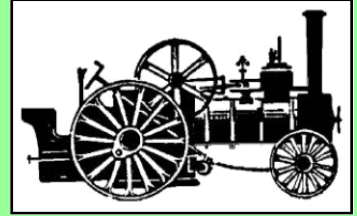


A Wisp of **STEAM SUPREME**

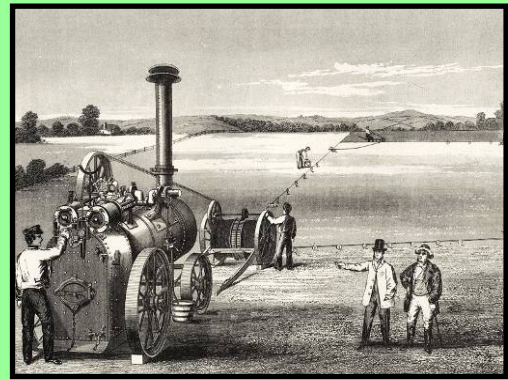


Extracts from the Melbourne Steam Traction Engine Club's Newsletter



Railway Bridges

Nimons bridge Ballarat Skipton Rail Trail



Steam Shovel Project
Unloading the Machinery
Deck . Hopefully we will soon
be craning it back into position

English President. One
of the British tractors
featuring at Goldsmith

Roundabout Ploughing with a
single portable engine and
cable running round the field
was demonstrated at G. S.

RAILWAY BRIDGES

All the recent discussion about a bridge for our little train has definitely stirred an interest about these impressive structures .

Ian Malcolm was the first on the band wagon with a very interesting social meeting "slide" show of some bridge images he found on the internet .

SAYON CAMP WASHINGTON

A particularly impressive one was of the Bloedel & Donovan Lumber company building a wooden bridge at Sayon camp Washington USA . Ian Malcolm supplied



IN SEARCH OF LOCAL BRIDGES

With my interest stirred I just had to find a trestle bridge for myself. Stopping at Skipton on the way back from Goldsmith mention of Nimons Bridge on the Ballarat Rail Trail caught my attention . Billed as one of the largest timber trestle bridges in Victoria it had me hooked and I just had to find it . Somewhere between Linton and Scarsdale apparently?

I drove along dirt tracks and eventually crossed the rail trail where there was a shelter with information board showing the bridge . I struck out on foot at a brisk rate and after about an hour realized I was nearly back to Linton and had only found a couple of bridges but nothing worth writing about so gave up and headed back with 10 km wasted. Having a closer look at the sign it became apparent it had been drawn as a mirror image causing me walk in the wrong direction. Oh well off again . On emerging from a cutting after tramping another 2 ½ k here it was spanning a valley.



OUR RAIL BRIDGE

Finished with the help of Josh on Thursday . Installed with the help of railway Ian on Saturday and in service the next day ,our gloomy RunDay .

Scaling the men (there are 7) it comes out at about 18 m high. It may not be the biggest bridge but is of special interesting to us because of the skid mounted steam driven pile driver perched high on the loose end of the bridge. The pile in the process of being driven is a whole tree trunk stripped of branches . On the front of the pile driver is an A frame about 10 m high called a leader . This is used to guide the pile as it is hammered into the ground by blows from a iron weight the size of a man (see pic) . This is repeatedly hoisted and dropped by the steam winch until the pile is tight (typically 10 blows to the inch) .

THE DADDY of the ALL

No name or details but the trees and loco suggest North America

The loco is a Shay specially designed for logging . It has an outboard 3 cylinder vertical steam engine driving a shaft running along the outside of the frames to drive the ends of all axles of the front and rear bogeys to give maximum traction . These engines can negotiate an incredible 1 in 11 grade and get around very sharp curves. Ian Malcolm supplied



NIMONS BRIDGE

Very impressive and in good condition having been redecked as part of the Rail Trail .

Walking over it gives elevated views of historic mining operations at Newtown



For those keen enough a return track takes you down under the bridge and across the Woody Yallock river for some fantastic perspectives.

Halfway up the far bank is a special large semi transparent sign with a photo of a mixed steam train crossing the bridge.

