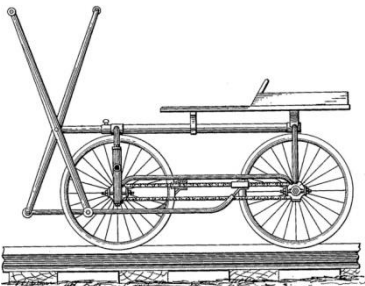
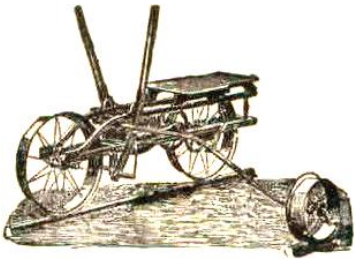


# Velocipede

## And other Hand Powered Rail Vehicles

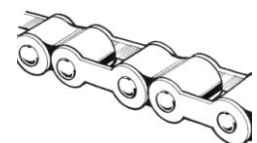
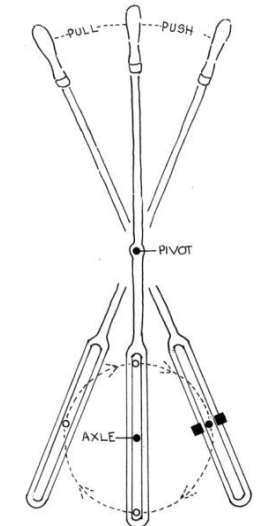
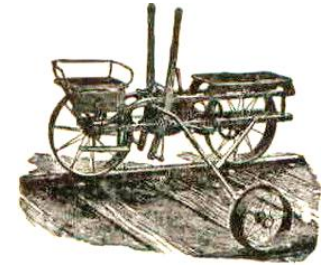
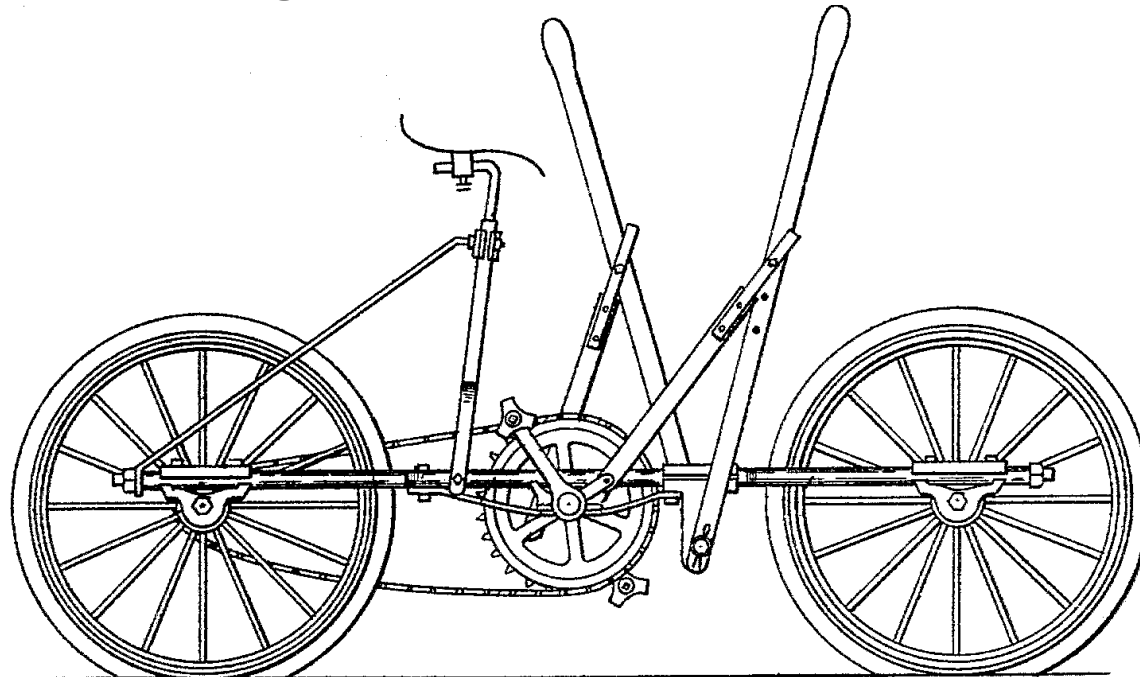
Hajtany (HU) Railbike (US,GB) Dresinsykling (NO) Handcar (US)  
Handhebeldraisine (DE) Drezina (RU) Resiina (FI) Drezyny (PL) Skinne cykel  
(DK) Cykeldressin (SE) Draisines (BE) Bicilinha (BR) Dresin (NO)  
Bicicletta Ferroviaria (IT) Spoorvegiets (BE) Dressin (SE,NO)  
Dresina (SP) Schienenvelo (CH) Drezyny (CZ) Spoorfiets (NL)  
Pump Car (US,GB) Velorail (FR,GB) Cyclo Draisine (FR) Hand Jigger (NZ)

No 45 For this free email newsletter, contact: [jackiethomas002@hotmail.co.uk](mailto:jackiethomas002@hotmail.co.uk) Or download from: [www.velocipedes.co.uk](http://www.velocipedes.co.uk) 2015 dates TBA 15th National Velocipede Rally, Nene Valley Railway Velocipede Rally, Shildon/Weardale Railway Velocipede Event, Dean Forest Railway, North Yorkshire Moors Railway Velocipede Event, USA Nevada Northern Event. 2 foot gauge: Statfold Barn Railway, 28<sup>th</sup> March, 6<sup>th</sup> June, 12<sup>th</sup> September [www.statfoldbarnrailway.co.uk](http://www.statfoldbarnrailway.co.uk)



