

Contact Peter Smith Telephone 01454-880825 Or Mobile 07969-773480 Email peter\_smith@horologix.com

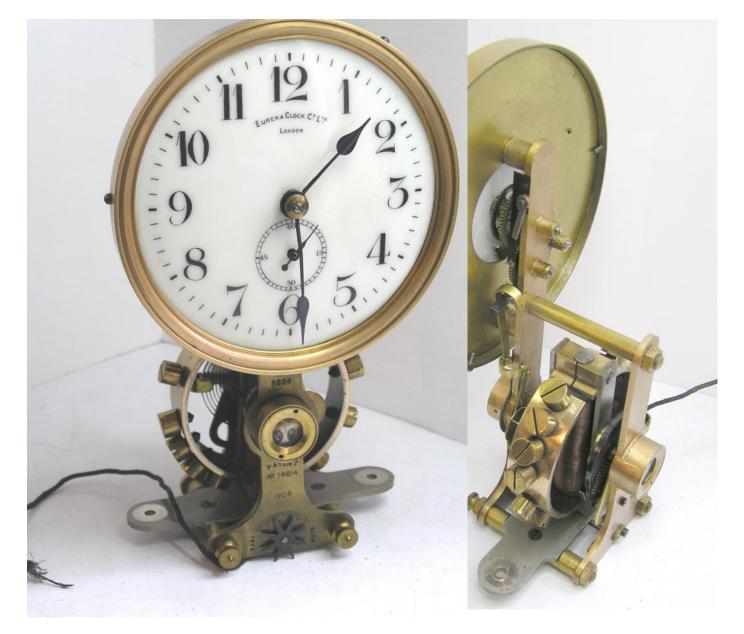
Eureka Clock Serial Number 8256.

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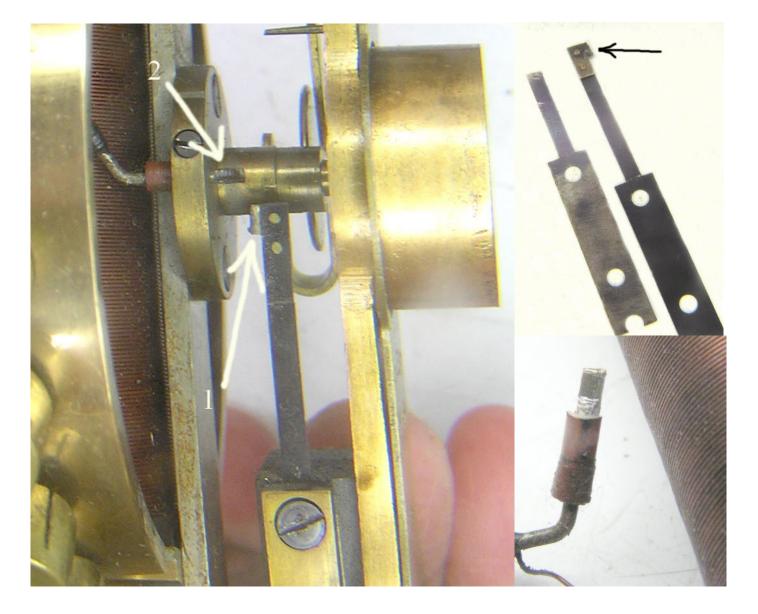
Restoration photos by kind permission of the owner.

The movement as delivered without case. This tall movement seems to be in excellent all round condition with any wear limited to the contact set and return spring. It is a two ball movement with a second hand. The bezel though was very loose because the retaining screws were not catching the back of the dial plate with sufficient friction. This may be a replacement bezel. But either way it is simple enough to correct by adjusting the dial to sit further out from the dial plate and closer to the bezel.



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As can be seen here, there is catastrophic wear to the contact flag. In fact it is completely worn away. The contact pin (2) has not faired much better and will need to be replaced. The flag is a small piece of silver riveted to a 0.004" piece of spring steel. It is reinforced on the one side by the addition of a buffer spring in the same material. This spring increases the pressure the silver side of the flag exerts on the pin when the wheel is revolving in a the clock wise direction.. There should be approx 3mm of flag protruding to make contact with the pin..

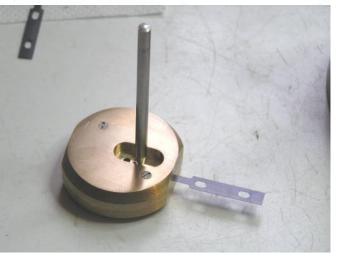


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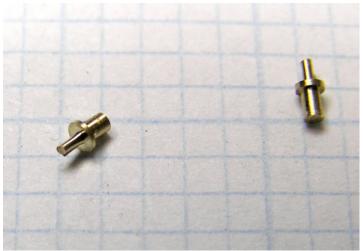
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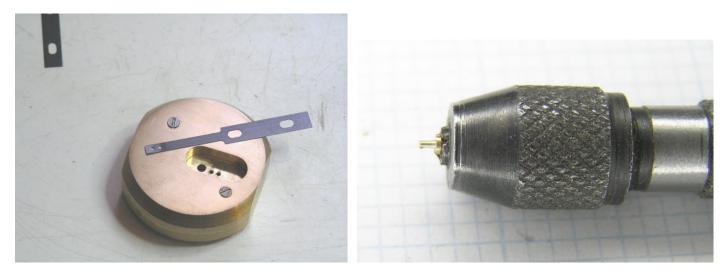
This photo at left shows the wear in the count wheel return spring. It's function is simply to capture the count wheel once it has been impulsed one tooth forward by the gathering pawl. It has worn clear through and will be replaced from one cut from 0.004" spring steel. It only takes a sharp pair of scissors and hole punch.



