley pole of wood with $\frac{1}{2}$ inch iron core substituted to reach the regulation height of 21 feet. **The Dynamo** was a **Thomson-Houston** type with "spherical or ball" armature, listed as a "**400 Incandescence Machine**" as distinguished from the Arc Light Machine (which had a three part commutator). At the Exhibition the dynamo ran at 1000 R.P.M.— at Box Hill it was speeded up to 1,200 R.P.M., and the voltage increased from 400 to 500, in which no allowance was made for effect on the control of the car. **The Engine** was one of two made by the "**Ball Engine Co.**", Erie, Pennsylvania, U.S.A., a 10 x 12 with overhanging fly-wheels, one of 4' 6" which housed the governor; the other 5' 6" carried the belt to the dynamo; the speed of the engine was 275 R.P.M. One feature of these engines was the small clearance given the piston at end of the stroke, and care had to be exercised in adjusting the crank and crosshead connections. (The "mate" of the Box Hill engine went to the Nicholson Street power house of the cable trams, for lighting purposes. The matter of piston clearance may have been overlooked as the engine "disintegrated." Mr. Hilton had provided against that contingency, ensuring a greater clearance by inserting a thicker joint in the back cylinder cover).

Of instruments in the engine room there is little to record. There were no volt and ampere meters. Five 100 V. lamps in series would show the dynamo was functioning. Above the switchboard was fixed a magnetic lightning arrester. The said switchboard of $\frac{1}{2}$ " match-board carried a solitary knife switch, and a steam pressure gauge placed on the wall completed the engine room.

The Boiler was 12' x 3' 6" in barrel with dome and 50 tubes; under fired, set in brickwork, no side flues, and 30' of 14" iron smoke stack. Feed water was taken from a dam specially constructed for that purpose. A Vauxhall pump and Penberthy Injector supplied the water to boiler. (The dam is still in existence).

THE BOX HILL & DONCASTER TRAMWAY Co. Ltd.

This Company was incorporated under the Companies Statute of 1864 on the 24th October, 1888. The Capital was £15,000 in 15,000 shares of £1 each. The signatories to the Memorandum of Association and number of shares held were —

Charles Frederick Taylor, 23 Selborne Chambers, Chancery Lane, Barrister at Law.	1000
William Sell, Doncaster, Agent.	500
Richard Serpell, Doncaster, Farmer.	1000
William Meader, Box Hill, Agent.	500
Percy Joseph Russell, Queen Street, Melbourne, Solicitor.	500

On 1st August, 1889, William Meader, Chairman, presented the first half-yearly report and balance sheet. Up to that date — the date of the balance sheet — 30/6/89, £4599/16/3 had already been spent on the permanent way. The tramline was expected to be in working order early in October. He declared it to be the first electric tramway in the Southern Hemisphere.

The Balance Sheet showed —

Capital Paid up	£5942 10 0	Brokerage Advertising and Flotation Expenses	£328 9 7
Deposit from Contractor	140 0 0	Secretary	102 0 0
		General Expenses	25 19 1
		Cost of Construction to date	4599 16 3
		First Instalment on Electric Plant	1000 0 0
		Balance	26 5 1
	<hr/>		
	£6082 10 0		£6082 10 0

CAPITAL A/C.

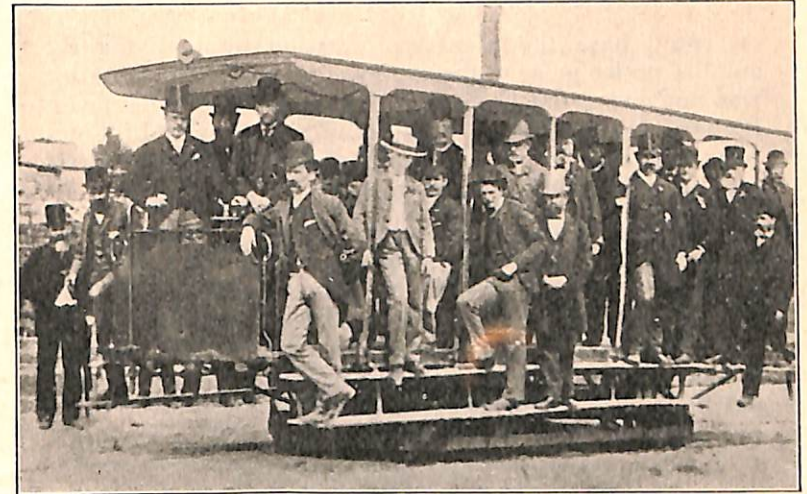
Capital called up		Paid	£5942 10 0
3190 shares @ 20/-	£3190 0 0	Owing	2115 0 0
6370 „ @ 15/-	4792 10 0		
150 „ @ 10/-	75 0 0		
	<hr/>		<hr/>
	£8057 10 0		£8057 10 0

The auditors were Fred McDonough and Squire Aspinall, and the secretary, Robert F. Gow, 4 Market Buildings, 58 William Street, Melbourne.

