GOLDSMITH

THE PYRENEES HERITAGE PRESERVATION MAGAZINE

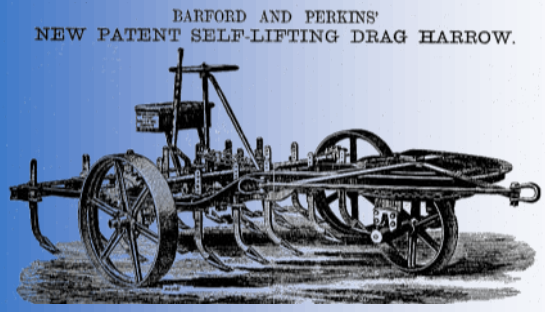
Edition 164 Oct-August-June 2022 Lake Goldsmith Steam Preservation Association Inc.

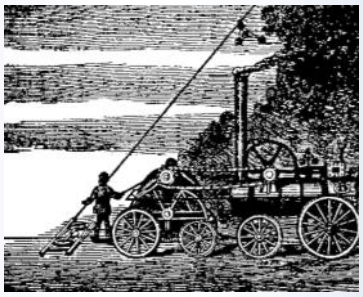
AN INVITATION TO THE LAKE GOLDSMITH SPRING RALLY IN 2022

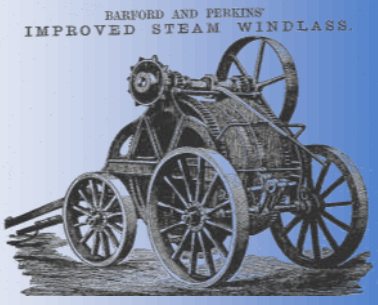
1234 Lake Goldsmith-Carngham Road Lake Goldsmith Vic 3373

A special feature of this Rally will be an exhibition of Roundabout Steam Ploughing from the days before paired ploughing engines were developed.

www.lakegoldsmithsteamrally.org.au







HIGHLIGHT RALLY THEME FROM THE DAWN OF POWER FARMING - ROUNDABOUT STEAM PLOUGHING

Using a Barford & Perkins winch & portable steam engine and self moving anchor

LIVE STEAM ACTION ON THE ARENA

+ pictures from the Made in America rally & the Beaufort QB display.

BEAUFORT PROGRESS ASSOCIATION INC

STOCKYARD HILL Wind Farm
www.goldwindaustralia.com
SPONSORS 2018

ABN 35 910 857 569 The FERGUSON SYSTEM Registered No A 0027694
THE HARRY FERGUSON TRACTOR CLUB OF AUSTRALIA INC.

ANTIQUE CATERPILLAR MACHINERY OWNERS CLUB
CATERPILLAR

Our Mission Statement

To foster, nurture, encourage and demonstrate technical, agricultural and life skills associated with the Industrial Era.

To provide a quality environment where these skills may be used to educate and entertain members and visitors.

To run two weekend rallies each year, and be available at convenient time for other interested groups or individuals.

To conserve and develop a heritage collection.

Find us on the net at:- www.lakegoldsmithsteamrally.org.au

Contact us at:- info@lakegoldsmithsteamrally.org.au **or The Secretary P.O. Box 21 Beaufort 3373**

Index

To register for this "cost & obligation free" bi-monthly e-magazine

email:- goldsmithgazet@optusnet.com.au or Ph 0425 744 052

Or contact the editor:- goldsmithgazet@optusnet.com.au

We need your email address, and a back up phone no or email contact, post code in Australia or your Country, or just download it and earlier editions from:-

www.lakegoldsmithsteamrally.org.au/magazine.html

Lake Goldsmith Steam Preservation Association Inc.

Registration:- A0032895 Correspondence to:- The Secretary PO Box 21 Beaufort 3373

COVID NOTE

Visitors to the 120th rally on Nov can check for any last minute COVID requirements before leaving home.

Welcome to Goldsmith Edition 164 June 2022

It was great to see the Rally Grounds at Lake Goldsmith back in action last May. Our pre rally deluge certainly settled the dust but not the visitors on the weekend.

The next Rally is due in Spring on October 29 & 30 and whilst we hope that any Covid requirements are minimal, it is always common sense to maintain our distance and use any masks and hand sanitisers that may be suggested at the time.

The theme display for the Spring Rally is a trip back to the dawn of Power Farming.

Bob Butrims and Bruce Roberts will be bringing their Roundabout ploughing tackle over from South Australia and using it on the arena powered by a local portable steam engine to plough a patch on the arena.

We have had steam in action ploughing at Lake Goldsmith in the past when Fowler Ploughing Engines and a reversible plough were demonstrated. These heavy powerful machines were each fitted with their own cable winch which were used alternatively to pull the plough towards each machine to plough the area between them. With the completion of each row both engines moved forward so that the plough was drawn through unploughed soil.

The engines were heavy enough to act as anchors against the side pull of the plough. This system allowed the operators to cover a lot of ground in a day. The high price of the machinery and the number of men in the crew meant that this system suited large properties, or contract teams who were employed on many properties to provide a return on the heavy investment.

Prior to the development of these successful ploughing engines smaller less powerfull systems were developed soon after the introduction of portable steam engines by Tuxford and others in the UK. These engines were drawn by draught animals on the road and around the farm and eventually powered many tasks as manufacturers developed machinery for pumping, sawing, elevating, threshing, chaff cutting and ploughing.

Whilst these operations got under way in the 1850's the tackle that Bob & Bruce will be demonstrating arrived in Australia at Bega in Southern NSW in 1882 . This machine was quite advanced as the anchor rollers which had previously been manually moved with each advance of the plough were now automated to move forward at the completion of each plough run. This advanced feature reduced the crew from 5 men to 3 with a saving in labour and cycling time. This unique feature is something that should not be missed by anyone with an interest in mechanical evolution.

Before we take a deeper look at roundabout ploughing, a quick run down on exhibits at the May rally will bring back some memories of the day. Ed.