The two photos above and below show the jig I use to punch the contact spring ready to accept the rivets and silver flag.



Above are embryo rivets after turning on the lathe. The heads are 1.6 mm diameter while the body is 1.00 mm. The stub left by the parting tool needs to be filed away. The photo below shows the rivets held in a pin vice ready for filing..

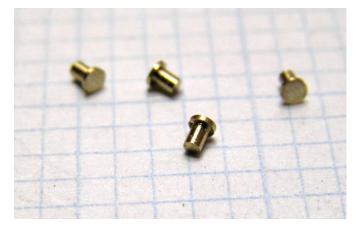


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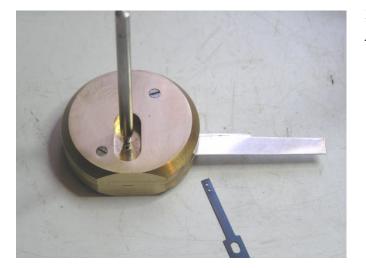
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The rivets after filing. They are now ready to be fitted.



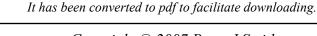


The silver strip in the same jig ready to have the holes punched through for the rivets. I made the jig so that both spring and silver would be in perfect alignment for the rivets.

The Parts being riveted together in the stake. The photo below shows the flag spring immediately after riveting The second flag shows the situation after being roughly trimmed to shape ready for chamfering the edges with a needle file.



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The photo above shows the completed contact set. The Tufnol sleeve of the contact pin can be turned to suite the hole in the Eureka plate. This varies in diameter from 2.00mm (shown) to 3.00 mm. Half the diameter of Tufnol is filed away to leave the silver pin exposed on one side.

The threaded retaining ring that secures the bearings and glass can be a bit of a b\*\*\*er to remove so I have made the tool show below which greatly facilitates its removal. It is simply a bar with two chamfered pins at the correct diameter to fit the holes. It saves a lot of effort and scratched brass. Well worth taking the time out to make it.

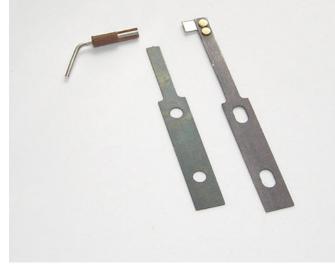
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for all your Bulle

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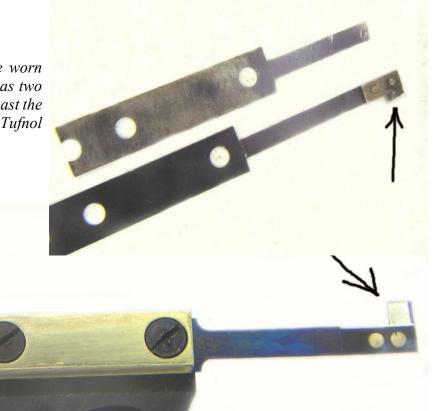
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The components of the balance wheel ready for removing and numbering the poise screws. These screws can be very different in their weight and must be replaced exactly the same position.. You will find the inside of the screw will be relieved to varying levels. Check the coil at this stage and make sure that it reads 20 ohms give or take 2 ohms.

The photos at right and below show the worn flag and the new replacement. The flag has two chamfers which facilitate the pin sliding past the silver pin on the clockwise swing and the Tufnol insulator on the anti-clockwise swing.

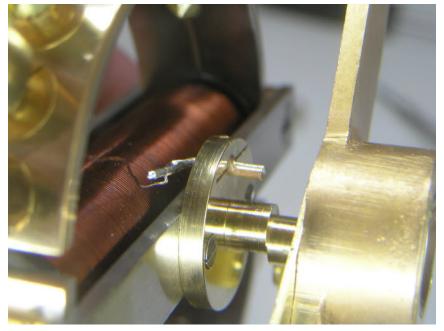


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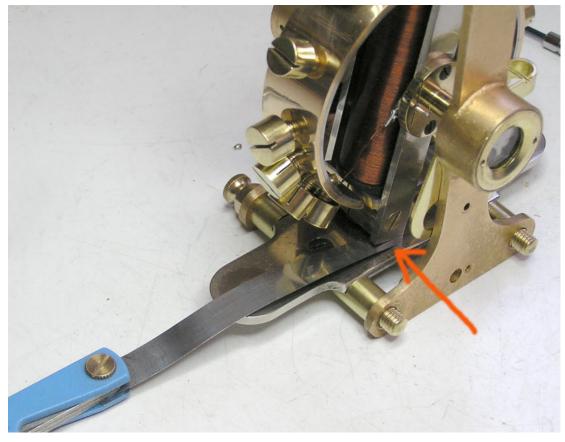


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The contact pin in position on the balance wheel. It must be positioned such that it present the silver contact pin to the flag on the clockwise swing and the Tufnol insulator on the reverse swing. The chamfers on the contact flag will



The solenoid within the balance wheel must have a minimal gap between it and the steel base plate when in the vertical position. To help get this gap correct a number of shims can be positioned under the plate to lift it towards the solenoid. Use a feeler gauge to estimate the shim size required..

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## The finished clock.



Photos supplied by the client. The movement has been fitted back into the restored case and these photos supplied by the client show the finished clock. The presentation plaque is a good dating aid and reads:-

Presented to Mr J Fitton by officials and friends as a mark of esteem on his leaving John Brown Co Ltd, Atlas Works Sheffield 24th August 1911.