The first return of shareholders lodged 2nd October, 1889, showed 58 shareholders.

The Company, through its solicitors, Taylor and Russell, submitted the plans of the proposed tramway to the Nunawading Shire at its meeting held 18th February, 1889. The Council pointed out that no arrangements had been made between the Company and the Council, and it was resolved to ask the Company to forward further particulars. These particulars came before the Council at its March meeting.

The Company proposed to take a lease of the tram for 30 years and at the termination of that time the Coun-



Tram arriving at Doncaster on opening day.



Photo taken at Box Hill terminus at opening ceremony. The figure standing with hand on control is A. J. Arnot who was Electrical Engineer for Melbourne City Council. Note the hoardings. These were covered by land selling companies' advertisements extolling the advantages of buying land in the vicinity.

cil could have the plant at valuation upon giving six months' notice prior to the expiry of 30 years, but, if notice was not given, the Company was to have a further lease for five years and so on until notice was given. The Company undertook to keep so much of the road as was necessary for the tramway in repair.

The conditions were agreed to and the preparation of the road went on with such speed that the local press reported on 12th April of the same year that the road "was almost completed as far as the White Horse Road. Thus a fine thoroughfare has been formed right through to Doncaster, which, under ordinary circumstances, would not have been undertaken for years."

The Opening Ceremony

The "Age" in its issue of 15th October, 1889 reports:

The electric tramway which has been constructed from Box Hill to Doncaster, a distance of $2\frac{1}{4}$ miles, was formally opened yesterday, and trial trips of a most successful character were made along the route. The enterprise was undertaken by the Box Hill and Doncaster Tramway Company Ltd., about 18 months ago, and although a great many obstacles have had to be encountered, the works have just been brought to a satisfactory termination.

A large number of gentlemen accepted the invitation of the directors to be present at the opening ceremony.

The terminus at Box Hill is at the intersection of White Horse Road and Station Street, right in the centre of the township, and it runs through pleasant undulating country to the Tower Hotel.

The rails are laid on blue-gum sleepers let into the surface of a metalled road which has been formed for the purpose.

Some heavy cuttings and embankments have been necessary, but, in spite of considerable outlay in this direction, it has been found impossible from the nature of the country to avoid making some very steep inclines. The grade up the hill into Doncaster is the steepest on the line, the ground rising as much as one foot in sixteen, and in several other places the grade is nearly as great.

On account of the difficulty in obtaining land along the route it has not been possible to lay the track in a straight line so that sharp curves have combined with steep gradients to give the experiment a severe and searching test.

The motive power for driving the car is generated in an engine house which is situated about half way along the route. The engine is of the American Ball type, of 50 horse power actual, capable of running 300 revolutions per minute. The dynamo driven by the engine runs at the rate of 1100 revolutions per minute, and gives a current of electricity of 80 amperes at 400 volts. The motive power is supplied to the car by an overhead wire, which is suspended above the track about 17 feet from the ground. Posts are placed along both sides of the road in pairs, and from a wire stretched between them, the copper wire which carries the current is suspended. The power is transmitted to the car itself by means of a long arm which stretches upward from the vehicle. At the upper end of the arm a pulley is fixed which runs along the wire and thus establishes an electrical contact. One car only is used, and the apparatus for propulsion is placed under the platform, so that it is quite inconspicuous, as the motor

occupies but very little space. The current from the engine dynamo induces a north and south magnetic field in the magnets of the motor, and this, creating a corresponding state in the armature, causes the latter to revolve, the revolutions being transmitted by toothed gearing to the axles of the car. Resistance coils are provided for absorbing the current when the vehicle is going downhill. The car when loaded weighs about six tons, but the motor has a power of about 15 horses, and it is fully equal to propelling such a weight, and the engine in the shed is sufficiently powerful to drive two other cars of equal size.

This electrical system by the over-head wire is the patent of the Thompson-Houston Company of the United States, and it has come into use in many places in America. The first tramways on this plan were laid down in 1885, and at present there are 346 miles in operation and many more under construction. It is thought that this system will prove more feasible than the method of driving cars from electricity stored in jars, but at present the matter has scarcely emerged from the experimental stage.