119th **RALLY RUNDOWN** Autumn 2022

With the Made in USA rally theme there was a lot to choose from, and some made sure that you noticed, as can be seen with this early speedo/odometer & Hawkey spanner & Tap which were proudly on display. (right)

This Fairbanks Morse stationary engine looked new on its dedicated trolley, it certainly made moving around an easy exercise. (left

Below is a not so common John Deere bicycle. John Deere is always well represented at Lake Goldsmit

Twin cylinder John Deere tractors are always popular with owners and visitors , who in the past have been known to refer to them as Puffing Johny's due to the uneven beat of their engine which uses a crankshaft with the big end journals 180° offset. It is more common for Twin cylinder 4 stroke engines to have these journals in line, giving an even beat, but needing substantial counter balance weights on the crankshaft. Ultimately the need for more power needed more cylinders which could not fit easily across the frame, so eventually they gave way to inline en-

gines and a right angled driveline.

The "MADE IN AMERICA" theme was a great opening for many manufacturers past and present.

International Harvester & McCormick Deering were well represented in the portable and stationary engine ranks.

International engines evolved from the very early days of petrol and Kerosene engines, and many included water injection, The Mogul engine, above left, dates from around world war 1, and they are all over 100 years old. It is incredible how many engines survived, the fuel, lubricants and coolants would not have had any of the long life features used today. The red Inter LA or B above left, dates from around 1940 and the vertical Red International appears to be an R & T made in Ballarat as an OEM for International The Green M on the right above are from post WW1 to the 1930's and came in high and low tension ignition. The low tension magneto can be seen on the engine on the left. They also came with low tension internal points (in place of a spark plug) which ran from a battery. Others used a high tension Wico box magneto. Kerosene was a household fuel for all appliances before electricity and universal car ownership.

Famous is another engine brand used by International Harvester Co after the merge with McCormick after 1902. Similar engines were sold by IHC & McCormick dealers under different names. IHC tractors such as this Titan below make a great show as internal combustion started to take over the traditional roll of steam on farms.

IHC keep on making tractors and crawlers until Case took over in the late 1900s.

IHC were not alone at the Made in America rally. John Deere and their predecessor ,Waterloo Boy, make a great display in the pioneer shed and around the grounds. They are great survivor of the American Tractor industry that dominated the 20th Century.

Oliver is another name from the past makers of tractors and crawlers, their differential steering allowed power to be applied to both tracks while turning. Oliver took over the Cletrac company in the 1940's and kept making models under each name into the 1950's.

Oliver had an interesting history which started in the 1850's making chilled steel ploughs.. A continuous series of acquisitions preceded tractor production. Later they were taken over by White, who had started the Cletrac company after WW1. Merges continued and White ended up as part of AGCO . It has had an interesting history.

Ford is another interesting Tractor manufacturer. After developing the "Detroit" model tractor, based on the Model "T" ford car, and putting into mass production

it seems to have ended up everywhere from Russia to Australia and everywhere in between. Plants were set up in Ireland and England, and they came here from all sources . The tractor pictured is fitted with an ATHENs side mounted plough. Fordson's were popular with accessory manufacturers.

Caterpillar are another famous American manufacturer, the two pictured below, along with a HUFF loader in the background have had a long history at Lake Goldsmith and have done a lot of work as the rally grounds expanded. The Antique Caterpillar Machinery Owners Club have a base at Lake Goldsmith so we are fortunate to have displays of tractors from the Holt & Best forbears in

the 1920's to an enormous variety of equipment built for military, industrial

and farming use. In more recent times Caterpillar acquired Bucyrus who manufactured our c1902 rail mounted, steam powered face shovel which once worked in Queens land and spent its later life at Fyansford near Geelong.

The Brockway truck on the left was an American truck which was imported and sold in Australia by Ronaldson Bros & Tippet.

International Harvester gave farmers a practical wagon that could be used on the same tracks as their horse draw vehicles. The machines could be supplied by the same dealers who supplied their other equipment used around the farm.

Early models had air cooled engines, and a "buggy" was made with a seat replacing the tray for use as a passenger car. The high wheels ran from about 1907 until the 4 cylinder Model H light truck was introduced about 1912.

The traction engine on the right was made in OHIO USA by C S Kelly & Co.

Always popular at Lake Goldsmith are the vehicles owned by the Military vehicle club members. The WW2 Jeep appears dwarfed by the MACK transporter in the rear. These Jeeps were made by Willy's and Ford and were used in just about every theatre of WW2. They were an amazing vehicle adapted to many uses.

Thank you to the owners that display these vehicles at Lake Goldsmith.

The Buffalo Pitts below left calls Lake Goldsmith home. These American Traction engines were distributed in Australia by International Harvester. Their Low price, light weight and easy handling made them a poplar engine.

Case was also a popular manufacturer and the model below is a regular feature.

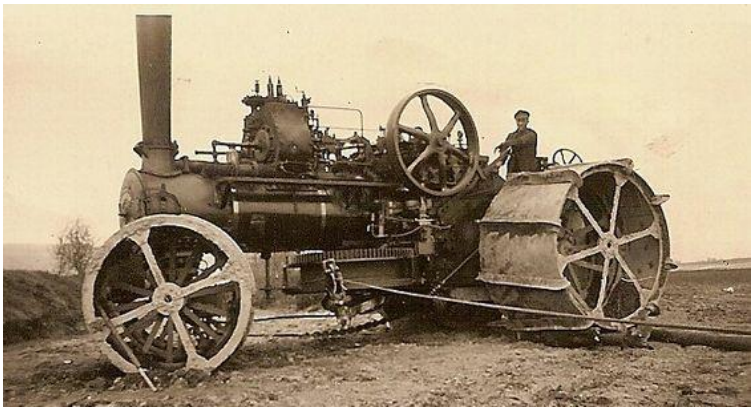
There were many more machines made in America on show and in action on the arena that are not included here.

Cars truck and utes that were once common on our roads appeared in immaculate condition as can be seen in the pictures on this page, International Pick ip, Chrysler Royal Cars and an early Valiant ute were all made here by American companies and The Indian motor bike had ceased production by the 1950's.

From the American Civil War this artillery piece is one of the oldest working exhibits of American Manufacture, and its boom is a reminder from the past as we look to acquire Hypersonic Missiles. Ed.