## Velocipede *Arm Enhancer* *Special*

A strange 1890's extra on 3 wheel track machines



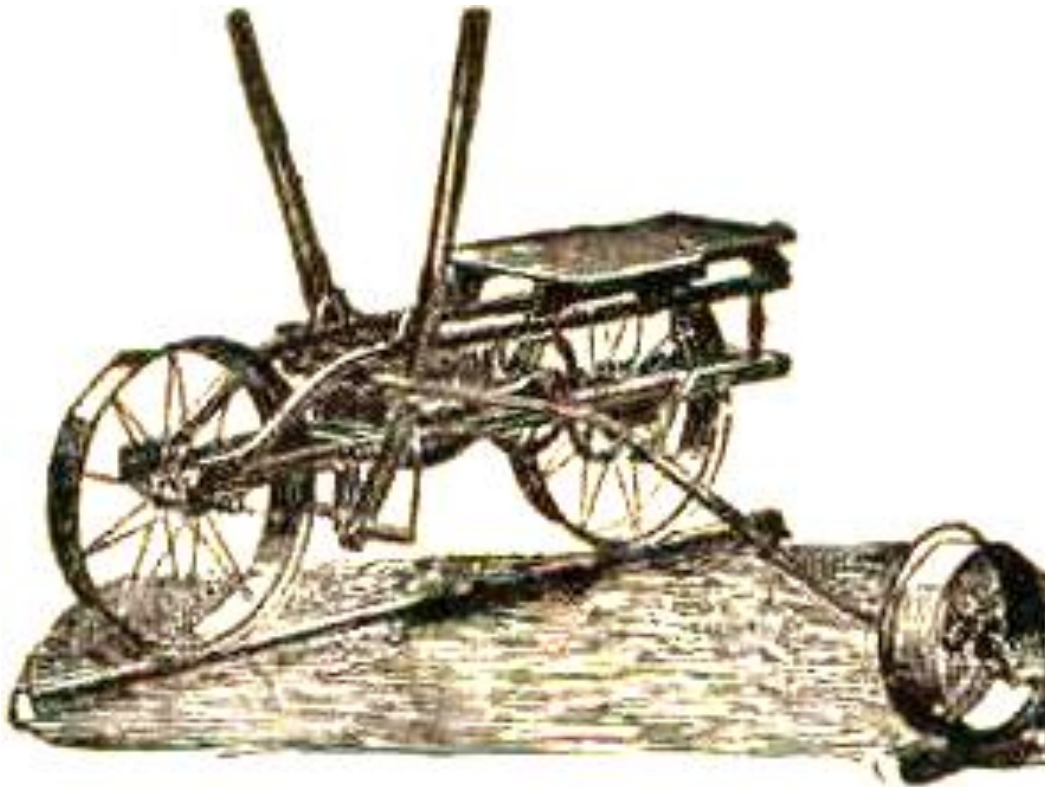
Lary Shafer Report & Photos page 7 Kalamazoo Drive Solution page 9

# From 1899 Parker Wilkinson Catalogue

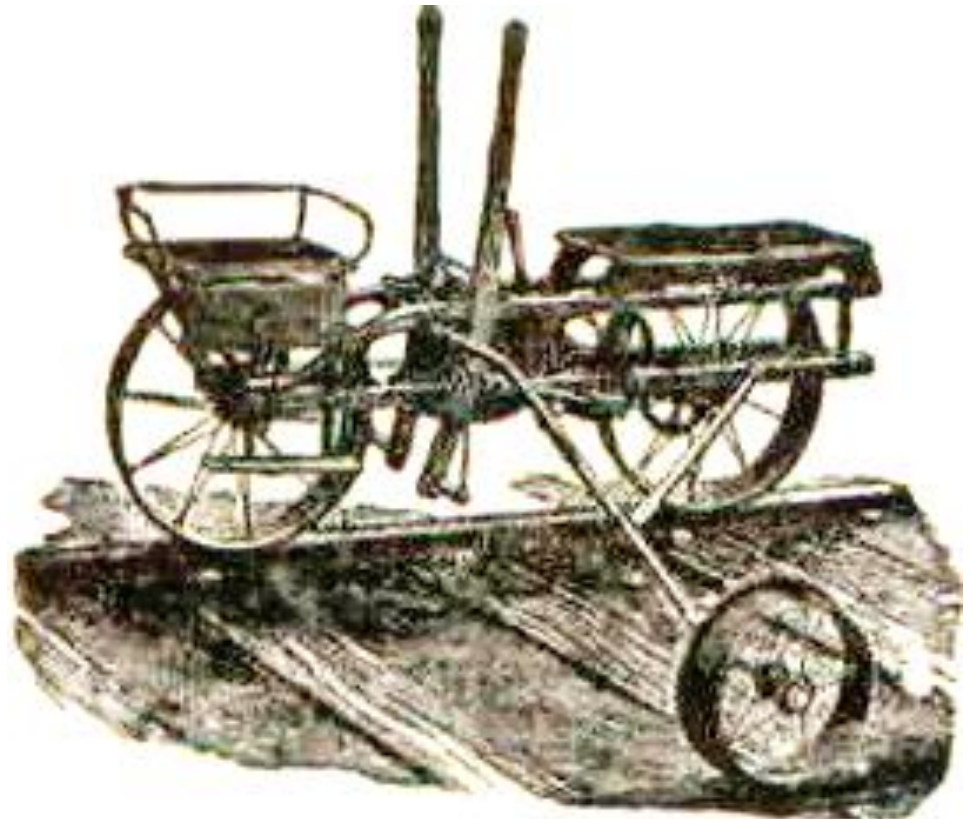
## Two machines with arm "Power Enhancers"

"They are light, strong and nicely balanced and having two levers they can never get on the "dead center". They are speedy and so built that they will keep the track."

No.1 One man..... Each, \$30.00  
" 2 Two men " 32.50



One Man 105 lbs  
*(These wheels are very Kalamazoo like)*



Two man 120 lbs

### RAILWAY SECTION CARS.

See cuts page 172 and 174.

No. 40.	Standard gauge, 700 lbs.....	Each, \$62.00
---------	------------------------------	---------------

**STONE CAR.**

No. 41.	3 ft. tramway, 1400 lbs.....	Each, \$73.00
---------	------------------------------	---------------

**SIDE DUMP BASKET CARS.**


No. 50.	Size 36x30x24, capacity 10½ cubic ft., weight 500 lbs.....	Each, \$ 43.00
" 51.	" 40x40x26, " 15 " " 533 ".....	" 33.00
" 52.	" 48x34x36, " 23 " " 835 ".....	" 60.00
" 53.	" 60x48x36, " 37½ " " 965 ".....	" 63.00
" 54.	" 58x58x28, " 33 " " 986 ".....	" 72.00
" 55.	" 64x60x60, " 80 " " 1900 ".....	" 120.00

AA.—Capacity 16 cubic ft., length 54 in., width 36 in., depth 24 in., gauge 18 in., wheels 12 in., angle steel frame, body ¾ steel, weight 1000 lbs..... Each, \$130.00


**WESTERN DUMP CARS.**

Capacity 1¼ yds., gauge 24 in., wheels 12 in., weight 1400 lbs., axles 2 in.  
Can furnish any size required; write us for prices.

**RAILROAD VELOCIPEDE CARS.**



One man, weight 165 lbs.



Two men, weight 130 lbs.

They are light, strong and nicely balanced and having two levers they can never get on the "dead center." They are speedy and so built that they will keep the track.

No. 1.	One man.....	Each, \$30.00
" 2.	Two men.....	" 32.50

**HAND CARS.**

No. 1.	Double frame car, 20¼ in. wrought spoke wheel.....	Each, \$ 70.00
" 2.	" " " 20¼ " plate wheel.....	" 70.00
" 1.	Tel. car, brass gearing, 1¼ in. steel axles, 24 in. wheel, cast walking beam.....	Each, 100.00
" 2.	Tel. car, brass gearing, 1¼ steel axles, 24 in. wheel, wrought iron walking beam.....	Each, 100.00
" 3.	Tel. car, brass gearing, 1¼ in. steel axles, 20¼ in. wheel, cast iron walking beam.....	Each, 90.00
" 4.	Tel. car, brass gearing, 1 in. steel axles, 20¼ in. wheel, wrought iron walking beam.....	Each, 90.00
" 5.	Tel. car, brass gearing, 1 in. steel axles, 20¼ in. wheel, pat. ratchet crank.....	Each, 90.00
" 1.	Rubble car, 19 in. plate wheel.....	" 50.00
" 1.	Iron Lorey car.....	" 100.00

Discount.....

