

WATTS ON July 2020

Graeme Power in Dabkin, Queensland had a stroke of luck when he purchased an early Brisbane Synchronome clock as he loved the Nouveau case. Not really an electric clock collector he gradually discovered he had a very rare item from the workshop of the Jackson family which purchased rights to the Synchronome name and patents from Frank Hope-Jones of London in 1903. There is a similar silky oak case example in the Queensland Railway Museum but this has the later style of movement. Interestingly, Graemes clock was pulled from the bottom of a dumpster outside the Railway offices in Brisbane in the late 80's. Early installations were Melbourne St Station Brisbane 1903, Ipswich 1907, Toowomba Station 1907 and Maryborough in 1909. This could be one of those.

Restoration of the movement included making the 2 missing coils, the entire pendulum assembly with a 6mm mild steel rod – suspension block and 2.5 kilo bob. Carefully fettled Breguet style hands replaced the rusted pair. The case was cleaned and refreshed and a key found: the flaking dial was replaced.



There are several interesting features of this clock:

Crutch driven pendulum

Early Brisbane pendulums were crutch driven just like most mechanical movements of the day. A leader and crutch attached to the top support impulses the pendulum each full swing when the gravity arm drops every 30 seconds. This arrangement may have simplified installation but was a complication later abandoned.

Count wheel pushed rather than pulled

This feature appears in a Hope-Jones 1905 patent but was soon discarded for the pull action. Other Australian master clock manufacturers use the push action with either a high tooth or low tooth on the countwheel to activate a pulse for the slave units.





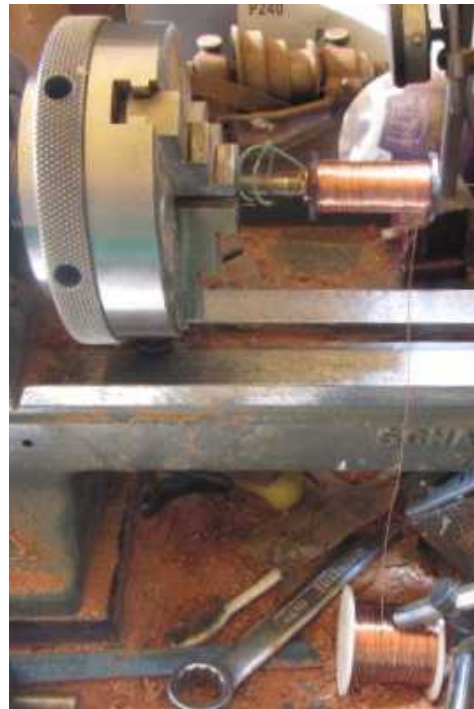
Releasing the latch

A flat “pushing” strip attached to the impulse pallet is split into two, higher and lower arms, releasing the gravity arm every 30 seconds when a shallow tooth allows the top split to dislodge the spring loaded holding catch. The roller on the gravity arm drops to impulse the pallet and the pendulum fork, thereby impulsing the pendulum rod. The gravity arm tail meets the armature contact to complete the electric circuit and bring the electromagnets into action, pulling the armature towards them which returns the tail and reset the gravity arm latch.

The right picture shows where Grahame had to start, the movement steel and brass work all corroded and the two coils missing. Fortunately the pendulum hanger was there but the pendulum itself was gone. In earlier models, the pendulum was held by the wooden backboard but this example has a bolted brass sheet, rising from the backplate, forming a more stable configuration.

Coil making

The coil making process in pictures, Cores are Cast Iron, bobbins Silky Oak,



"I wound the coils by hand on the Schaublin 70 and ran the coils on till I got to 2.5ohms resistance and cut it off there. surprisingly they both came in spot on 2.5. the wire being wrapped with 4 core twine stretched between two clamps I unthreaded the twine and spread it between my fingers as I ran it on so I only had to do it in one quick pass in a few minutes, I locked it on with super glue and you cant really tell the difference with the real thing, I only did the lead in and out then bound the bobbins in the same twine shellacking it to finish the old school look."



Slave movement

The slave had its original coil which tested ok. Interestingly the dial swings out on hinges. The slave movement is unmarked but typical of the time.

Other

“The pendulum is an old weight shell. I silver soldered a decorative collet to the cap and silver soldered a base and decorative stand away adjuster to look like the original, or at least what I was told the original probably would have looked like, it weighs 2.5kg and swings properly keeping time rather well, there are still some sorting issues for me as I don't really think this clock ever ran properly as an understanding of Resistors and Diodes and how to use them in a circuit was in its infancy. I think it was stripped for parts early in life due to its recalcitrant manners. Even the wire lock that holds the count wheel as the pendulum draws back is odd, it is soldered into its holder and I can see it should have a lock screw so adjustment is possible.”

Luckily there's an increasing interest in electric clocks and master clocks in particular. Graeme used the excellent book by Robert H A Miles “Synchronome Masters of Electrical Timekeeping” published by The Antiquarian Horological Society, plus research by Norman Heckenberg and Tony Roberts in their publication *Synchronome Brisbane 1903-1991” and Synchronomes at the end of the World, Barrie Smith's publication on “The Synchronome Company” also contains references to Australian models.

Links

Synchronomes at the end of the world

<https://www.ahsoc.org/shop/books/synchronome/>

Many thanks to Graeme Power for sharing his project with us
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