PLOUGHING WITH STEAM

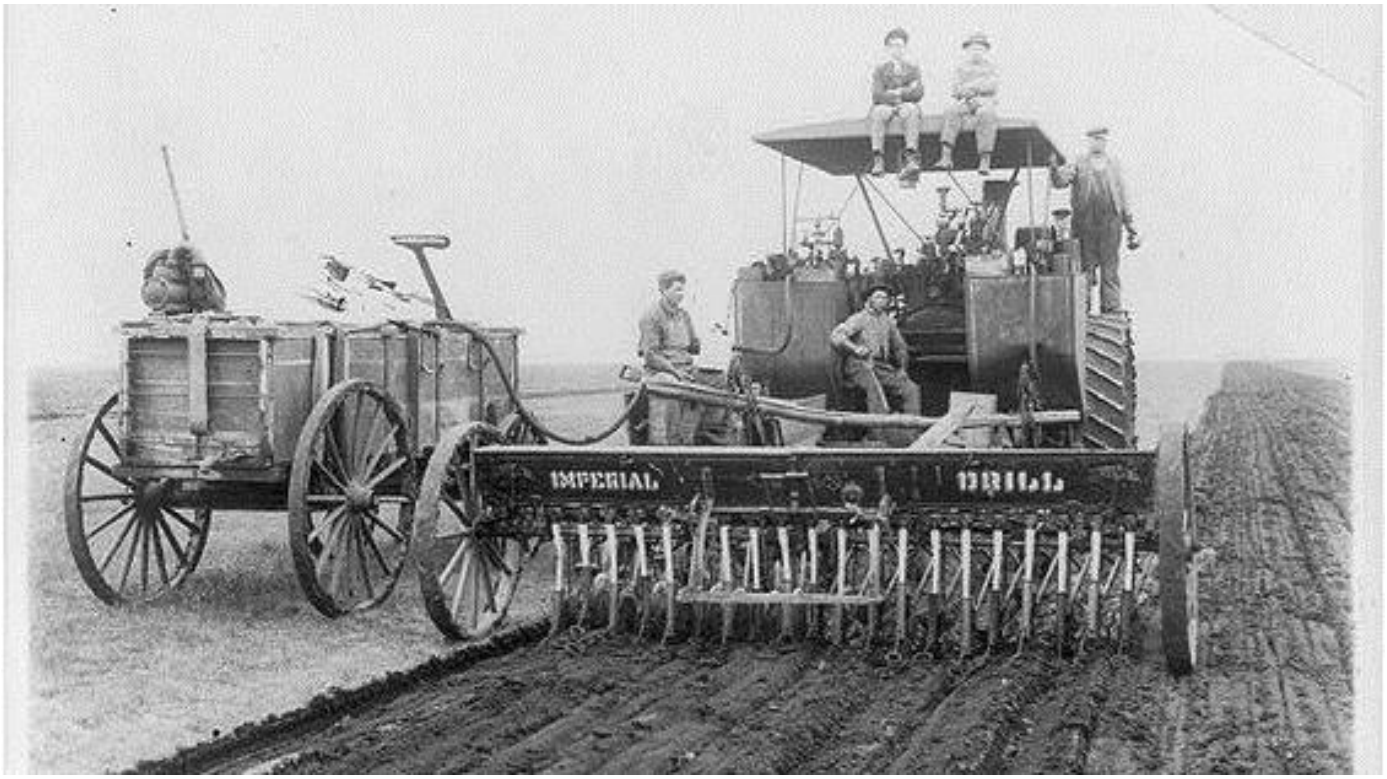
Many who attend steam Rally's are familiar with vintage steam ploughing using using a pair of vintage Fowler Ploughing Engines moving along both sides of a paddock while a reversible plough is towed between them as they advance along the paddock. This gear was fairly common, particularly in the UK where most ploughing was carried out by contractors who could amortise the high cost of the equipment and the team of operators over more farms and a larger acreage.



These contract teams also operated in Australia, as did other teams who used Steam Traction Plants for grain threshing. These teams are a major feature at Lake Goldsmith.

Steam traction engines were also used to draw ploughs directly, in much

the same way that is still common today, although in those days the ploughs were revamped equipment designed for working with draft animals.



Once the Traction engine was available it became available for everything from

sowing seed to harvesting and then threshing the grain . These machines need to be refuelled and watered at some point, and were a practical solution to ploughing in large areas where ploughing engines had a limited cable length. The ground traction and large horsepower of these engines allowed large areas of grazing farmland to be ploughed, which in turn allowed the areas to be cropped.

These steam engines survived in use until internal Combustion engine tractors were powerful enough to replace them and end the steam era of Power Farming.

This era of rural steam using self propelled engines is familiar to anyone with an interest in Power farming history.

What is less well known is how Power Farming Started..

Portable Rural Steam Engines were not self propelled, so of themselves they could not be used to directly plough ground, so an indirect method was needed.

Mines had used horse and steam powered whims and winding engines from the late 1700's. During the era of sailing ships natural hemp fibre rope was used in enormous quantities but it was a limiting feature in raising ore & spoil from deep mines. Chains were a heavy, expensive and unreliable.

Iron wire rope was invented in Germany at a Silver Mine in Saxony by Wilhelm Albert in 1834. This rope of 3 twisted sections of 4 wires was about 20mm Ø.