The gentlemen who assembled at Box Hill yesterday to try the new means of propulsion had a very pleasant experience, as the trip was of a most enjoyable character. The seats are ranged across the car, occupying its entire length and accommodating 35 to 40 persons, though on several occasions it was made to carry a greater number of people. When all was ready for a start, the brake was removed and the vehicle glided down the track with a smooth and easy motion. Starting down a considerable slope the pace was allowed to increase after the style of the switch back railway, until the car was travelling some 12 or 14 miles an hour, and the impetus attained in this way was used in mounting the opposite slope. The pace was slackened considerably in going up the hills, and on the steepest grades only 5 miles an hour was attempted, but still the average speed was good throughout, and the whole distance of $2\frac{1}{4}$ miles was covered in 20 minutes. The cars will run regularly from this date, and the Company proposes to charge 6d. for the single journey.

The Banquet

After the Metropolitan portion of the visitors had been conveyed to Doncaster by the tram, a banquet was served in the Tower Hotel to commemorate the successful completion of the works. Mr. William Meader, the chairman of the Box Hill and Doncaster Tramway Company presided, having on his right Mr. E. H. Cameron, M.L.A., and Mr. C. J. Ham, M.L.C.; and on his left, Mr. James Balfour, M.L.C., and Mr. F. Stuart, M.L.A. There were also present Mr. C. F. Taylor, M.L.A., Mr. E. J. Dixon, M.L.A., Professor Kernot, Captain Rowan, Mr. B. J. Fink, Cr. Hicks, the President of the Boroondara shire, Cr. Houghton, President of the Nunawading shire, Cr. Hunter, President of the Bulleen shire, Mr. A. J. Arnot, the superintending electrician of the tramway, Mr. R. F. Gow, the secretary of the Company, and others.

The President read a telegram from the Premier who expressed his regret that an important cabinet meeting would prevent his attendance.

The toast of the Queen, the Acting-Governor, and Lady Robinson were honoured with enthusiasm. Cr. Houghton, the President of the Nunawading shire, proposed the toast of the Ministry coupled with the name of Mr. E. H. Cameron, M.L.A. Mr. Cameron said he had been asked to respond because he held the position commonly known as the Government whip. He thought that perhaps it was just as well that Mr. Gillies was not present to reply in person, for in that case he might have been called upon to state why the Railway Bill had been dropped. The Railway question was one which had a special interest for the Doncaster district, and the promoters of the tramway had received much opposition, because it was supposed the tramway would forward an excuse for postponing the construction of the railway to that suburb. That supposition was, however, erroneous, for he felt satisfied the Doncaster railway would be included in the next construction bill. (Cheers).

Cr. Ellingsworth, of the Nunawading shire, gave the toast of the Parliament of Victoria. He knew that many

people had been looking anxiously for the railway bill, but there was another measure that was also much required namely, the Local Government Bill.

Mr. Cameron: It will be introduced next week.

Cr. Ellingsworth said he was very glad to hear it, for they had been waiting for the bill for 10 years.

Mr. Balfour, M.L.C. in responding, referred to the good accomplished by the Coalition Government. Speaking of the desire expressed for the construction of a railway to the suburb, he remarked the electric tramway would prove very useful until such time as the railway was completed, and in addition to that he was very glad that the enterprise had been carried through, if only it was for the pluck and energy showed in making use of the new invention.

Mr. C. J. Ham, M.L.C. in acknowledging the toasts referred briefly to the Parliamentary business, and expressed the hope that the new Health Bill would receive some modification in the way of protecting the interests of the country districts.

Mr. E. J. Dixon, M.L.A. also briefly responded.

Mr. B. J. Fink proposed the Municipal Corporations of the Colony, which he described as a credit to Victoria, and the admiration of all our political visitors.

Crs. Hicks, Hunter and Haughton responded to the toast and expressed the hope that the tramway would be a success equal to the merit of the enterprise.

Mr. Frank Stuart, M.L.A., said that after what they had witnessed of the latest adaptation of the wonders of electricity to the needs of man, it gave him great pleasure to propose Success and Prosperity to the Box Hill and Doncaster Tramway Co. Ltd.

Mr. William Meader, the chairman of directors, in acknowledging the toast, said it gave him very great pleasure to be present on the occasion after all the difficulties that he and his co-directors had passed through. They had received a good deal of opposition from the residents of the district, and they had been scoffed at by almost everyone for attempting such a mad-brained scheme.

Doncaster had now an improved means of communi-

cation, and he hoped it would have the railway also, but if Government refused to make it he was prepared to float a company and make a start within 24 hours.

Mr. C. F. Taylor, M.L.A., one of the directors, said that he had often read of inventions in the past having been received with distrust and opposition, but he could not believe that the same spirit could have been shown at the present day if he hadn't experienced it himself. He was glad to hear that there was a good prospect of the Doncaster line being included in the Railway Bill, but even if it was passed it would take five years before the line could be completed.