If you stand in the exact spot it was taken it superimposes the outline of the train onto the bridge making it very easy to imagine the bridge in its working days
How clever is that ?



Close inspection of the photo shows the Steam locomotive and tender crossing the bridge is towing 10 cars . This helps give an idea of just how big the bridge actually is

Back home I got onto the internet and looked up the specs . It is 18 m high and 104 m long but it seems it is only Victorias 4 th longest so where are the others?

NOOGEE TRESTLE BRIDGE

14 m high and 102 m long , nearly the same size to Nimon's but in a bush setting as it served the timber industry in the Latrobe valley .

Again it is on a rail trail and can be crossed but you can get to this one without walking



PUFFING BILLY

At 13 m high and 91 m long it is not the Biggest but definitely Australia's most iconic and unusual in being curved. Also the easiest to get to as you can actually look at it from sitting in your car !



Often you do not have to wait long to see Puffing Billy steaming over it loaded with tourists . Found on the internet

It cannot be walked over but better still you can actually take a steam train ride over it.

KILCUNDA

is next on the list at 12 m high and 91 m long .

Not much of a spectacle but can be easily seen from the highway between Philip island and Wonthaggi .



So the bridges I know about are getting smaller so then what is the BIGGEST .

Des Lang tells me —.



STONY CREEK Nearly to Lakes Entrance. 18. 6 m tall and 274 m long thought to be the longest remaining wooden bridge in Australia .

On the East Gippsland Rail Trail at Nowa but not well maintained so cannot be walked on .

This is one for my bucket list!

Now for one of the smallest yet all the same significant as brought about the closure of the Whitfield—Wangarratta narrow gauge line

MOYHU WOODEN BRIDGE

Just a small wooden bridge across a gully on the Whitfield side of Moyhu. . Burnt out in Feb 1952 by a bush fire, started by a T model Ford they were fiddling with outside the Benalla Sawmill , thus bringing about the demise of the line.

I can just remember this Trolley that ran for a year or so over the temporary bridge that could not take the Steam Locomotive weight.

The Trolley was locally known as the Spirits of Salts because it sometimes had that effect , not after the Spirit of Progress . What was the fate of the Trolley?

My uncle Fred Piepers

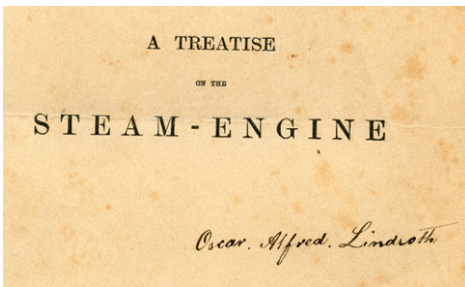


delivering produce to the Trolley at his farm Burn Brae . (Not at JARROTT as captioned in Nick Anchen’s book The Narrow Gauge). I grew up at the adjacent PIPER Stopping Place so know (Vic Rail’s spelling of Peipers)

Who is Oscar?

by Rohan Lamb

The club receives regular donations of old engineering books, with some being more interesting than others. Recently an old steam book published in 1866 called *A Treatise on the Steam-Engine*, by John Bourne (7th edition) was donated by Peter Stone of the Sunraysia steam group. This fragile and well-worn book came from the estate of Don Cox, an early member of MSTEC, and the last engineer in charge of the pumps at Dukes & Orrs dry dock. Not only is the book an excellent account of the early development of the steam engine, but also has two names of previous owners written in the front of the book which caught my attention. On the first title page is the name "Oscar Alfred Lindroth", and on the second title page is "Cyril S. Lindroth, Dooen Pumping Station".



The title page with Oscar's signature

Dooen is located on the Henty Highway, 9 km NW of Horsham in the Wimmera region of Victoria.