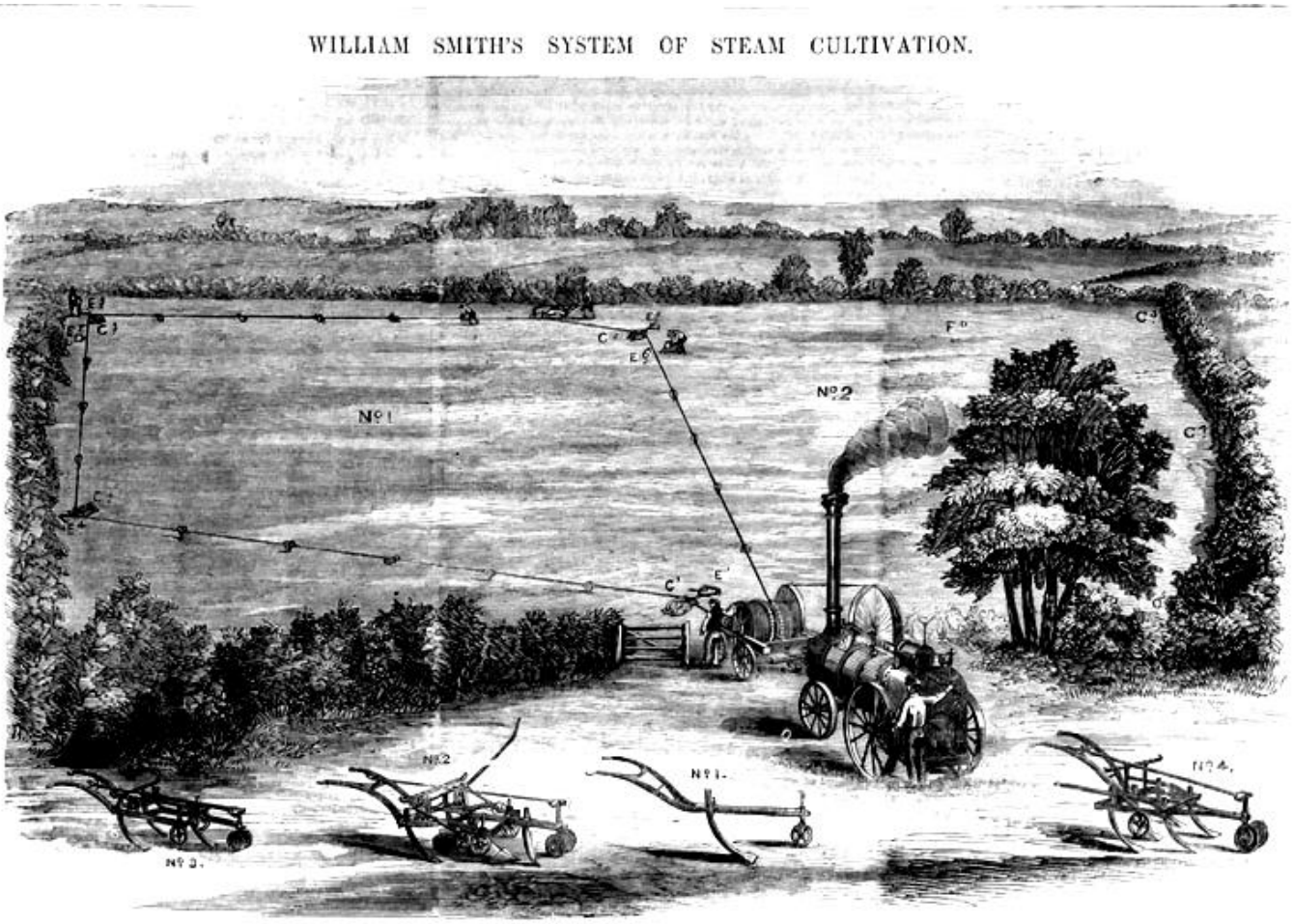
By 1840 wire rope was produced in England, Whilst mines were the primary market, the strength of wire rope opened the potential for a remote means of ploughing.

The next essential for Power Farming was a power source which could be towed to a location on the farm and used to power a winch that could pull a wire rope The first portable engine was produced by Tuxford in 1839 at Boston in Lincolnshire England, and in 1841 Ransome's followed with their own portable Boiler with others soon to follow.

A winch was needed to pull a wire rope, and hence a plough. Winches had been around in various forms , powered by man or beast, and in the later part of the 1700's steam powered winding engines were developed for use in mines. A portable winch was developed which could be set up near a steam engine so that the power could be used to pull the wire rope and an attached plough. In the mid 1850's the Bessemer method of converting iron into steel was invented, and steel wire rope, with its superior strength, flexibility and fatigue resistance arrived. All the essentials were in hand to use steam to plough a field, and there were many who tried to develop different methods to provide practical, economical and reliable systems to replace draft animals.

There was a lot of incentive to reduce farm cultivation costs at the time. Imported grain was much cheaper than local production. Farm labour wages were extremely low and it was difficult to keep staff from moving to factories where new skills could be learned and better wages earned. Draft animals were also labour intensive in care and they grazed on land that could be cultivated, or alternatively they comsumed part of the saleable crop.

One farmer in particular believed that they compacted the ground, or otherwise



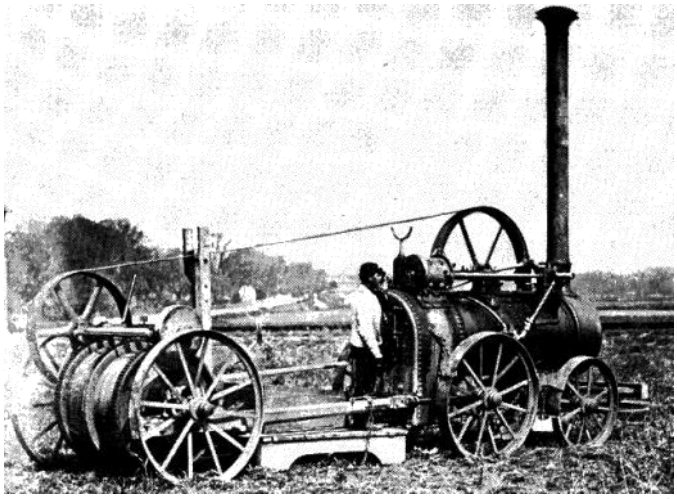
reduced the crop yield. It was his belief that if steam power could be harnessed to cultivation crop yields would improve.

His name was William (Bill) Smith and his farm " Church Farm " was at Little Woolstone near Fenny Stratford in Buckinghamshire England. He was born in 1814 and by 1855 he had developed an efficient system of cultivation which used a wire rope to pull a plough or cultivator in either direction by selecting one of 2 winches which were driven by a belt from a portable steam engine which had been towed to the edge of a field by horses (which were still essential for transport). The engraving above shows the layout of the equipment and the crew who operated it.

The wire rope was directed by a series of pulleys located strategically around the field. Two pulleys either side of the plough were relocated after each pass until the ploughing was complete while the wire rope accumulated on the winch drums. The system was very successful and some years later Smith built a museum to house and preserve it as part of the farm. In 1956 the shed was opened and the equipment was removed and restored and it can be seen in the M.K. Museum. It is rare that the original machinery ever survives virtually in tact for so long, and it is beleivedto be the oldest steam plough in existence.