Professor Kernot in responding on behalf of the Union Electric Company of Australia Ltd., stated that it would probably not be long before electricity was used upon locomotives in place of steam. He considered the success of the tramway was a good evidence of the soundness of the system, because in this instance it was applied in hilly country and under unfavourable conditions.

The Toasts of the Officers of the Company, The Press and The Ladies were also honoured, and the proceedings then terminated.

LOCAL OPTIMISM.

The venture promised to be a success. An extract from the "Box Hill and Camberwell Express" of 1st November, 1889 reported "The electric tram at Box Hill is proving a paying concern. On the opening day there were many who unhesitatingly stated that it would not pay for axle grease. These people are now surprised that the line is so well patronised that a second car is rendered necessary."

The "Box Hill Reporter" in its issue of 3rd January, 1890, stated that the electric tram was well patronised and worked even better than the railway did on the occasion of the visit of a large crowd on Boxing Day.

In April, 1890, the second half-yearly Balance Sheet was presented.

It was reported that the one electric car at present running had proved totally inadequate and that steps had been taken to order another with double power which, it

was expected, would be delivered in four months. It also reported that the directors had found it necessary to become personally liable for over £800; so therefore, the balance owing on shares, 5/-. would be called up.

The Profit and Loss Account for the first six months working showed that working expenses had been £470/9/3 and receipts £528/16/5, showing a credit of £58/7/2.

FIRST RIFTS IN THE LUTE.

However, this happy state of things did not continue. A dispute arose with a shareholder who had ceded a strip of land to the Company in consideration of shares.

The "Box Hill Reporter" of 21st June, 1891 stated —

The dispute that has existed with regard to the tram for some time has again resulted in the car being stopped and the rails pulled up. On Friday last, the Manager for the proprietor received notice that the traffic would have to be stopped or forcible means would be used. The employees all received their dismissal and the Car was locked up in the shed. Saturday came and two fences were erected at either boundary of the South Doncaster Co's. Estate. During Sunday night some person or persons knocked the fences to pieces and removed the materials, but the parties who erected the fences, not to be outdone, chopped down the posts that carry the wire and strewed the debris all over the road.

We understand that a movement is on foot to divert the route so as to escape the land in question. The new line is planned to follow the Koornung Creek along and thence across the main Doncaster Road, near Messrs. Lowe & Smedley's forge. If something is not done shortly, we understand that Mr. Thompson, the owner, will remove the plant to some other suburb where we hope his investment will meet with more cordiality and inducement.

After the Doncaster Council adjourned on Monday night, a number of the ratepayers held a meeting to discuss the question. Cr. Sell having been voted to the Chair briefly stated what he took to be the cause of the dispute. Cr. Tully also spoke on the seriousness of the matter to Doncaster and Box Hill, and moved the following resolu-

tion — That Messrs. T. Petty, Thiele and Schramm be deputed to try and bring about a reconciliation between the two contending parties. Mr. Cameron had much pleasure in seconding the resolution and said if these gentlemen could obtain the object they would earn the thanks of the residents of Doncaster. The Chairman and Mr. R. Serpell said they did not think there was much likelihood of a settlement being effected as they thought the matter had gone too far, but there would be no harm in trying. The other land owners along the line who had given their land to have the tram were greatly incensed, and justly too, at the shameful treatment they had received. The speakers thought it would be better to ignore the Estate Co., and try to work out the new route.

After a desultory discussion the motion was carried.

FIRST COMPANY FAILS.

In a later issue — 26/6/1891 — the same journal contained this — It appears that the closing of this Road by the South Doncaster Land Co. has met with considerable opposition and disapproval at the hands of the residents of Doncaster and Box Hill if an opinion is to be formed from the action that is being taken to keep the thoroughfare open.

During Sunday and Monday an effigy which had been carefully made, was suspended on the cross wire at the terminus of the tram line in Doncaster. The effigy has been provided with a belltopper to which is securely fastened the following inscription, "A E . . . Sad! Sad! The sad effects of rail lifting. The above will be burnt in effigy on Saturday evening at 8 p.m. All are cordially invited."

Matters drifted on in an unsatisfactory way — shareholders were so tired of the position that an Extraordinary meeting was called for 4th January, 1892 to wind up the Company as it was unable to meet its liabilities. Mr. Robert Ferguson was appointed Liquidator at a remuneration of 20% of the gross proceeds.