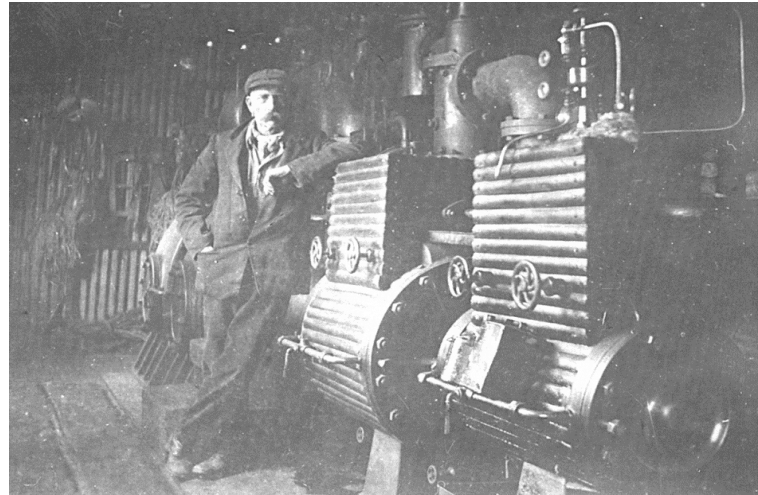
The Dooen pumping

station was built by the Wimmera United Water Works Trust during 1883-84, and in 1888 a new Trust, the Western Wimmera Irrigation Trust was formed.¹ William Denham was the engine driver at the station until November 1897, and he had been employed by the Trust since its inception.² He resigned due to being unable to work following an accident at the pumping station when he was severely scalded.³ It was at this time Oscar Alfred Lindroth was appointed the engine driver in charge of the pumping station.⁴ Prior to working at the pumping station, Oscar had been employed as an engineer at the Dimboola flour mill.

Oscar was born in 1855 in Helsinki (recorded in his naturalisation papers using the Swedish name of Helsingfors), Finland, and was a ship's engineer who arrived in Victoria on 28th March 1884⁵ on the *Silver How*. He became naturalised in February 1892.⁶ Remarkably a photo of Oscar next to the main steam pump at the Dooen pumping station survives. The pumping engine was built by the Austral



Dooen Pumping Station c.1890 showing the channel from the Dooen weir. The pumping engine discharged through a rising main lifting through of 54 ft (16.5m) over a length of 6500 ft (1981m) to a service reservoir from where the water was regulated into distributing channels (Museum Victoria)



Oscar Alfred Lindroth beside the Austral Otis pumping engine (Van Veldhisen, R., 2021, Pipe Dreams: A stroll through the history of the water supply in the Wimmera-Mallee)

Otis Elevator & Engineering Company, South Melbourne in 1897 when the pumping station was enlarged. They also supplied a new underfired multitubular boiler, 16 ft (4.87m) long x 6 ft (1.83m) diameter.⁷ The pump was a duplex direct-acting tandem compound Worthington type steam pump with steam cylinders of 12" & 21" bores x 24.5" stroke (305 & 533 x 622mm), and 21" (533mm) bore pump cylinders.⁸ The steam pump was replaced around 1921 by an oil engine and pump.⁹

There was another side to Oscar. He was also an inventor having designed a concept for a flying machine. This was based on the helicopter principle where the 4 bladed propeller was rotated from vertical to horizontal via a bevel gear mechanism. He sought to patent the idea in 1911, but this does not appear to have been granted.¹⁰ The Defence Department considered the proposal and reviewed a model of it in 1916 but concluded it was impractical and recommended no further action.¹¹

Oscar occupied the role of engine driver until being taken ill with kidney disease, and dying aged 63 on 8th March 1918. He left a widow, Francis Alice (1868-1956) and three children. The eldest son, Cyril conducted a motor garage in Dimboola and is the other name in the book, and his second son, Albert, had been assistant to his father at Dooen.¹² His youngest child was a daughter named Aurora.