This system was practical for small areas, particularly on farms which already had a portable steam engine which was used for other purposes such as thresh-

ing or pumping. The early farm engines were generally of small horsepower which also posed a limit on how large a plough could be used and how fast it could be pulled. Smith did not manufacture machinery himself, but he seems to have come to an arrangement with other manufacturers to use his ideas in a manner which combined with their on equipment. In 1853 Howard Bros of Bed-

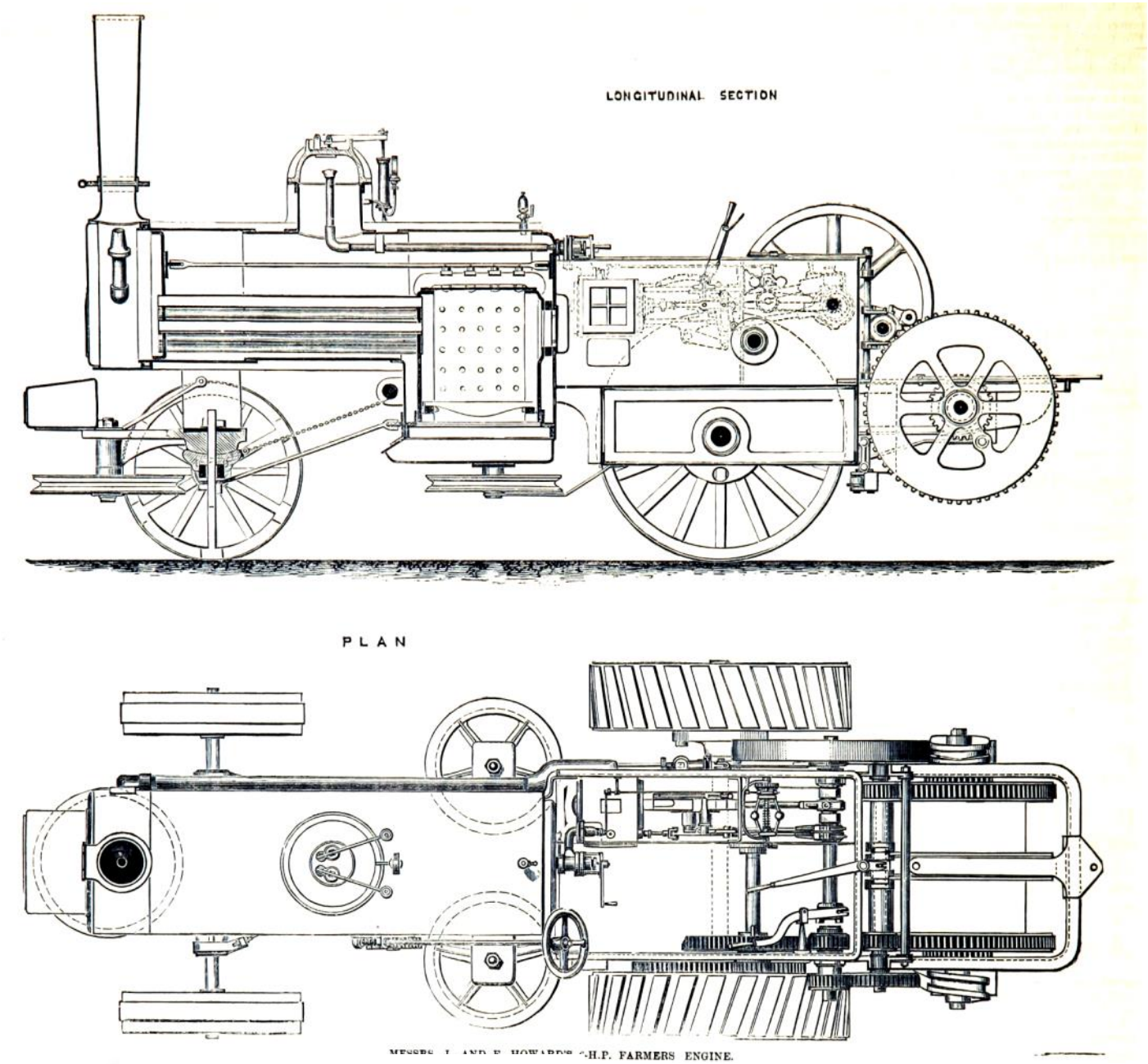


ford seem to have been the first to offer roundabout ploughing as an addition to their range of Steam Portables, ploughs and other farm machinery.

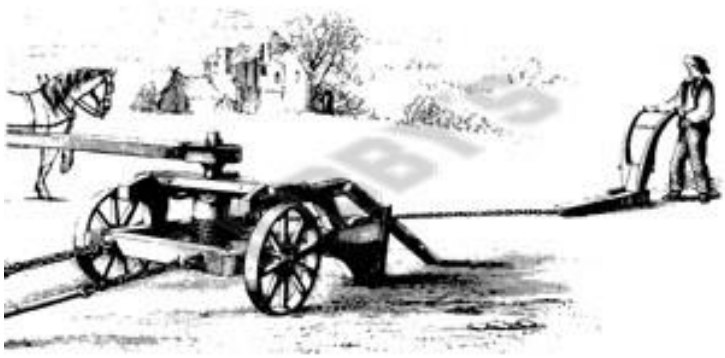
When compared with the engraving of Smiths rig on the previous page the winches have been moved to the rear and the cables run forward under the boil-

er to pulleys that feed left and right, and the operator is on a platform where he can work the boiler and the winch clutch levers. All of the road wheels are steel verses the timber spoked wheels on Smiths Portable engine.

With the later development of traction engines Howard Bros developed a self propelled model which allowed one person to operate the engine, the boiler and the winces from a central elevated position. These pictures were taken when the machine was seen in operation after its restoration at the 50th anniversary of The Steam Plough Club in 2016. Of note, the rear mounted winches feed pulleys under the centre of the engine. The elevation and plan of a similar engine show the layout of the operators floor plate and a front mounted pulley location.



MESSRS. J. AND F. HOWARD'S 6-H.P. FARMERS ENGINE.



Howard Brothers were not the only company to use cable ploughing.

In 1850 John Fowler started to develop systems for laying drains directly in soft wet ground by pulling a Mole through the ground below the surface.

