

Website: wmec.org.nz

**ISSUE No 321** February 2019 ... ... ...

Clubrooms/Running Track at Heritage Park, SH14, Maunu, Whangarei.

#### 3rd Sunday Running DECEMBER

The morning weather forecast was for cloudy, etc, so arrangements were made accordingly to cater for usual cloudy weather crowds.

But the weatherman did the dirty on me and decided to shine all nice and bright so the populace of Whangarei all headed to the beach to get sun burned. That left us with a whole heap of "snags" and loaves of bread that were not consumed, oh well ... into the freezer for next time.



We had a good turnout of members and likewise motive power so that all was "wasted". I think that some of the other groups on the site were likewise hit.

Rankin's new loco, Evaline, wasn't steaming all that well until it was discovered that the firebox had to have a larger fire therein. After that it went like a pocket rocket. It would appear that a small fire wasn't the answer. We had a visitor from MLS who is supposed to be an expert on small injectors. I think he got to the bottom of some of the problems that were giving a bit of grief on other locos.

**HURRAH!!** It must have been a bit of a milestone in the club's history because we actually signed up three new members in one day and what's more they were in the older age bracket and either had or were building things of steam!!.

On the previous Thursday we had our Christmas luncheon at the "Flames" Restaurant in the pub at Onerahi. Those who didn't take up the invitation missed a good doooo.

#### JANUARY

The weather was supposed to be a bit cloudy but instead decided to burn the skin off our heads. Public numbers were down and accordingly at one stage there were more club members than members of the public, but luckily this happening managed to clear out the freezer so that it is now empty ready for the next over-buy.

Tony, with the help of new member Jayden, managed to sort out a signalling problem with the lights at the starting end of the platform. They have been intermittently faulty for some time but no one seemed to be able to get to the bottom of the problem.

HOWEVER ALL IS NOW ROSY!!

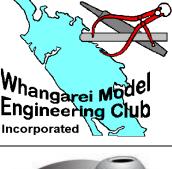
## CLUB NOTICES

3rd Sunday Running — February 17, 2019 Mid-week Workdays — Mostly Every Wednesday, 10 am.

#### **Extra Running Days This Month:**

**NOTHING ADVISED** 

THESE WORK IN WITH MUSEUM "LIVE" DAYS AND OTHER EVENTS WHEN HELD



#### QUIZ — What is it?

See Page 4.





By the <u>f</u>ditor

## Wednesday Workdays

A gang of the dedicated members have replaced a very corroded steel pipe that was taking the ground water from the upper platform area to wherever the outfall happened to be.

Weeding, etc, has been undertaken around and over the top of the tunnel to try and make the area a bit more photogenic and to lessen the summer fire risk.

There has been no other work as such through December as most Wednesdays have been taken up with running the railway because of the school holidays.

The usual servicing of locos has been undertaken by our chief engineer and any other members attending have been doing the platform/driving work.

Tony is still working on the signalling in the tunnel and Goods Shed area.

The workday-come-running-days for the school holidays so far have not been as profitable as the previous year.

The committee has been busy planning for the coming Anniversary Weekend open weekend.

#### Colin's New (old) Stationary Engine Gets to Run

After hiding or lurking in unknown places for quite sometime and after various attempts to get it to run properly it appeared in the workshop one WDW.

All Colin could get out if it were a couple of weak putt-putts and despite various threats to it's health that was all.

ENTER THE BRAINS-TRUST!! And after much fiddling of things it managed a few more putt-putts, and all of a sudden it decided it had better do the right thing and it settled down to quite a steady beat.



VIEWS EXPRESSED IN THIS NEWSLETTER ARE NOT NECESSARILY THOSE OF THE EDITOR OR OF THE WHANGAREI MODEL ENGINEERING CLUB (INC)

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# Pilsbury's Smoke Preventing Firebox

This article appeared in Locomotive Engineering, September, 1899

The smoke-preventing brick arch illustrated in a previous number, has brought to our notice a similar device used years ago.

In 1884, while master mechanic of the Eastern Railroad, Mr A. Pilsbury, now superintendent of motive power of the Great Central, got out a form of brick arch providing for air admission through the arch, coming out at the top. He took out a caveat for the invention, but never had it patented.

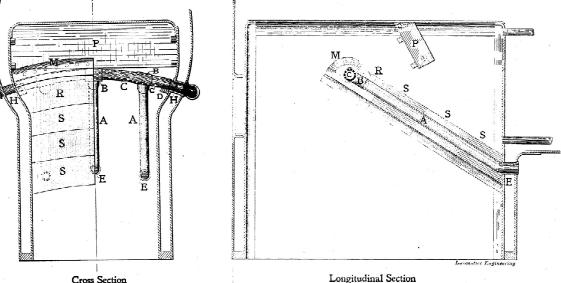
The invention was applied to an engine of the Eastern Railroad and gave excellent results, having been in service for over a year. The matter was not carried further because Mr Pilsbury left the railroad, and several official changes subsequently took place on the Eastern Railroad, and among them the device was neglected and afterwards forgotten, but its usefulness and utility were substantially established.

We have received from Mr Pilbury a blueprint of the device, from which the annexed engravings were taken. It will possibly be of interest to some readers to

know that Mr A. M. Watt, now superintendent of motive power of the New York Central Railroad, was chief draftsman for Mr Pilbury when this form of arch was designed, and he made the drawing from which the blueprint referred to was taken.