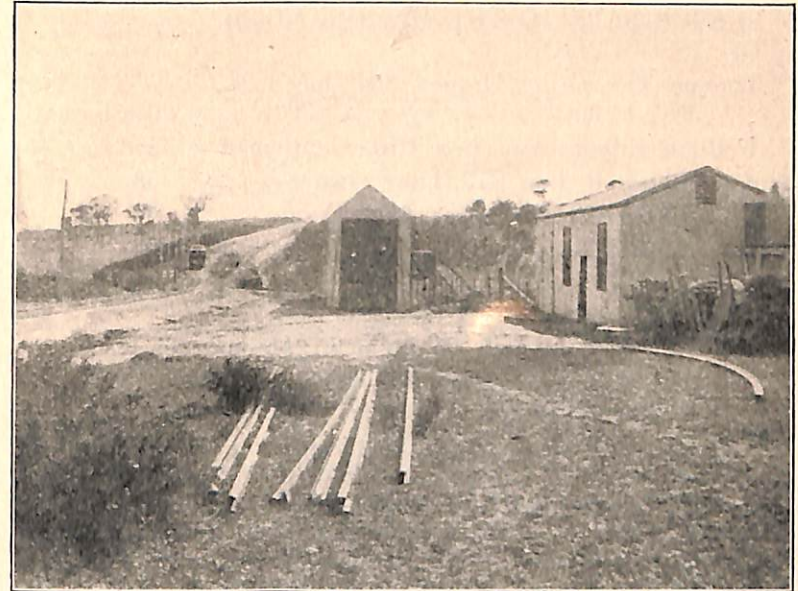
On 3rd June, 1898, the Company was struck off the Register as a defunct Company.

New Company Formed

Despite the failure of the Box Hill — Doncaster Co. there were evidently some who thought the proposition worth a further trial as on 25th January, 1892, a new Company "The Doncaster and Box Hill Electric Road Company Ltd." was registered under Companies Act of 1890, "To construct, lay down, make, manage, work and maintain a tramway commencing in Station Street, Box Hill, in the Parish of Nunawading opposite the Box Hill station or thereabouts, then running north along Station Street aforesaid through the properties owned by Charles Frederick Taylor, the Box Hill Township Estate Company Ltd., Richard Serpell and George Wright to the Koornung Creek thence in a North Westerly direction along a road surveyed out and the properties of the Bank of South Australia, John Woolcock, Frederick Wilson, Edward Wilson, the South Doncaster Estate Company Ltd., William Behrens and Edward Gallus to the Doncaster Road, thence across the Doncaster Road to Williamson's Road, thence running along Williamson's Road to the junction of the Heidelberg and Templestowe Roads, and to construct, lay down, make, manage, work and maintain tramways in any part or parts of the Shires of Nunawading and Doncaster in the County of Bourke, and to construct, erect, and maintain all buildings, bridges, culverts and erections of any nature or kind whatsoever and provide all machinery, rolling stock, working gear, working chattels and to do all acts, matters and things necessary, convenient or expedient for any such or all of such objects and to repair and keep in repair any, each and all of such tramways."

The Company was empowered to run omnibuses as well, and to carry on the business of electricians, mechanical engineers, and dealers in electricity for motive power and light, to light streets, public places, buildings, factories, railways and tramways.

Capital: £12,000 in 12,000 shares of £1 each.



The "Power House" was a Corrugated Iron structure one end of which was used as a car barn until the box car came to hand, then a separate "barn" was built to contain two cars with inspection pit for one.

DONCASTER & BOX HILL ELECTRIC ROAD CO., LTD.	
DAY RETURN.	
6666	BOX HILL
	- and -
	DONCASTER.
	Not Transferable. Available for day of issue only. 9d.

Type of ticket used.

SUBSCRIBERS TO THE MEMORANDUM OF ASSOCIATION.

Thomas Theophilus Draper, 356 Queen St., Electrician	900 shares
William Ellingworth, Box Hill, Gentleman	138 "
Alfred Serpell, Box Hill, Land Owner ..	58 "
Richard Serpell, Doncaster, Land Owner ..	884 "
M. Glassford, 372 Flinders St., Merchant ..	1800 "

5/2/1892.

Witness to Signatures—

Robert F. Gow, 58 William St., Melbourne.

The Solicitors were Messrs. Taylor, Russell & Renwick, Salisbury Buildings, Queen St., Melbourne.

The Memo of Association lodged does not indicate that any assets of the former Company were taken over, neither does it contain anything about the payment of any consideration to anyone, but the Summary lodged, stating that there were 5,000 shares paid up, seems to imply that these were given as a consideration for something that is not disclosed in the papers filed.

The new Company appointed Mr. H. J. Hilton engineer, and operations commenced in March. The land difficulty was overcome by altering the route as was set out in the prospectus.

The engineer took one motor from the box car and installed it on the open six bench car, which was again placed in commission. This scheme effected a saving of 25% of fuel.

The tram was run by the Company with many breaks and experienced many vicissitudes until 1894. The Bank Smash of 1893 and the closing of the English, Scottish and Chartered Bank in Box Hill, the Company's Bank, were severe blows.