The Mole was a pointed cylindrical device attached to the bottom of a blade below a plough so that it could be pulled along below the surface of the soil, generally with a string of pipes attached. Initially the plough and winch pulled themselves along the ground on rollers by winding in a cable that was anchored somewhere in a field. To improve the drag a portable horse powered capstan was fixed and the plough pulled along by the cable. By 1853 a double winch was attached to the front of a steam engine and a return double pulley was located remotely so that 2 cables were attached to the mole plough allowing it to be pulled forward and returned for a new drain.

John Fowler died in the 1860's and his family took over the company and developed the highly successful double ploughing engine system which went on to

dominate steam ploughing using the balanced reversible steerable double plough which was towed alternately between each of two ploughing engines.

These ploughing engines were heavy powerful and expensive. Each of the 2 winches on the roundabout was now driven by a separate engine and there was

no need to relocate the cable pulleys in the field for each pass of the plough as the engines moved themselves as required. As with the double winch only one was pulling at a time while the other payed out slack cable. One big advantage of the Double engine was that it was economical if the cost was amortised over a lot of farms, which was achieved by using contract teams who owned the gear and provided an experienced crew.

The roundabout system was still practical on small farms where the steam engine had other uses. The need to keep moving field anchor pulleys for each pass was initially a problem, but this was overcome by resourceful engineering with a significant saving in labour.

The Roundabout system that will be demonstrated at the 120th Lake Goldsmith rally by Bob Butrims and Bruce Roberts uses a self advancing anchor pulley system which was manufactured by Barford and Perkins in England c1880 under patents by Campain.

Basically the system was similar to the arrangement developed by Smith in 1850. the big change was the movable anchor shown above.

It appears to have the pulley mounted under the frame with the cable from the plough entering on the right and leaving on the left as it is pulled by steam engine. The cable from the plough has a ball attached which gets forced onto a mechanism which allows the anchor carriage to advance to the next ploughing row, and in doing so lifts the 2 spades which are helping hold the anchor against the pull of the engine.

The cable is now stopped and the direction is reversed disengaging the ball and dropping the ground anchor spades. The anchor wheel on the plough side appear to be discs which sink into the soil to resist side movement.

Of necessity there is a movable anchor at each end of the Plough run.

It will be interesting to watch this in operation and watch the sequence of events of this machine during direction reversal. This really is a neat mechanism. From the information supplied by Bob Butrims this appears to be the only original set in existence. This anchor was measured so that a replica could be made in the UK to allow the double winch traction engine on page 18 to demonstrate roundabout ploughing at the Anniversary meeting at Crockey Hill near York in 2016.

Barford & Perkins made three different types of roundabout ploughing tackle of which the display unit is No 1, The No 2 used a Traction engine in lieu of a portable, and the N 3 used a special traction engine in the style of the Howard Bros machine on Page 18.

Barford, eventually , in the 1930's combined as Aveling-Porter and Perkins manufactured Diesel engines.

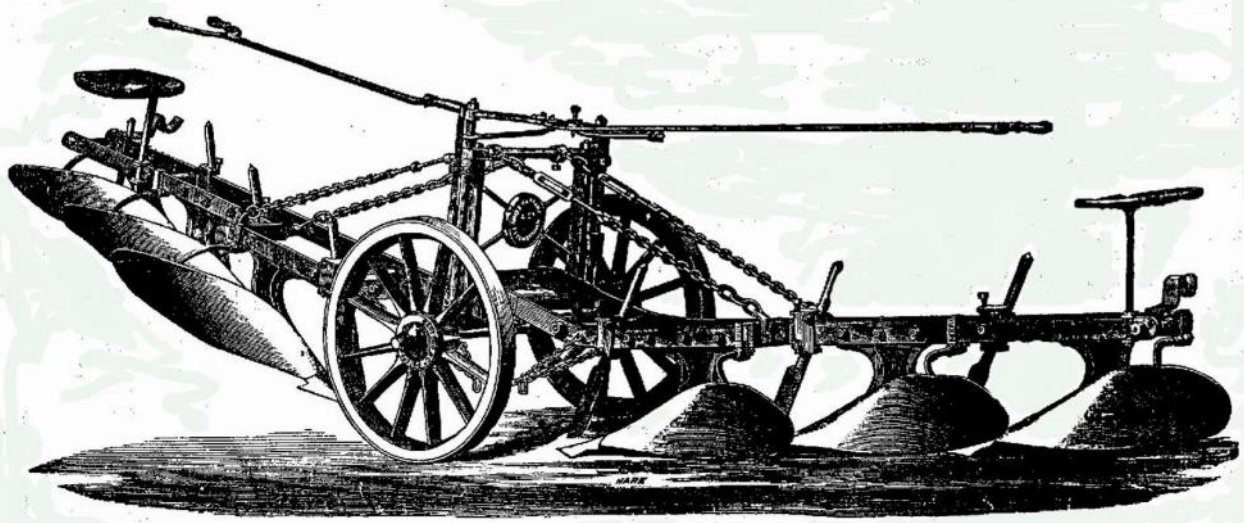
The market for Rounabout Ploughing dried up in the UK, and only very few arrived in Australia

The tackle that will be displayed by Bob & Bruce was one of 3 units that arrived in Australia in the 1880's. Two Units went to Bega in NSW. These machines operated until about 1900 and the remains were acquired by Bob in 1980.

The machinery has been used annually at the Monato Ploughing Field days near Adelaide annually. The soil there is shallow and only a drag harrow is used. For the Lake Goldsmith Rally on October 29 & 30 2022 the deeper soil should allow the use of the 4 furlough reversible plough which was probably last used 122 years ago in 1900. This will be a unique even at the 120th Rally, it is not one to miss.