References

- ¹ Nasebandt, F., April 1964, Old Pumping Station at Dooen, *Aqua*, p.171-176
- ² *Horsham Times*, 19 November 1897, p.4
- ³ *Horsham Times*, 3 February 1905, p.2
- ⁴ *Horsham Times*, 19 November 1897, p.2
- ⁵ Date in the naturalisation application appears incorrect based on newspaper account of ship arriving in Melbourne on 6th April 1884 (*The Mercury*, 10 April 1884, p.2)
- ⁶ NAA: A712, 1892/U619
- ⁷ Contract no.211, 18 February 1897 (*Aqua*, April 1964, p.176)
- ⁸ Nasebandt, F., p.172
- ⁹ *Horsham Times*, 15 April 1921, p.3
- ¹⁰ *Herald*, 31 July 1911, p.2
- ¹¹ NAA, A2023, A38/4/282
- ¹² *Horsham Times*, 12 March 1918, p.6

CAPSTAN or TURRET LATHE ?

Many people enjoyed Clive's story on his research and restoration of the little **HEBCO** production lathe. This included Ray Bedford who wishes to clear up the difference between Capstan and Turret lathes as some on the internet incorrectly proclaim they are just the American and British designation for the same thing which is not right.

Ray Rights :- *When it comes to the Hebcos lathe, it is actually a Capstan lathe (a very small one) a Capstan has the turret with just a short slide, whereas the Turret lathe has the features of the capstan but also a saddle whereby the whole unit can travel up the bed much like a conventional lathe, complete with power feeds, a good example of a turret machine would be the Ward unit the club owns. They can both turn short distances by using a thing called a roller box, but I could not find a good picture, however its an arm fitted to the turret which usually has two rollers to support the work and a cutting tool on the opposite side. As with all production machinery they support a multitude of special tooling, the Coventry die head being a classic example, we even had a couple with air operated bar feeds. Capstan and turret lathes were fitted with all manner of feeding mechanisms, some were even automated using a pegboard system which I never understood or thankfully had any dealings.*

Thank you Ray I have included a couple of pictures to reinforce your explanation Warwick



Our big Ward Turret lathe with its multi station rotating tail stock .

Each station holds a special tool for a different operation such as drilling, threading facing and even turning short distances . The whole head (resembling a turret on a battle ship) is automatically indexed around performing the operations in the correct order. In the case of a turret lathe the whole shooting match is mounted on its own saddle that is **automatically** powered up and down the bed the appropriate distance for each operation . This makes it suitable for automatic operation and longer work .
Warwick photo

The next picture is Warwick's little vintage Brown & Ward of Birmingham Capstan lathe .

This has a similar multi tool rotating tail stock but being only for short work it's saddle is clamped to the bed. Feed is by rotating a 4 spoked capstan wheel acting on a short slide built into the tail stock saddle which remains clamped to the bed. On the return stroke the tool holder automatically rotates to the next station and the appropriate distance stop for that operation brought into play . The tail stock itself remains locked into a set position to suit the batch of particular parts being made just as in the little Hebcos lathe .

My lathe has been modified with the addition of a threaded rod to advance the main saddle to allow parallel turning as a substitute for a poor mans first lathe .

It is also somewhat limited by its flat belt drive and no back or threading gears.

Note the heavy clamp under the bed for securing the tailstock with its slide in the one position for all operations . The saddle and head stock are similarly attached to the flat bed.

Little history is know about this lathe or it's manufacturer . Brown & Ward were established 1899 at 4 Branston street Birmingham UK . In 1914 they were listed as specialist engineers and tool makers for jewellers and brass founders including capstan and automatic turret lathes according to Graces Guide Any info would be welcome .

A very similar one is in " The Henry " (Ford Museum) and was set up so visitors could turn up their own brass candle snuffer.