176

### HAND CARS.

No. 1.	Double frame car, 20¼ in. wrought spoke wheel.....	Each, \$ 70.00
" 2.	" " " 20¼ " plate wheel.....	" 70.00
" 1.	Tel. car, brass gearing, 1¼ in. steel axles, 24 in. wheel, cast walking beam.....	Each, 100.00
" 2.	Tel. car, brass gearing, 1¼ steel axles, 24 in. wheel, wrought iron walking beam.....	Each, 100.00
" 3.	Tel. car, brass gearing, 1¼ in. steel axles, 20¼ in. wheel, cast iron walking beam.....	Each, 90.00
" 4.	Tel. car, brass gearing, 1 in. steel axles, 20¼ in. wheel, wrought iron walking beam.....	Each, 90.00
" 5.	Tel. car, brass gearing, 1 in. steel axles, 20¼ in. wheel, pat. ratchet crank.....	Each, 90.00
" 1.	Rubble car, 19 in. plate wheel.....	" 50.00
" 1.	Iron Lorey car.....	" 100.00

Discount.....

176

See **Velocipede Newsletter 15**

on the website [www.velocipedes.co.uk](http://www.velocipedes.co.uk)

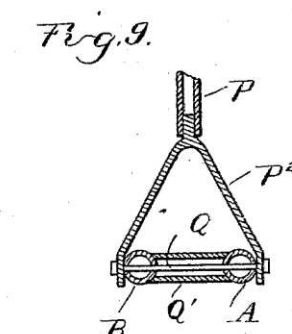
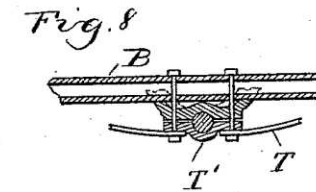
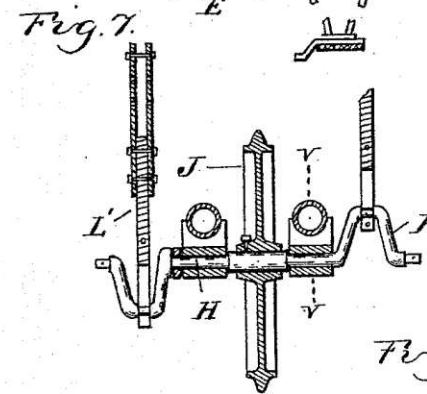
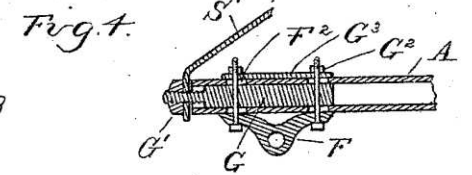
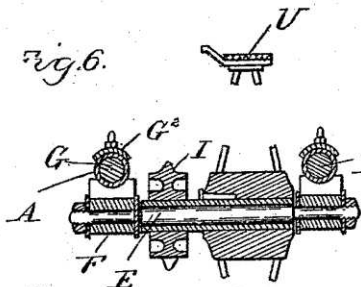
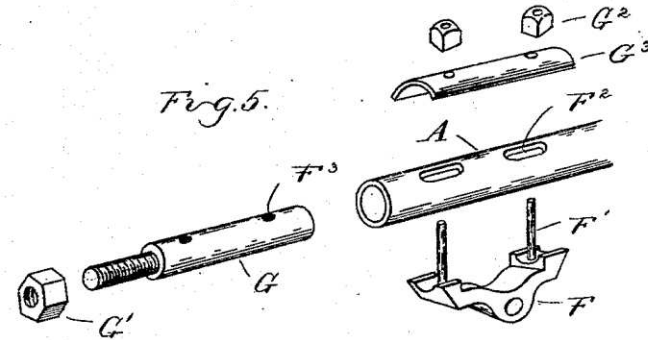
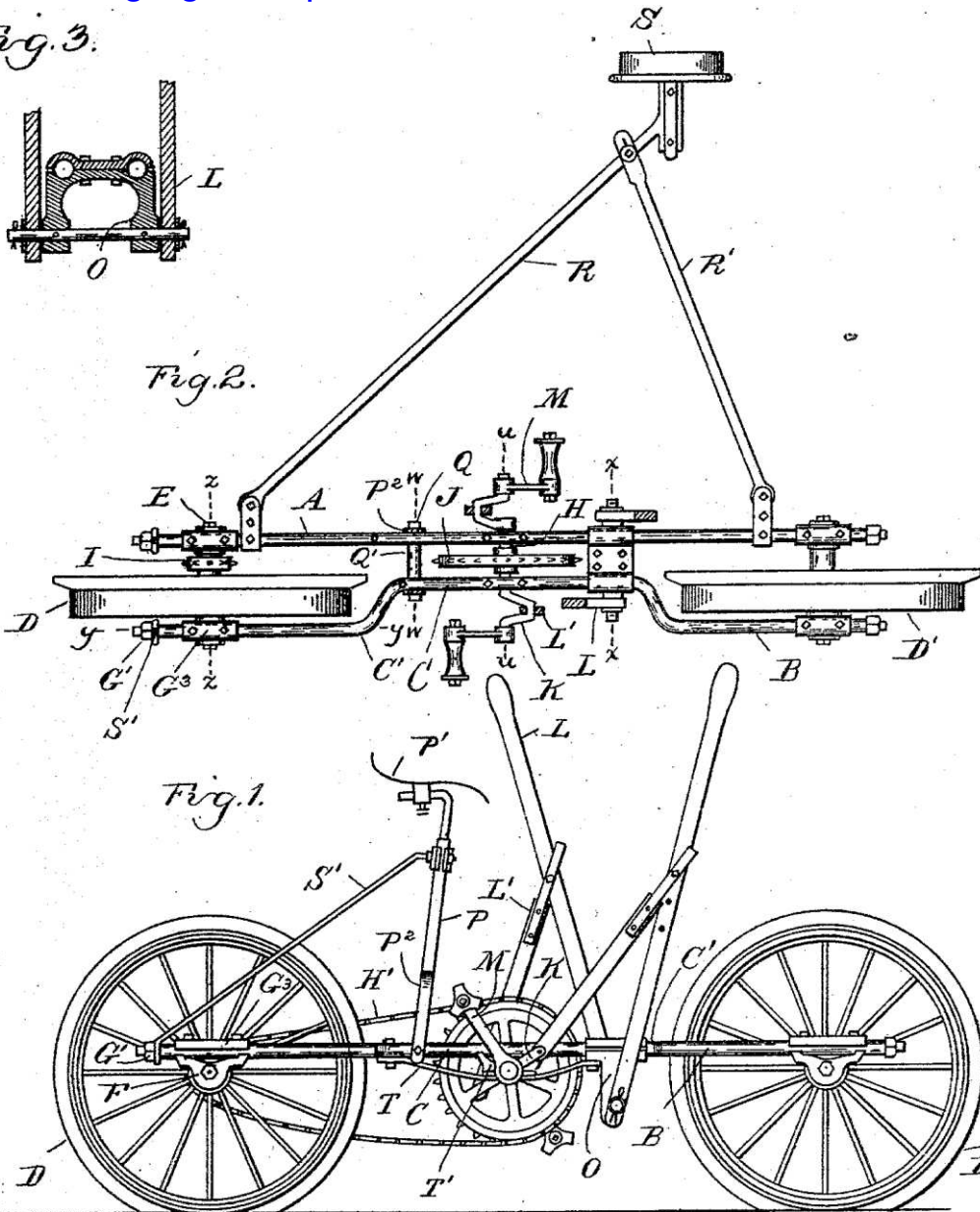
for a Russian machine with arm operated **"Power Enhancers"**