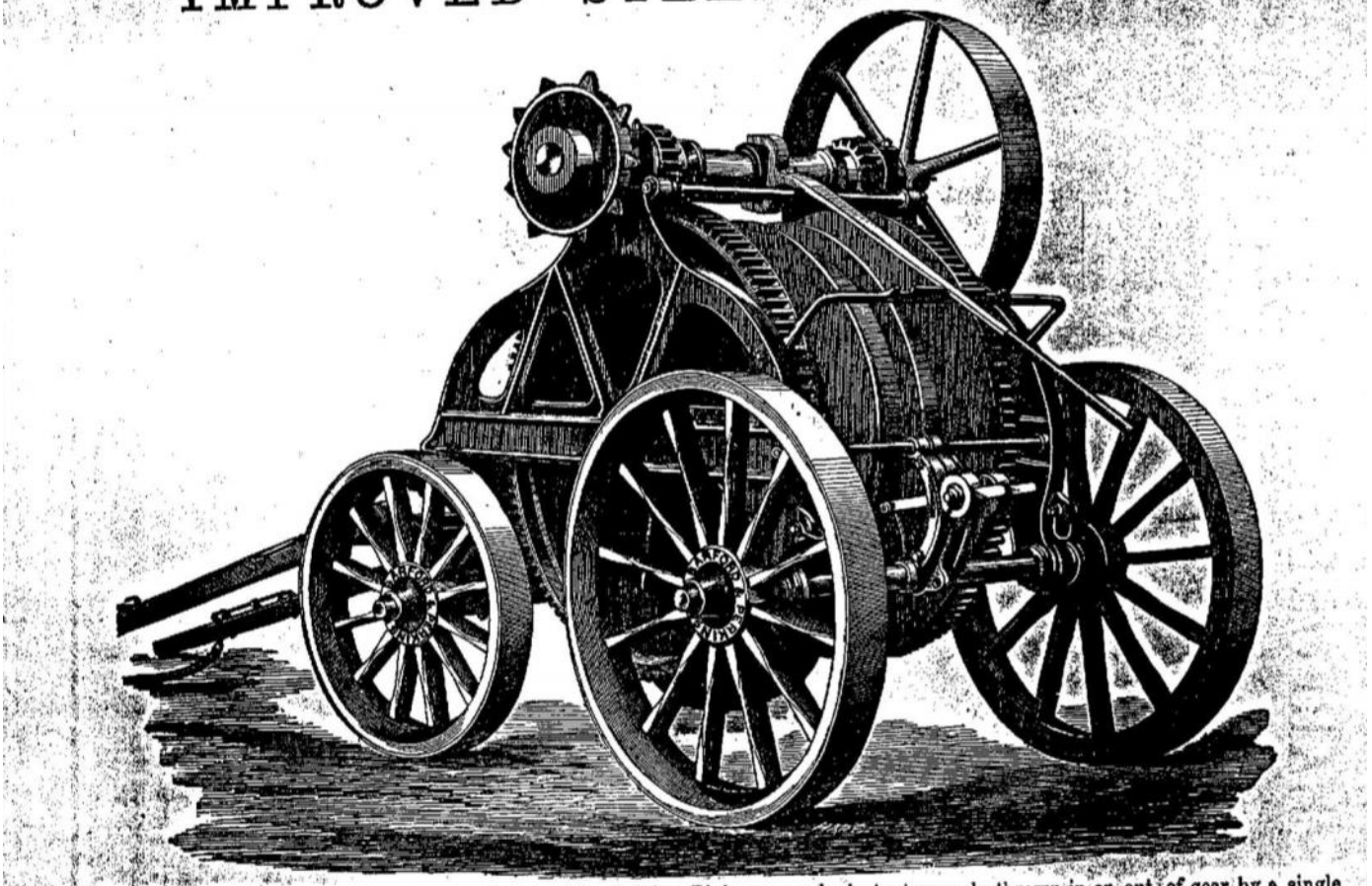
BARFORD AND PERKINS'

PATENT COMBINED STEAM PLOUGH AND DIGGER.



The Beams are straight and are trussed together, and are more easily adjusted than any other—any depth or width of Furrow being obtained at pleasure by the simplest arrangement. The Steerage acts directly upon the Wheels, is immediate in its action, and very perfect. It is very strong, yet light and simple, and easily managed. Each Plough is provided with a Set of Digging Breasts, which can be substituted for the Ploughing Breasts when required, and for making Fallows the operation is most valuable.

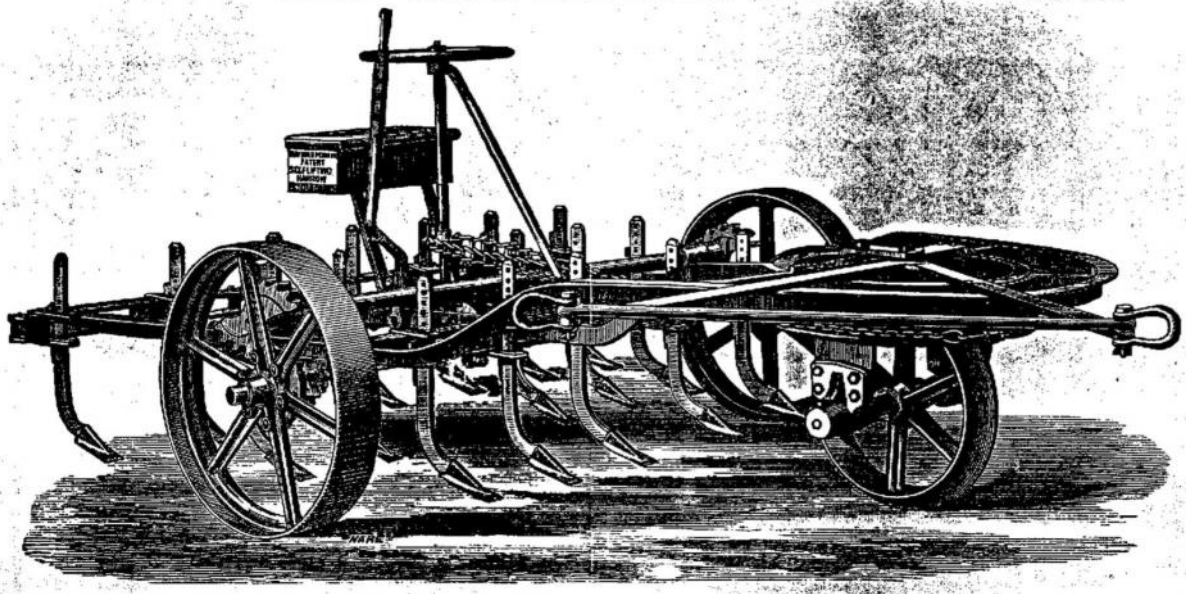
BARFORD AND PERKINS'
IMPROVED STEAM WINDLASS.