COMPANY'S ENGINEER TAKES OVER.

In 1894 the Directors, as a last resort, offered the proposition to the Engineer for the Company, Mr. H. J. Hilton. The agreement in connection with this is a curious one written on an ordinary piece of writing paper and is

OCTOBER 16th, 1893, until further notice.

DONCASTER & BOX HILL ELECTRIC ROAD CO., Limited.

⇨ TIME TABLE. ⇩

MELBOURNE TO DONCASTER.

WEEK DAYS	(Saturdays excepted)										WEEK DAYS	
Melbourne
Box Hill Station
Box Hill Terminus
Doncaster

DONCASTER TO MELBOURNE.

Doncaster .. .. .	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Terminus ..	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Station ..	..	..	..	..	..	..	..	..	..	..	..	..
Melbourne .. .. .	..	..	..	..	..	..	..	..	..	..	..	..

MELBOURNE TO DONCASTER.

SATURDAYS ONLY.

SATURDAYS ONLY

Melbourne .. .. .	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Station ..	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Terminus ..	..	..	..	..	..	..	..	..	..	..	..	..
Doncaster .. .. .	..	..	..	..	..	..	..	..	..	..	..	..

DONCASTER TO MELBOURNE.

Doncaster .. .. .	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Terminus ..	..	..	..	..	..	..	..	..	..	..	..	..
Box Hill Station ..	..	..	..	..	..	..	..	..	..	..	..	..
Melbourne .. .. .	..	..	..	..	..	..	..	..	..	..	..	..

MELBOURNE TO DONCASTER (SUNDAYS) DONCASTER TO MELBOURNE

Melbourne ..	12 40	1 55	2 55	3 55	4 55	Doncaster ..	1 55	2 55	3 55	4 55	5 55
Box Hill Stat'n	1 15	2 30	3 30	4 30	5 30	Box Hill Ter.	2 10	3 10	4 10	5 10	6 10
Box Hill Term.	1 20	2 35	3 35	4 35	5 35	Box Hill St'n.	2 17	3 17	4 17	5 17	6 19
Doncaster ..	1 35	2 50	3 50	4 50	5 50	Melbourne ..	2 50	3 50	4 50	5 50	6 52

NOTE—On Saturdays, Sundays, and Holidays, whenever the traffic demands it, the Tramway Time Table may be suspended and Cars run to suit traffic.

TRAMWAY in conjunction with Victorian Railways.—DAILY TICKETS, available over Tramway and Railway to Melbourne, and return to Doncaster, can be purchased on Train Cars. First Class, 1s. 6d. each; Children, 9d. And also at Princes Bridge Station for Doncaster and Return at same rates.

FARES ON TRAMWAY.—Box Hill and Doncaster, 6d.; do.; Return, 9d. Box Hill and Grove Road, 3d. Doncaster and Grove Road, 3d. Box Hill and Tait's Hill, 1½d. Children under 12 years. Half Fares.

N.B.—All Return Tickets are available on day of issue only.

treasured by Mr. Hilton. A reproduction of it appears on page 23. It reads—

It is this day agreed between the Doncaster & Box Hill Electric Road Company and Mr. Henry Hilton, the former agreed to let the Tramway, the machinery and sheds to the latter for a weekly rent of one shilling. Mr. Hilton to bear all working expenses—except tear and wear but otherwise to keep the property in good order. To run the tram on the winter time table and any extra trips that may be arranged. One month's notice to be given to terminate this contract.

M. Glassford (Director).
James Cook (Secretary).
H. J. Hilton.

Received the sum of one shilling being one week's rent.
J. Cook.

For nearly two years Mr. Hilton worked almost day and night to keep the tram running. Only his expert knowledge combined with his dogged perseverance and optimism made this possible. The return for the first twelve months, in which a total of 13,000 miles was run, was £350 and the expenses were £331.

At the time the orchardists of the district were experiencing a bad time and as there seemed to be no prospect of improvement Mr. Hilton gave the requisite notice and the tram ran its last trip on 6th January, 1896.

LOCAL JOURNAL'S POST MORTEM REVIEW.

The "Box Hill Reporter" wrote its obituary thus—

It is with regret we have to announce the closing of the above tramway at the end of the present week. For some time past it has been apparent to even the casual observer that its active solicitation for traffic was but ill rewarded, the car very frequently making two and sometimes three trips in succession without carrying a passenger. A slight resume of its career may not be out of place at the present juncture.

To Doncaster Tower BY ELECTRIC TRAM

IS ONE OF THE MOST PLEASANT, NOVEL & WITHAL CHEAPEST OF OUTINGS.