There is a patent for a very similar but more complex machine with an extra crank behind each pedal, by J. Donovan of Feb 13<sup>th</sup> 1894, go to [www.google.com/patents/US514449](http://www.google.com/patents/US514449)

The second page has enough build details to make one.

Fig. 3.

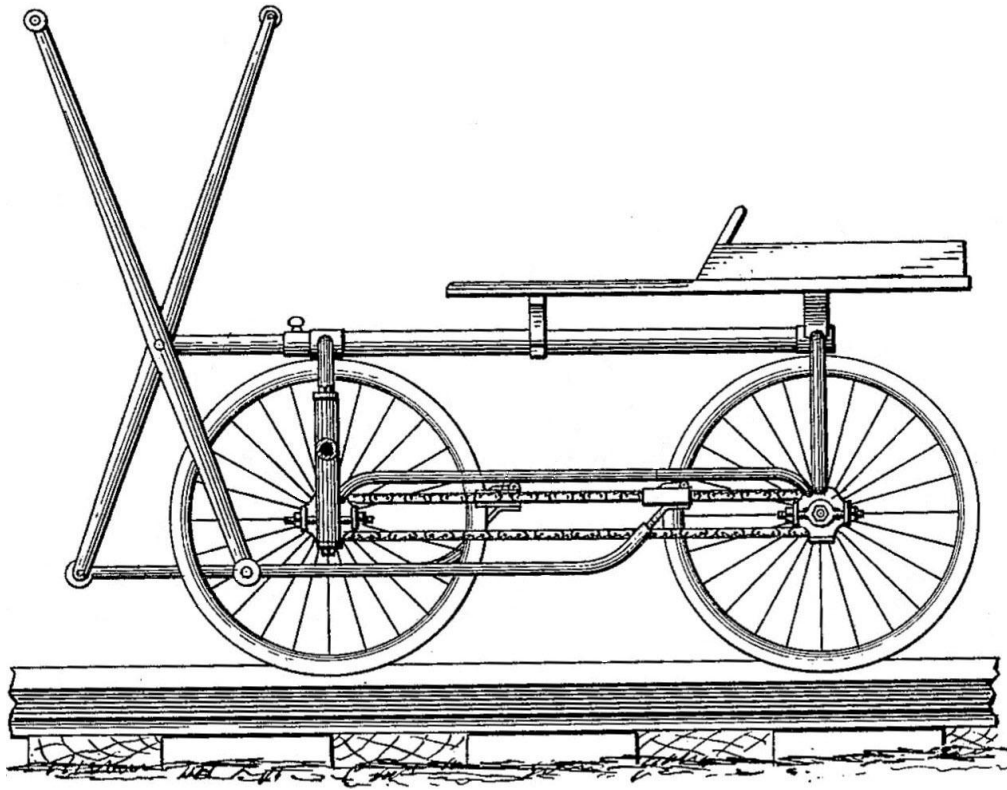


With our talented builders I shall expect to see one at our Rally.

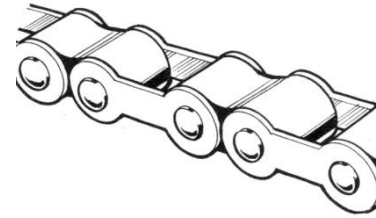
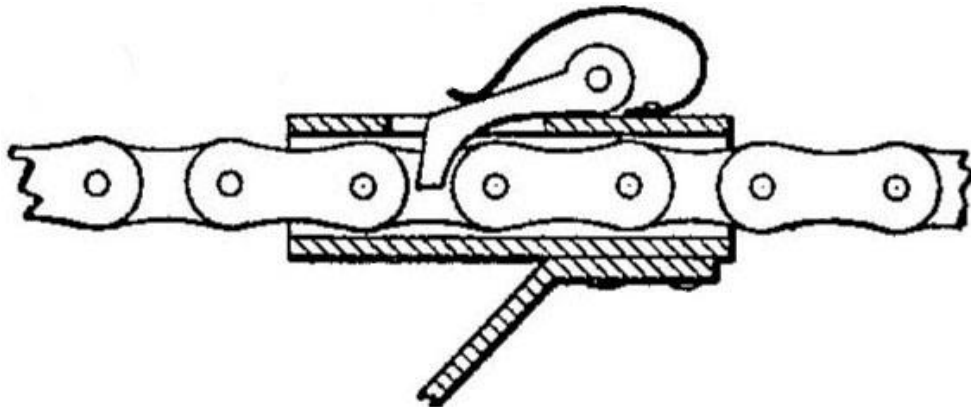
A most original device is by G.E. Heaton of March 29<sup>th</sup>, 1898.

At [www.google.com/patents/US601439](http://www.google.com/patents/US601439)