The above Windlass possesses many advantages. The Driving Pinions may be instantaneously thrown in or out of gear by a single powerful Lever. The Brakes are applied upon the under side of Drums instead of upon the top, as in other Windlasses. By this means the friction upon the Axle carrying Drums is decreased when the Brakes are applied, instead of increased, as heretofore. The Windlass is strongly built, and mounted on four strong Wood Wheels and Frame.

FOR PRICE SEE PAGE 18.

BARFORD AND PERKINS'
NEW PATENT SELF-LIFTING DRAG HARROW.



The principle of this New Implement is similar to the Cultivator on preceding page. The Lifting arrangement is most simple and effective, and has the advantage over all other plans that the depth of the work can be varied at will, without stopping the Engine; and it can be lifted out of the ground instantaneously to clear a footpath or any obstacle whatever. It clears 8 feet of work, and is fitted with 20 Moveable Tines, to suit it to any condition of land. Any other sizes to order.

FOR PRICE SEE PAGE 18.

Ballarat Engine & Machinery Preservation Society Inc.

PRESENTS

THE BEST OF Ballarat Rally

SHOWCASING ALL THINGS BALLARAT

(But includes anything old & interesting)

16TH OCTOBER 2022
from 10am - 4pm

SETUP DAY 15TH OCTOBER

BALLARAT AIRPORT
40 Airport Road, Mitchell Park

ENTRY FEE
Adults $5, Children & Exhibitors FREE

FOR FURTHER INFORMATION
BEN 0411 189 520 PETER 0400 154 972 ROD 03 5342 4521

Proudly supported by Scobies Service Centre and Westag Ballarat by transporting the large items to our Rally.

OUR INDOOR DISPLAYS INCLUDE:
A large collection of memorabilia of particular interest to Ladies and Children in addition to machines of a bygone era including an operating 1880's printing press

OUR OUTDOOR DISPLAYS INCLUDE:
A diverse range of steam and oil powered engines and flat belt driven machines. Numerous demonstrations etc. Cars, trucks and tractors, trade displays and joy rides drawn by Steam Traction Engines

EXHIBITORS OVER NIGHT CAMPING
Locate us under a large overhead water tank and follow signs for basic unpowered camping sites only and sorry NO camp fires.

OTHER ATTRACTIONS WHIST AT THE AIRPORT
- Anson Museum
- Aviation Museum & Air Force Assocation

WALLER & CHESTER PRINTERS, BALLARAT

120th STEAM & VINTAGE RALLY

LAKE GOLDSMITH

OCTOBER 29 & 30 2022

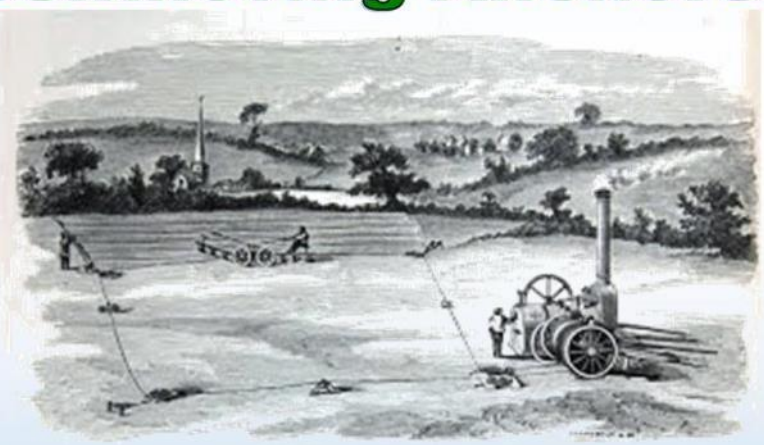
HIGHLIGHT THEME

IN ACTION ON THE ARENA

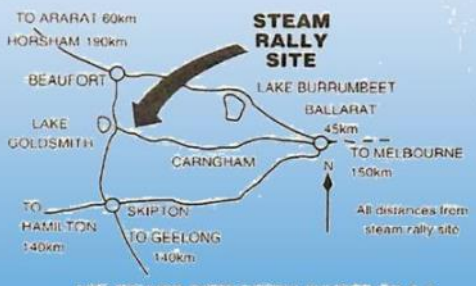
Roundabout ploughing with a Barford & Perkins winch & Campain selfmoving Anchors

Regular attractions include:

- 65 Display Sheds
- Steam & Oil Engines
- Steam Powered Shovels & Saw Mi
- Displays of Earthmoving, Cars, Motorcycles, Tractors & Trucks
- Radio Controlled Model Boats
- Attractions for Ladies & Children
- Blacksmithing
- Threshing
- On-site Catering



CAMPING FOR EXHIBITORS ONLY | FREE, NON-POWERED



VIC ROADS DIRECTORY MAP 75 G5 2.4

ADMISSION PRICE: • Adults $15.00 • Children aged 5-16 $5.00 • Exhibitors and Children under 5 free

For rally information contact: Trevor Ph: 0407 539 041
or Graeme Ph: (03) 9723 3310 Mob: 0418 388 149

www.lakegoldsmithsteamrally.org.au • PO Box 21 Beaufort 3373

Please check our website above for any possible COVID restrictions on the day.

& for May 2023- 100 years of Howard Australia


Lake Goldsmith
Steam & Vintage
Rally
www.lakegoldsmithsteamrally.org.au
Two rallies every year see website for all information.


McCORMICK-DEERING
0-12
BEWARE OF TRAINS


RAIL
CROSSING
WAY
IMPROVED PLATFORM LAMP
BRISCOE & CO
MELBOURNE
IMPROVED PLATFORM LAMP
J.W. FAUL
SANDHURST
EXIT

QUEENS BIRTHDAY WEEKEND - BEAUFORT - 2022

What a great turnout, Steam blasted away at the inclement weather to reveal a large turn out of steam power, vintage cars and the display inside the old Railway Goods shed. The last 3 pages show some highlights from the 2022 event hosted by Ron & Linda Harris with a lot of support from members of th Lake Goldsmith Steam Preservation Association. Thanks to all for the post covid return. Ed.