Franklyn Flyer Loco 1200

By Ray Bedford

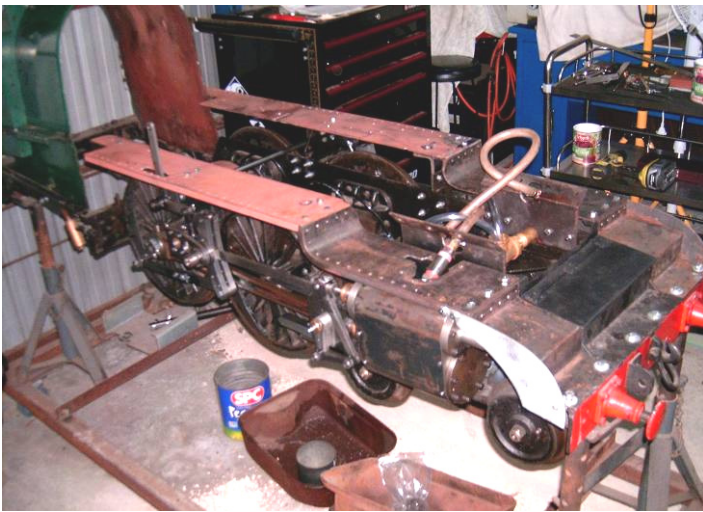
After many minor repairs and refurbishments on this loco, this latest edition has been by far the longest and probably the most challenging for myself and Frank Hedges. When it popped its boiler (cant even remember when) it seemed a great idea to fix some of the other issues of wear and tear. In the main this was essentially wear in the cylinders and lots of wear in all of the valve system and motion gear. However considering its age this little loco has served very well and still amazingly powerful considering all the issues.

One of the big issues we faced during the years working on this project was Covid, even with the vaccination available I still caught the thing, fortunately not too severe. Even so there were all of the travel restrictions and other trials to overcome.

As we needed to replace many parts, of the motion system, it was decided to re-design many of them, to make them more wear resistant and easier to maintain or replace in the future. Yes we may have sacrifice some of the general aesthetics, however this was done to improve reliability and service life, as it is hoped this loco will return to active duty pulling carriages as it was intended, not just a show pony.

Just a few words on the possible history of Franklin:-:
while re-fitting the running boards, which can now be removed using only two spanners and no nuts involved. Lots of extra holes were found, some strange shaped ones blanked off with plates and some just holes with dummy bolts installed. The first thought was to weld them all up as they had no practical use, then it was thought these holes and patches represent the fabric of some unknown past? Maybe not from the current loco but are these parts much older and came from an even older loco wrecked for parts, we will probably never know.

Now waiting for its new boiler.



Some of the final fitting before paint



Still a bit of cleaning up before paint



A bit of paint (rattle can)



A bit more, looking for a volunteer to re-paint wheels



Club

STEAM SHOVEL PROJECT

Picture of Lake Goldsmith's Ruston Hornsby shovel.

◀ *Ours is identical so it can be appreciated what a wonderful exhibit it will make when back together*

Last month mention was made of the grant to assemble our Steam Shovel as a static display to enable our Steam Museum visitors to appreciate and enjoy this impressive piece of steam machinery.

Built in 1924 it was used until 1958 in the Fyansford quarry digging out limestone for the Geelong cement works so has played an important part in almost everything built of concrete in the state making it indeed part of our industrial history.

Background

Since being acquired over 11 years ago it has been scattered around between sheds 7 & 11 as major sub assemblies putting it in danger of just being seen as abandoned junk by uninitiated visitors.

It arrived from Sydney as 3 oversize loads in Nov 2011 and is still just as dropped off ▶

With the offering of \$ 50 k Funding By the Victoria Government's Dept of Families, Fairness & Housing the proposal was accepted use it to - A/ Assemble the Steam Shovel. to enable the public visitors to enjoy the spectacle of this impressive piece of equipment and be able to appreciate the history behind it & - B / Refurbish our clubrooms improving access and amenity for members and visitors.



The Project

Being basically sound and complete but heavily patinated our plan is to loosely assemble it much in the condition it is now in as opposed to a major restoration back to working condition. Experience on projects like BigFoot and the Willans has shown that a full restoration would exceed our available manpower and finances at the moment.

That said nothing will be done now that precludes a full restoration at a later stage. In the mean time we will gain an impressive exhibit, even though static, to our National Steam Museum collection.

Work Scope Piece the steam shovel together after an inspection to assess its condition and limited restoration to items needing immediate conservation or if done now will avoid substantial disassembly again for a later restoration to full working condition in the future .

Approach The plan is to treat the job as a number of sub projects that can be tackled by individual small teams according to their skills and interests.



A few need to be done in a particular order so we can get all the heavy craneage done at the same time to minimize cost. On the other hand the boiler can be done at any time right up to the very end .