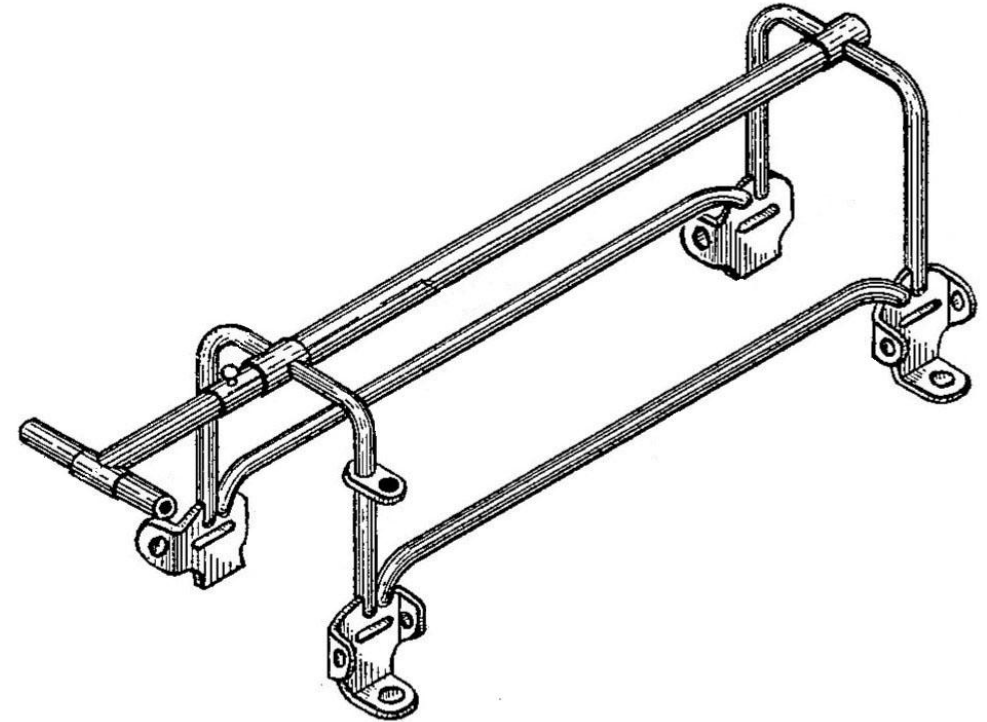
It bears a striking similarity at first glance to the Sheffield No. 16 **BUT**



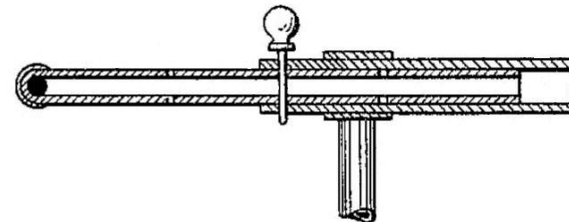
without cranks and having a chain on each side that are alternately “grabbed” by the spring loaded ratchets below.



Remember these machines use Block Chain not modern roller chain.

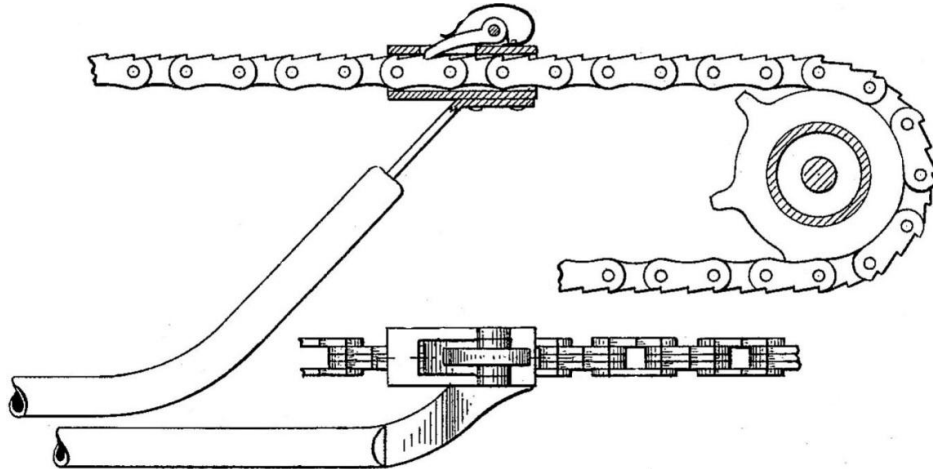


The frame design is “modern” and the pressed steel axle box holders are just one pattern for all four, the axle end goes through the horizontal slot into the adjustable bearing on the outside.

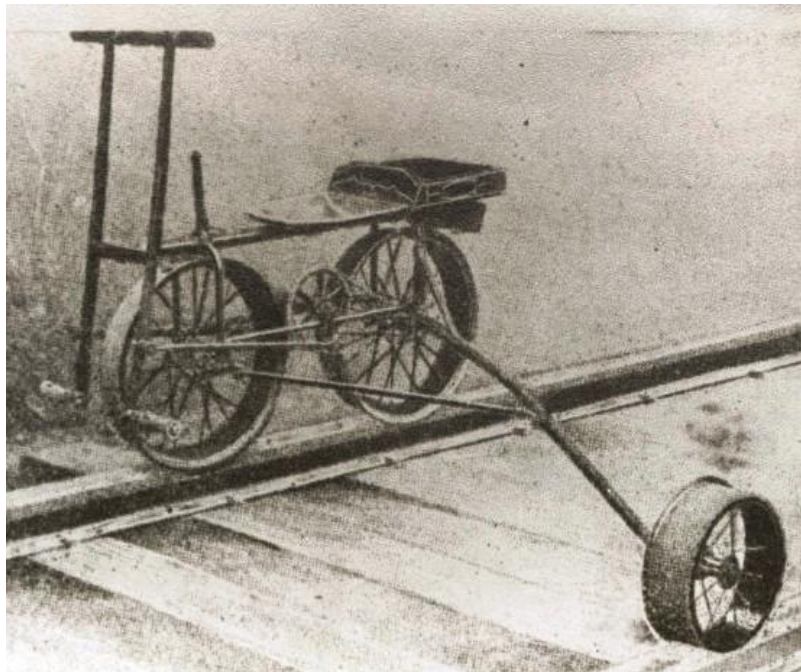


Adjustment for longer and shorter arms and legs.

There is an alternative horrible serrated top chain I do not think would have lasted long, mind you I have never seen a photo of a production machine so wear is probably irrelevant.