Magnificent view from the Tower.

Book Princes Bridge Station to Doncaster, via Box Hill. RETURN FARE 1/6

TRAMS MEET EVERY TRAIN UP TO 6 O'CLOCK, P.M.




TRAM AND RAIL return 1/6

TIME TABLE.

IN CONJUNCTION WITH VICTORIAN RAILWAYS.

MELBOURNE TO DONCASTER.	DONCASTER TO MELBOURNE.																																																																																
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Special Trips by Arrangement apply H. J. HILTON, BOX HILL.

Poster which was displayed on suburban railway stations.

The original plant made its debut at the Centennial Exhibition, under the auspices of the Great Southern Electric Company, where it was highly favoured. At the close of the Exhibition it passed into the hands of a Company formed for the purpose of running it on the present road which was surveyed expressly for it. Meeting with financial difficulties, that Company went into liquidation, and from its ashes arose the present Company, who, with an eye to increasing business, secured more powerful machinery.

Following on the collapse of the land boom, the Company became involved in litigation with adjacent land owners, pending the settlement of whose claims the line was stopped, from which blow it never properly recovered. When it was ready to start again, all trouble was prophesied at an end, but that was not to be, as on the trial trip the motors were disabled by defective engineering and even after repairs were effected the running was most unsatisfactory, stoppages of two and three days frequently occurring.

In March, 1892, the present lessee was placed in charge, an event which seemed to mark a new era, as the cars assumed more regularity in their running, and on the following Easter Monday over 1500 passengers were safely carried over the line without the slightest hitch. After successfully manipulating the electric apparatus of the cars, Mr. Hilton turned his attention to the outside circuit, and discarding the auxiliary ground wire, bonded the rails with copper loops, an operation which, together with his ordinary duties, occupied six weeks, over 1000 holes being drilled in the rails, and 500 copper loops inserted, the immediate effect of which was an increase of speed, and an appreciable reduction in the consumption of fuel.

Evil times again overtook the tramway when the local banks suspended. Traffic went down to zero, and to minimise the effect the mileage was reduced one-third. Failing to recover any lost ground, the Company turned to Mr. Hilton and offered to lease the plant to him at a nominal rent until better times returned, a most indefinite

Kilbourn April 14th 1892

It is this day agreed between the
Doncaster & Bathurst Electric Road
Co. ~~to~~ and Mr Henry
Hilton the former agreed to
let the Tramway - the Machinery
and Sheds to the latter for a
weekly rent of One Shilling -
Mr Hilton to bear all working
expenses - except Fuel,
Wear - but otherwise to keep
the property in good order
To run the Tram as the winter
Term lasts and any extra trips
that may be arranged - ~~to~~
One month hence to begin to
terminate this Contract

Received the sum of One Shilling being
first week rent
James Cook Secy
H. J. Hilton

Agreement made between Doncaster, Box Hill Electric Road
Co. and H. J. Hilton.

period as events have proved. For the space of one year and nine months it has been in the hands of the lessee, pursuing the even tenor of its way with unvarying regularity. Still, fortune declined to smile upon the venture, traffic has steadily dwindled, until hope being past, nothing was left but to allow it to calmly expire.

We cannot refrain from expressing our conviction that this is one of the greatest calamities which has yet occurred in this district. What might have been ultimately a source of great wealth to Doncaster, with all its beautiful scenery, and its popularity as a resort for pleasure parties, is thus allowed to slip past. That its well-to-do residents should permit this excellent service to cease, instead of coming to the aid of those who have for so long stood by their patriotic venture, surpasses our comprehension. We understand it will regenerate at Rutherglen.

After the closing of the tramway its assets were sold. A good deal of the copper wire was stolen.

Credit must be given to the late Mr. Richard Serpell for his untiring efforts as a director of the Company. He gave his time, money and physical assistance; his interest in the venture never waned, and it was not until after the plant had been wrecked and dispersed, that he handed over the Delegation Deeds of the road to the Box Hill Council.

The Doncaster Box Hill Electric Road Co. was struck off the Register on 10th February, 1899.

To-day all that remains to remind one that the first electric tram in Australia ran between Box Hill and Doncaster, are traces of the concrete foundation of the engine shed. Despite politicians' promises, no railway yet runs to Doncaster.

However, the Melbourne & Metropolitan Tramway Board's electric trams are slowly but surely approaching the pleasant little town.

COPY OF TESTIMONIAL REFERRED TO IN FOREWORD.

VICTORIAN RAILWAYS

Telegraph Superintendent's Office.
Melbourne.

20/3/1903.

Mr. H. J. Hilton,

Dear Sir,

From what I know of the manner in which you worked the Box Hill trams I can only speak in terms of the highest admiration.