The bucket will be one of the last to go on but since it needs a couple of rust cells dealing with it should be done at the same time as other sandblasting and painting .

◀ *Only these rust cells on the dipper need dealing with to make the whole boom ready to go on.*



▶ *Boiler cleanout and weather proof is all that is needed before mounting back on the machinery deck. It is believed to be basically sound*

Work Required Inspection has revealed it to be in surprising condition and a look in the green container , that came with it , shows almost nothing is missing.

Following is an overview of what needs doing in the order of attack



◀ **Base** Ensure undercarriage is free and greased
Decide which cracks need welding .

Tracks - Straighten out to get enough links to lay flat for the base to sit on . (No new pins will not be required ▶



until the full restoration in the future . .)

Machinery Deck Deal with it while it is still at ground level and the underside is accessible

- Free up slewing rollers and gears , ensure oil passages are clear and relubricate
- Damaged Coal Bunker .

Make new one from steel plate ▶



▶ A frame and deck, blast and protective coat.



◀ Machinery steam clean gears , clear oil passages lubricate and protective coat

Cabin - Stocktake how much we have, most of the missing frame has just been found in the container . New wall panels and rolled corrugated iron for the roof will have to be bought . The cabin should be assembled to the machinery deck while it is still at ground level to avoid working at heights.

Hard Standing Level an area at the end of shed 7 and put down some road chippings for the shovel to sit on .

Boon and Dipper All that is needed is for the rusts cells to be neutralized .

Crane Hire

- Lower base onto tracks
- Lower machinery deck onto base
- Put on boom

Engines

- Clean oil and protective coat anytime . Full restoration can wait. ▶

Expenditure

The biggest item will be heavy crange , followed by materials for coal bunker and roof repair such as steel sheeting , paint and nuts and bolts. Provision for a storyboard and signage is also allowed for . While the grant is for \$50,000 the majority is for



refurbishing the interior of our club rooms so we will need to keep track and spend wisely.

Timing All funds must have be spent and activities achieved in the time line agreed . The end date is 01 Sept 2024 so we need to get going .

Getting Involved

There are many little tasks like freeing up parts , cleaning and protecting . Lot of these can be done simultaneously in any order by small groups or individuals .

Larger tasks like freeing up the tracks , assembling the cabin and rebuilding the coal bunker will require dedicated teams of specialists for some time .

Particularly important is someone to track the Grant progress and manage it's expenditure .

If interested in getting involved talk to Brenton or Warwick .

Thanks to Will Boothey for doing the background work for this Grant

Lake Goldsmith Rally

For once there was no complaints about the weather . Sunny all 3 days no rain and not cold overnight for the first time in years. Quite a few of our MSTEC members took the opportunity to come down, many for the first time, and were stunned with the diverse range of exhibits with each shed an adventure of discovery as they peered around and took the time to look into the dark corners.



This slightly sad tractor caught my attention . It was missing a few vital parts but looked like it had not done much work . Not knowing what it was I looked for an information sheet but the fuel tank cap was the only giveaway Austin .



With no other information once home I had to consult the Know it All and gleaned the following.

With his successful car and lorry business Herbert Austin , with encouragement from the British Government , set up a factory to manufacture tractors in Birmingham in 1919. This was to be in competition with the Fordson model F which at the time was felt to be too dear and not suited to UK conditions. The tractors used the Austin Heavy 20 car engine set up to be able to run on paraffin (kero) and a 2 speed gear box giving 2 and 4 miles per hour . In case that was not

enough a 3 rd gear was made optional . How good they were is not said but those on Utube seem hard to start and boil over easily , having no water pump .

Anyway only a few thousand were made before duty on the imported Fordson was removed so Austin had to cut his price rendering the business unprofitable. He then identified a demand for tractors in France due to their high price because of import duties and shipping cost so Austin transferred his manufacturing over there . They were made up to the 1950's but unfortunately this time sales were let down by a poor French dealer network . The upshot of it all is they are pretty rare these days so are an interesting and collectable tractor . Thanks to whoever brought it along for our enjoyment.