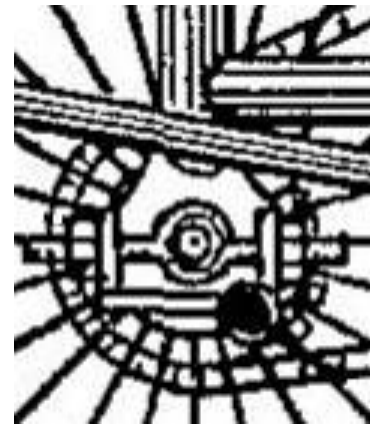
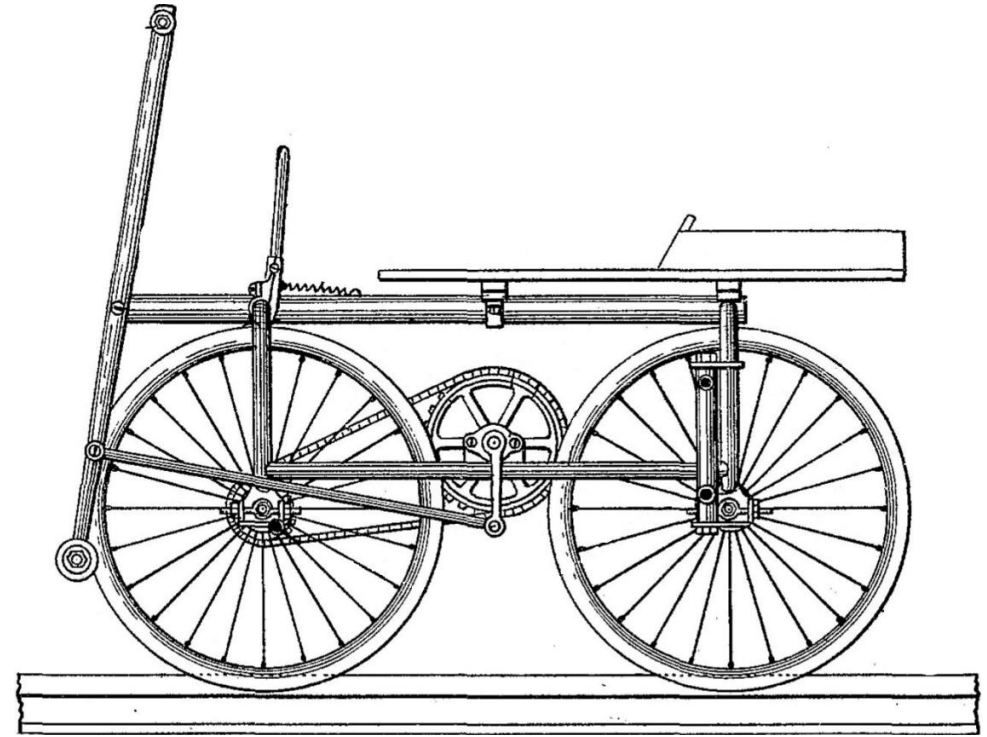


The Sheffield No. 16 referred to above, **not an arm enhancer.**

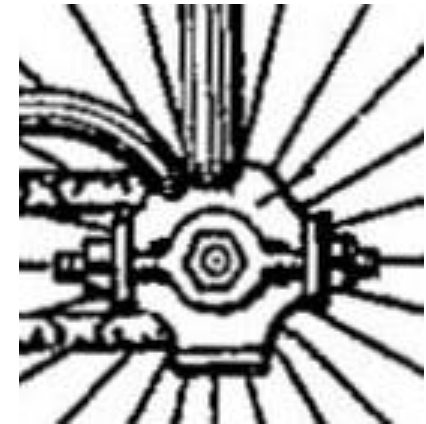


Later No. 16's, like this one, had the chain to the back wheel.

Sheffield No. 16 Patent by J.G. Matthews, March 13, 1900 is at [www.google.com/patents/US645115](http://www.google.com/patents/US645115)  
**not an arm enhancer.**



No. 16 1900



G.E. Heaton 1898

These axle ends, and frames bear striking similarities, I suspect Sheffield bought up the patent but **I have no evidence for this.**

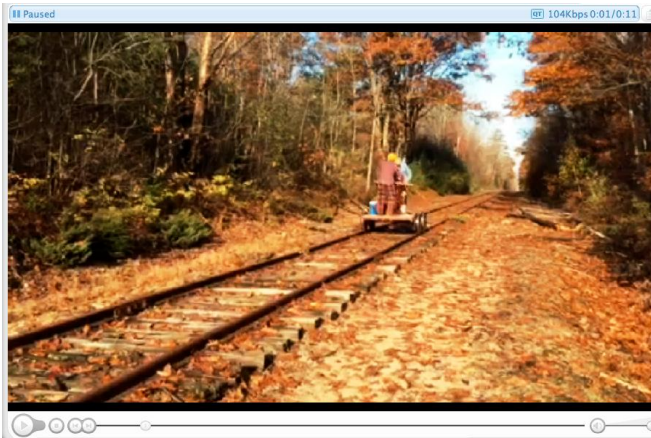
# “The best things in life are worth waiting for”



Hi Jacqui,

Only 55 years after I found it as a wreck and bought it from the railroad, at last I had a chance to give my old Sheffield a little run on the rails. The track in question is owned and operated by the State of Maine, but I got a permit to use this stretch of it for a day. Here is a little video taken by crew member Mark Doiron of me and my other crew member Caleb Doiron. It was very hard work to pump it up grades but the downgrades were fun. If I can ever get reconnected to my website, I will post the details of this ride there. The bell was not very handcar-like but we had to have a noise maker at level crossings and it made a nice sound.

Best, **Lary Shaffer**. See Lary's website <http://faculty.plattsburgh.edu/lary.shaffer>



Beautiful Countryside in Maine



Caleb and Lary in action



Loading up at home, leaving her little section house:



Crewman Mark helping with unloading from his magnificent trailer:



Crewmen Mark and Caleb at a rest stop:



Me checking axle box nuts for tightness en route.

# *Hand Power Tour* of Scandinavia by Geoff Holland

## Part 2

Geoff took all the photos in this issue and the last on a RTC tour of Southern Sweden in 2013.



Hire line, 3 wheel machines nearest and 4 wheel behind **All photos by Geoff Holland**



4w, with 3 wheels in line.



*Very American looking Section House.*



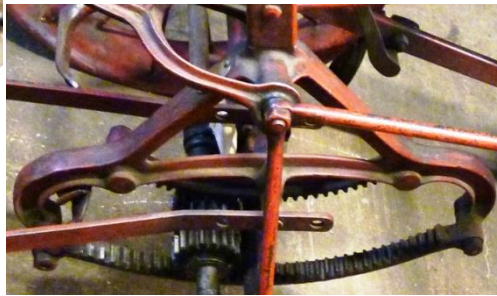
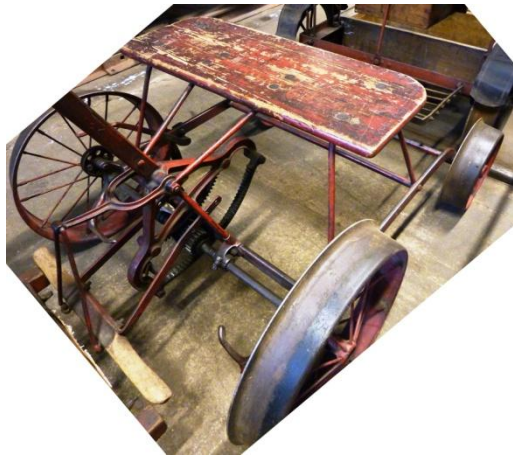
*A scrap pile to kill for, all these could ride again.*