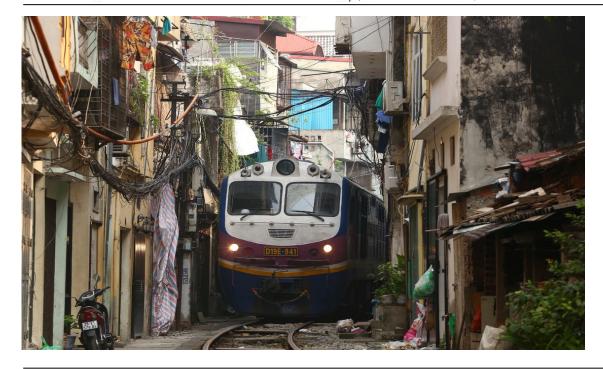
The brick arch is supported on lugs (D). There are three air tubes (A) fitted into thimbles at the front end of the firebox at (E), and terminating at the upper ends of the tubes in "T" fittings at (B). The "T" fittings B and thimble *E* form slip joints, which admit of and provide for all the movement necessary and required by expansion.

It will be noticed that the cross pipes connecting the upper ends of the of the "T" joints are perforated, and in turn covered by perforated curved fire brick, so that the air is delivered at the point and manner most suitable for aiding in consuming the gases. The deflecting arch (P) is not an essential part of the arrangement, and was not used in the engine fitted with the device.



Cross Section





### ANSWER TO QUIZ ON PAGE 2: The Vought V-173 "Flying Pancake"

WAS AN American experimental test aircraft built as part of the Vought XF5U "Flying Flapjack" United States Navy fighter aircraft program during World War II.

Both the V-173 and the XF5U featured an unorthodox "all-wing" design consisting of flat, somewhat diskshaped bodies (hence the name) serving as the lifting surface. Two piston engines buried in the body drove propellers located on the leading edge at the wingtips.

The "Flying Pancake" is a one-of-kind aircraft that dates back to World War II when Chance Vought built and flew the airplane to test designer Charles H. Zimmerman's theories about extremely low-aspect ratio wing design that allowed an aircraft to fly at very slow speeds. The Vought V-173 design features a circular airfoil with large-diameter propellers on the wing tips. Its designer reasoned that the drag, which is created by disturbed airflow near the tip of conventional wings, would be minimized by placing the propeller at the wing



tip. By maintaining a uniform flow over the entire span, Mr. Zimmerman felt that it could take off and land at exceptionally low speeds and still have good highspeed performance. After pursuing this idea with NACA (NASA's predecessor), he was encouraged to go to private industry and develop it further.

The V-173 proof-of-concept vehicle was built under a 1940 U.S. Navy contract and it made its first flight on November 23, 1942. The V-173 has a circular wing 23.3 feet in diameter and a symmetrical NACA airfoil section. A huge 16 foot diameter three-bladed prop was mounted at the tip of each airfoil blanketing the entire aircraft in their slipstreams. Power was provided by two

80 HP Continental A-80 engines. During its 131-hour test program, it was found that it had unusual flight characteristics and control responses, but could be handled effectively. It could almost hover and it survived several forced landings, including a nose-over, with no serious damage to the aircraft, or injury to the pilot. Restoration of the V-173 "Flying Pancake" developed into a large and challenging project.

The original prototype, designated the V-173 (Flying Pancake), was built of wood and canvas and featured a conventional, fully symmetrical aerofoil section (NACA 0015). Designed as a "proof-of-concept" prototype, the initial configuration V-173 was built as a lightweight test model powered by two 80 hp (60 kW) Continental A-80 engines turning F4U Corsair propellers. These were replaced by a pair of specially modified 16 ft 6 in three -bladed units. A tall, fixed main undercarriage combined with a small tailwheel gave the aircraft a 22° "nose-high" angle.

### Our Own Auckland Anniversary Weekend

Do you know that awesome feeling when you get into bed, fall right asleep, stay asleep all night and wake up feeling refreshed and ready to take on the day?

Next issue will contain (I hope) a more comprehensive photographic content of the previous Anniversary Weekend and the usual 3rd Sunday running.

Yeah, me neither!

### **Other Club's Events:**

MLS Waitangi Day 6th February (FREE): For Children with Special Needs. Maidstone (Hutt Valley): 23-24 February, 2019. Thames Open Weekend: 23-24 February, 2019. Hamilton Open Weekend: 16-17 March, 2019.

April (Easter): Australian Convention at Warner Club, Brisbane, Australia.

## INTERESTING VIEW ON THE PARIS ACCORD

Hmmm - saving the planet - here we go!

Here's a small sample of how many coal-fired power plants there are in the world today. I could go into using the advanced technology of thermally efficient, supercritical steam generators using our own world's best metallurgical coal; but what's the point, it is treated as hearsay and political hyperbole in Australia.

The EU has 468 plants, and building 27 more for a total of 495. They tell everyone else it's their responsibility to 'Save The Planet' from Climate Change, typical Europeans; morals are a philosophy, honesty is a heresy!

Turkey has 56 plants, building 93 more, total 149

South Africa has 79, building 24 more, total 103

India has 589, building 446 more, total 1036

Philippines has 19, building 60 more, total 79

South Korea has 58, building 26 more, total 84

Japan has 90, building 45 more, total 135

AND CHINA has 2363, building 1171, total 3534



And the **AUSTRALIAN** politicians are going ballistic and want to shut down their six (6) remaining plants and save the planet ... Duh!



PS: Today is the tomorrow you worried about yesterday.

Was it worth it?

IF UNDELIVERED PLEASE RETURN TO:-

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