You were not only in charge, but your own stoker, engine driver, dynamo attendant, and armature winder, a combination which satisfied me you were suitable for a much better position than you had there, and I should have been glad to avail myself of your services, had the departmental regulations permitted.

I have heard only good reports of you since. I feel sure you would give satisfaction to anyone securing your services.

Yours faithfully,

W. N. Holmes,
Tel. Supt.

Reminiscences of H. J. Hilton

THE BROTHERS ISAACS ENJOYED THE TRIP.

Mr. Isaac Isaacs (afterwards Governor-General) together with his father and brother would often take a trip over the line. They would arrive by the first afternoon train at Box Hill, take the car to Doncaster, then take the road on foot to Templestowe and Heidelberg, a pleasant walk on a fine day with views of the "Yarra."

A LEGISLATIVE COMPETITOR.

An ex M.L.A. once got on the Car at Box Hill and when asked for his fare, with cold hauteur, exhibited a gold Railway pass. He was told that *all* passengers on the car were required to pay the fare. He paid. Two weeks later he started a line of two-horse cabs (three in number) running from the Doncaster Hotel to Kew. That service ceased after nine days trial. It was said the only passenger carried was Mr. Stutt, ex M.L.A.

IRRITATING TACTICS OF LOCAL CRITICS.

Several old residents of Doncaster had the idea that the presence of the tramway blocked the possibility of a railway there. One of these who had often aired the view came to the car one morning and tendering a half-crown asked for a ticket to town. He was given a combined Rail and Tram ticket with a shilling change. On reading the ticket he said "First class! I want second class." He was told there was no second class on the tram and that ticket was issued as a special concession by the Railway Dept. Thereupon he said he would take a ticket to Box Hill, so the ticket was exchanged with a refund of nine pence. "Now," he averred, in a tone of triumph, "I can go second class." Quite true it was agreed, and it was then pointed out that the tram ticket was ninepence and the second class rail ticket would be ninepence; together, that was the price of the ticket he had rejected. In his astonishment he ejaculated "Mein Gott! Live and Learn." To add to his discomforture he was informed the exchange was a benefit to the tramway. This caused him to think furiously, to the amusement of others on the car.

TECHNICAL TROUBLES.

Coasting downhill from Doncaster, an insulator on the overhead wire came adrift as the trolley passed, throwing it away from the wire, the pole swung round, caught on a bracket and fractured the wooden casing, rendering it useless. Arriving at the creek all alone, the disabled pole was removed from the "trolley stick" and a length of fencing wire was taken a few turns on the "stick."

The rheostat was placed half way; then "squatting" on top of the car the free end of wire was held against the line wire as the car moved up the hill. On turning the brow of the rise at Grove Road the driver descended and took charge with the brake, this brought the car to the "Barn" where it was docked and the Box Car was placed in commission to take up the schedule.

What a chance it would have been for a photographer to take a "snap" as the car climbed the hill and label the result "A monkey on a stick!"

CLERGYMAN'S HECTIC RIDE.

On one occasion a reverend gentleman of Doncaster made request for a return trip, to leave Box Hill at 6 p.m. and return from Doncaster at 10 p.m. At the appointed time the passengers arrived, forty-five in all, being nine more than expected. The trip up was duly made, and at 10 p.m. the car was ready for the return (mention must be made that after the incident above recorded, the trolley pole was always tied down on that section from Doncaster to the creek). With all aboard and the brake released the car moved off down the hill, as the speed increased the brake was applied without appreciable effect; the trolley being held off the line wire there was no light on the car, only an oil lamp as head light. The passengers had no idea that things were not as they should be, and forty-five strong voices gave vent to "Hold the fort for I am coming" while the driver put all his energy into applying the brake. At a point near "Whittons Lane" there was about two hundred yards of practically level track over which the car travelled with undiminished speed, then a down grade to the creek. At the creek there was a sharp

curve the centre of which was immediately on the bridge. The writer had always regarded this with disfavour as requiring great attention; periodically the dog spikes were examined, particularly the outer and the check rails, and it was only a few days previous he had taken a "beater" and packed the ballast under the sleepers giving the curve at its centre the proper "batter."

Arriving at the bridge the car swiftly and safely negotiated the curve and took the upgrade three hundred yards to a stop, when the trolley was put in place on the overhead wire.

It may be recorded that no accident or hurt to any person ever occurred on the tram line during its existence.

ORIGIN OF WELL-KNOWN TRADE MARK.

On many of the poles which carried the overhead wires was a sign J B — conjoined. These were put there by James Barnes who was for a time employed by the contractor who erected the poles. Later this sign was to come very widely known on James Barnes's honey — the same James Barnes having established the company dealing in this commodity.

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