## Sherlock Holmes Article



# James has a solution



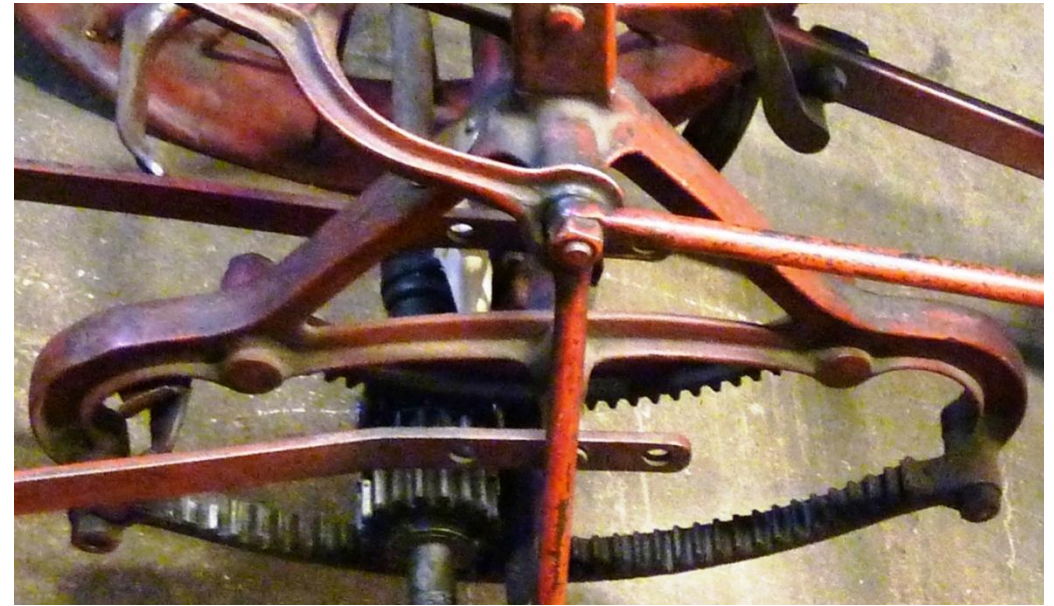
All photos by Geoff Holland

## To the Kalamazoo drive from No. 45

*Hello again Jacqui - I think I may have worked something out - this is my theory:*

**1** *The upper and lower racks are offset, not one above the other, as can be seen on the photo. I think each rack is permanently meshing with one of two pinions, arranged side by side on the axle.*

**2** *These pinions contain ratchets, so that they are always driving the wheels in the same direction.*



*So the lower crescent rack drives the car forward when the top lever is pushed away from the seat (and the pinion meshing with the upper rack "free wheels")*

*and the upper crescent rack drives the car forward on the pull stroke (and the pinion meshing with the lower rack "free wheels").*

*It appears that the racks are driven back and forth using the upright handle, so the wooden pedal board is a mystery. I'm not sure where the two brackets with the three holes in the end are supposed to be anchored either!*

*If they attach to the rack assembly, then you could push the top lever for one stroke, and push the wooden board with your feet for the other stroke.*

**How mysterious! James**

*Has anyone spotted a US patent in their researches ?*

*Jacqui.*

# Incoming emails



Jacqui...

1692

I have now had 1600+ emails to deal with, everything from: which pump car was used in the film **The Great St Trinian's Train Robbery** (it's a prop department mock up); the **Dad's Army** "Royal Train" episode (it's a steel frame Wickham, now on the Mid Norfolk Railway); the velocipede in "**The Titfield Thunderbolt**" (a GWR Buda c.1910 (and where do I get an OO model of it)) to "how do I price and sell a velocipede for an elderly friend?" (sadly two of those).

Explaining "back to back"\* and "cone angles".

Hiring a machine for a television show, a running day as a present for dad/make a music video and it goes on. **It is fascinating.** \*will be in Newsletter 46

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## From Cary Williams

Here is a link to some interesting velocipede/ hand car photos

<http://www.ephemerasociety.org/blog/?p=2605>

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## From Mark Hambly



Photo Australian National University

I first discovered this image last year as it appears in a **Colonial Sugar Refining** publicity brochure from the late 1940s

In correspondence with John Browning in Brisbane I discovered that, like a number of **CSR's** official photographs, it is now held in the Noel Butlin Archives Centre at the **Australian National University in Canberra.**

(It was used in the October 2014 Australian Narrow Gauge Railway Museum Society's publication "Salute to the Hudswells" - available in the UK via the IRS).

---

## From Rolf Schulze

Hi Jacqui,

Thank you for your great newsletter. We're a group of railbikers from (primarily Northern) Germany and we're very interested in your newsletter and the international railbiking community. Our website is [www.draisinenfahrten.de](http://www.draisinenfahrten.de) Until now, it's only available in German, but we're looking forward to add some English/French/Swedish translations later.

Every year, we make at least one excursion with our railbikes abroad. Last year, we were in Northern France and the year before, we were in Sweden, since Sweden is somehow the cradle of touristic railbiking. We love to meet foreign railbikers, because we think an international exchange between railbikers is very important, since we've all to cope with the same problems (e.g. technical and safety issues, procurement of good wheels, preservation of abandoned railway tracks, brush-cutting, protection of grade-crossings etc.).

We have also started a Facebook group:

<https://www.facebook.com/railbikeadventuretours?fref=ts> We really would like to publish your newsletter also there, but only with your consent.

Best regards, Rolf Schulze [www.draisinenfahrten.de](http://www.draisinenfahrten.de)

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## From Roger Whiffin

Some pedalling up and down at Dromero, an old station in Italy near the French/Swiss borders

<https://www.youtube.com/watch?v=pvBkktQk-2U>

[https://www.youtube.com/watch?v=S\\_DtrWWRKvU](https://www.youtube.com/watch?v=S_DtrWWRKvU)

At about 3 mins into this there are some views of pedal draisine at this museum in Lecce - in the deep south of Italy.

<https://www.youtube.com/watch?v=O1YdvL5Lp0A>

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## From Mark Egerton

<http://www.railtrackriders.com.au/index.php/photos/> This worked the first time I tried it but is now showing error 404, which their webmaster may correct. 3 foot Tasmania, casting polyurethane wheels, 1/2 way down.

## From Lary Shafer

Hi Jacqui and Kevin,

Happy New year. Attached is another **Kalamazoo Catalog** and associated price list for your collection, or to use in any way you like. The probable date is **1897** since that is the date of the price list that was with it. It came **from the archives of Western Michigan University** and we should give them a little pat on the head in any use of the material. Sadly, the copy in their archives is a photocopy but I suppose I should be glad that the information survived at all. By 1897, the company is, again, apologising for all the errors of the past (pipe gallow frames, paper wheels, etc.) and they are going to have another try at it. This company is a model of hubris before the fall and humility after.

As always, all the best, Lary

**This Catalogue follows in a second email. Jacqui**

---

## From David Topham Warren, Oregon USA

Hello Jacqui;

Do you folks have an American/Canadian counterpart? I am just trying to pass the word! I saw an advertisement for 20" all-steel wheels in Grants Pass, Oregon USA. The items are listed at [www.discoverlivesteam.com](http://www.discoverlivesteam.com) on the For Sale pages under Full Size equipment. I have been looking around at hand cars and velocipedes the last several days and I happen to come across these wheels.