The display area in front of the Founders Building was reserved for light British horticultural tractors again a type not widely seen out here.

This OTA gets billed as the unique 3 wheeled tractor for nursery orchard and farm .

Made by Oak Tree Appliances using a Ford perfect 10 hp 4 cylinder engine with its 3 speed car gearbox feeding into a high low auxiliary box giving 6 speeds between 3/4 and 15 MPH . The channel iron frame with tricycle style front wheel gives good maneuverability in tight spaces while being equipped with 3 point linkage and pto . Not bad for a little tractor . Owned and restored by Warren Harris

British tractors were the theme and Field Marshalls where in force everywhere you looked . I did not know there was so many but most were not restored indicating they do not get out much.

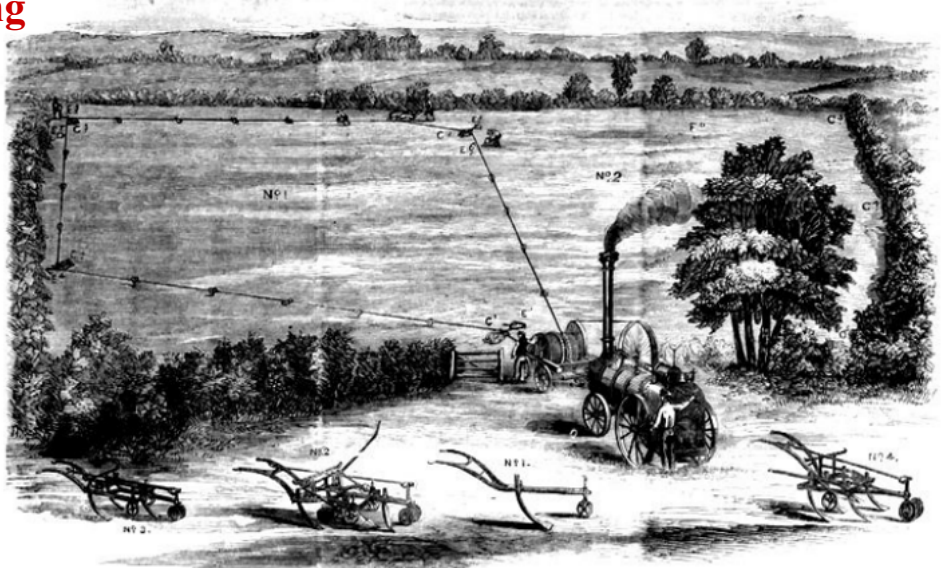


Roundabout Steam Ploughing

This was a special feature this rally using a Barford & Perkins winch & portable steam engine and self moving anchors . It was specially brought over from South Australia by Bob Butrimis and Bruce Roberts and set up on the arena . It is quite different to the usual balance ploughing we do at our Scoresby SteamFest.

The original system shown in the engraving was invented by William Smith in 1853

It involved a portable engine driving a winch placed in one corner of a field with a cable running round in a square through pulleys anchored in the ground at each corner. After each pass of the plough the top 2 pulleys had to be repositioned manually by a team of men to be ready for the next pass.



The tackle they demonstrated arrived in Australia at Bega in Southern NSW in 1882 was more advanced in that the top anchors B & B automatically advance at the completion of each pass of the plough. A is the portable engine powering the special winch and C and D the fixed anchor pulley at the bottom of the arena. This refinement reduced the team from 7 to 5 .

Apparently at the end of each pass a special ball on the cable in front of the plough catches on a mechanism under the carriage of the anchor that raises the spades out of the ground that are holding it in place against the pull of the engine there by allowing it to advance the required amount. The cable is then reversed disengaging the ball and dropping the spades back into the ground. It then draws the plough back to the other corner along the new path and so it goes on



The anchor carriage. On the left can be seen the spades that lift out of the ground that allow it to advance at the end each pass . The pizza cutter disc wheels are designed to dig into the ground under the sideways pull of the plough . Obviously 2 of these moveable anchors are needed and only suitable for light work in soft ground .

Acknowledgement Brian Smith, Goldsmith

Gazette 2022 .