**There is even a pump car for sale on this link Jacqui**

---

## From Peter Goodman, Australia

Hi Jackie,

Just thought I would let you know another Sheffield is well on the way as per the attached photo (note manufactured crankshaft for reference purposes only sitting on the frames)

This will be #17 but with 14in and not 20in wheels, reason being, I already had the wheels and axles and wanted to reduce "stuff" around the place.

Other parts left over from the last build will also be used .

Thanks for all the good work and email snippets received.

Regards,Pete.



Photo Peter Goodman

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## From Ron Edwards

Jacqui,

I am retiring and **would like to sell the Railriders** if any of your readers are interested. I have 3 excellent aluminum molds for the wheels I offer: 6 inch, 12 inch, & 17 inch. I have some spare parts and lots of names, web site and whatever else I may have. These molds are in Concord, NH - USA and be picked up there. I would like to sell everything for \$10,000, they cost me more then what I'm asking. I have been selling them since 1975, and as my site shows I've sold them all over the world. A heart attack in May this last year has taken the enthusiasm from me to run this anymore. I will be selling wheels until I sell.

Happy rails to you, Ron <http://www.railriders.net/>



**From Tim Dunn**

**2 foot gauge days out**

Dear Jacqui and the Velocipede gang

We have been building a 2ft gauge pump trolley for some time - and it's being completed this spring with wheels and brakes.

We're organising an **event on a 2ft gauge railway in Leeds over Spring Bank Holiday (23-25th May)** where we plan to use it.

It's to support our Sierra Leone National Railway Museum event "From West Riding to West Africa" **at Armley Mills Industrial Museum**, where there is a short 2ft gauge railway. They don't have motive power, but they do have a nice little track. I'm aware that there are other 2ft gauge pump trolleys out there. We've not the only one.

We'd very much like to have a couple present, maybe operating, over the weekend so that people can see how they work.

We'll sort insurance and so on, and there may be a possibility of us hooking up a small trolley to two of them and providing "rides".

We're not complete amateurs: organising the weekend are myself, Anthony Coulls (NRM curator), Helen Ashby (ex NRM) plus the Leeds Museum team.

We're just seeing if there's any appetite or potential vehicles that would like to join us first - so - is anybody interested?

Tim 07973 174 357 [www.timdunn.com](http://www.timdunn.com)

<http://www.twitter.com/SLRAILWAYMUSEUM>

## Wickham Corner

**Andrew Jeffrey** and friends on the North Yorkshire Moors Railway have the under frame from a Wickham trolley to start building a Pump Car.



## Kalamazoo Bike On ebay

**Spotted by Joe Riley, sent to John Vander Ven and forwarded to the whole group.** Offered by Dennis Auction Service, Stewartsville, New Jersey. <http://www.ebay.com/itm/271725409621>

The photos on the site are exemplary and well worth studying.



Fig. 1. New Track Velocipede.



Fig. 2. New Track Velocipede with Toolbox and Extra Seat Attached.

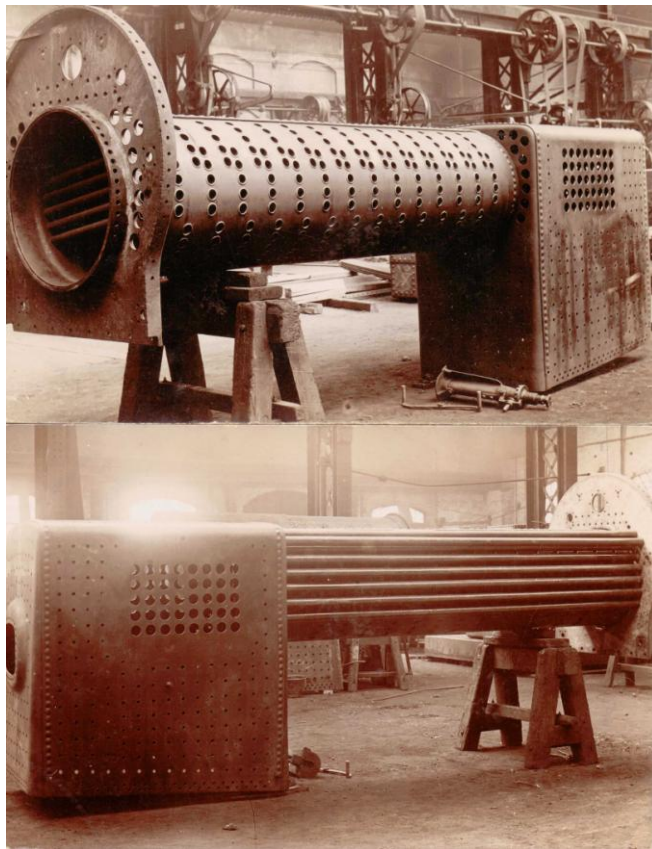
This is the machine. I have never heard of one of these bikes in preservation, it may well be unique.

## Sold for \$4,000



The prototype left, was slightly different

# Unusual Boilers Solved



**Thank you for all the comments sent in, Dugald Drummond won most votes by a mile. There have been**

**many fascinating emails and especially thanks for the three most succinct answers below. We have some very knowledgeable readers.**

*Both views were taken in Nine Elms works towards the end of 1901 and depict a special boiler to Dugald Drummond's design that was fitted in his K10 class 4-4-0 No 343. The first view shows the central drum and the second with the outer 18 fire tubes in position. The locomotive was completed in December 1901. Needless to say it was not a success and the locomotive was rebuilt with a standard boiler in December 1902. For the full story see "LSWR Locomotives - The Drummond Classes" by D.L.Bradley, published by Wild Swan in 1986. Out of print but should be available through the library lending service.*

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[http://1920slocomotives.blogspot.co.uk/2014\\_03\\_01\\_archive.html](http://1920slocomotives.blogspot.co.uk/2014_03_01_archive.html)

See photos 137, 138.

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*The firebox has cross tubes and is sizeable so I am pretty sure it is one of Mr. D Drummond's from the period 1897 to 1912 which were quite numerous. The odd feature is that there are water tubes across the barrel. It appears that Drummond tried this with less success. His locomotives were otherwise conventional and in due course these complications were dispensed with.*

---

I had a conversation with **John Jolly of Mangapps Railway Museum** about these boilers and he reminded me that in his experience "brass" tubes can be extraordinarily long lived.

The cross tubes visible in the top photo have been beaded over, they would have been difficult to expand, as the angle at which they emerge from the barrel would change as they move away from the centre line of the boiler.

---

I have had only one experience of brass tubes, when I was a member at the Industrial Railway Museum in Rutland in the 1980's. They had a small 0-4-0 Singapore (which had been in Singapore during the Japanese occupation 1941-45 and had a bullet hole to prove it).

Singapore needed partial retubing and it was my job to let the commercial boilermakers in each morning on the three days they took to do the job, with new steel tubes (they were incredibly quick).

When the job was over I bought a scrap "brass" tube thinking it was ordinary brass, **a big mistake.** Tube brass is as tough as phosphor bronze to cut and awful to machine. It is made for one purpose only.

*Jacqui.*