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Bulle Clock Serial Number 1583

Restoration of Bulle Clock Serial Number 1583



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This is a very early and interesting Bulle clock dating from the first year of production. The full size movement is held in a front lifting glass framed wall case. The three glass panels are held in place by two angled brass strips. The dial is perfect as are the hands.

The case is unusual in that the two small hinges are at the top of the case meaning that the whole front and sides tilt up and backwards for access to the mechanism. The mechanism has an early half plate movement with box section, which is only seen on clocks with a serial number less than 2000.

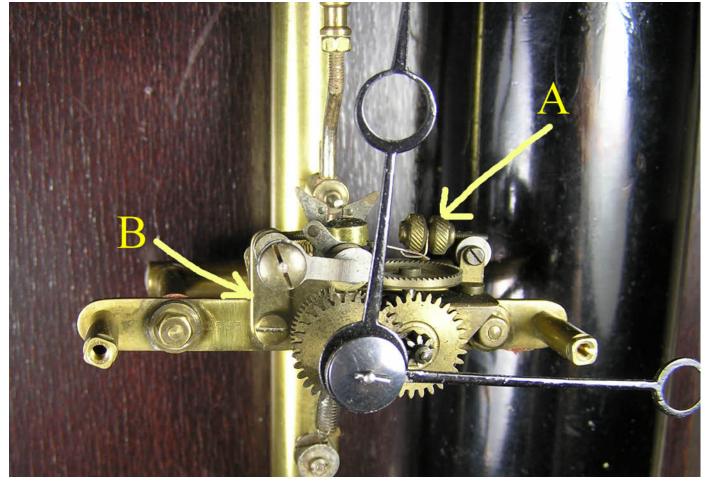
Not all of the later production methods have been ironed out yet and as such this clock has some unusual features not seen on later clocks.





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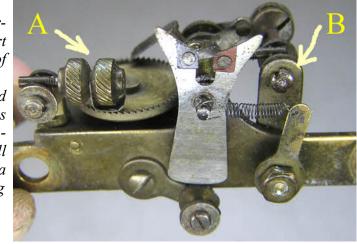
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This clock has the early method of restraining the count wheel (A) from lifting and recoiling after impulse. Two knurled thumb nuts act as weights to stop the wheel lifting, while the piece of bent steel between them acts to prevent the wheel moving backward. The arbour that holds the dampening cup and fork arbour end shake plate is attached on a separate bracket (B). The later full plate mechanism no longer requires the bracket.



The near perfect card insert dial and rear of the movement The fork and both contacts are in fine condition and will only need a gentle cleaning



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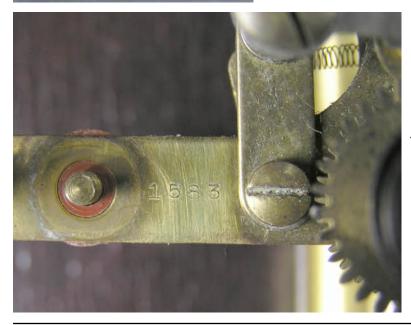
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These three photos show the rear of the clock and the battery holder which is a little rusty and will need to be cleaned and painted. These holders are made from flat tinned steel with end plates which are peened over and soldered. Two brass rods with one flattened face, are then riveted into the ends and threaded to take the two screws as shown. arrowed





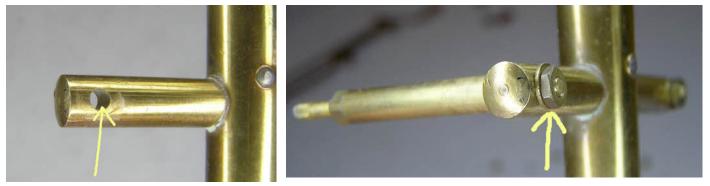
This last photo shows the early serial number. It us prudent to remove the nut and washer from the threaded arbour so that any hidden digits from the serial number can be seen. I have had quite a few people write in with incorrect serial numbers because there is a digit hidden beneath the fibre washer.

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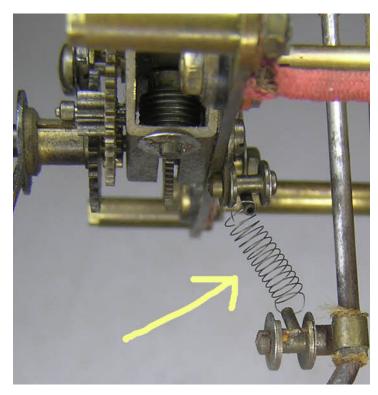


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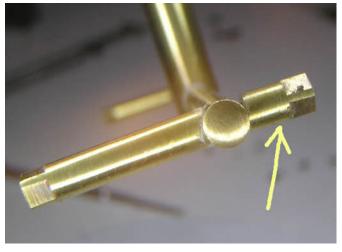
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At first I thought that this movement had been damaged and nuts had been added to the arbours that hold the movement to the frame. But on closer inspection I think the modification is original. The hole is clean with no damage or any indication of being threaded. Also the arbours themselves have extended thread ends to suit e the added nuts. If frame was originally threaded then the threaded end of the arbours would be shorter and not protrude through the frame. It must be remembered that methods changed quite quickly in these early production clocks and many new ideas were being tried out. I have seen many parts on these "half frame" clocks that have obviously been hand made while testing different techniques.



This photo shows the base of the movement and the rear. original Isochron spring and brackets.

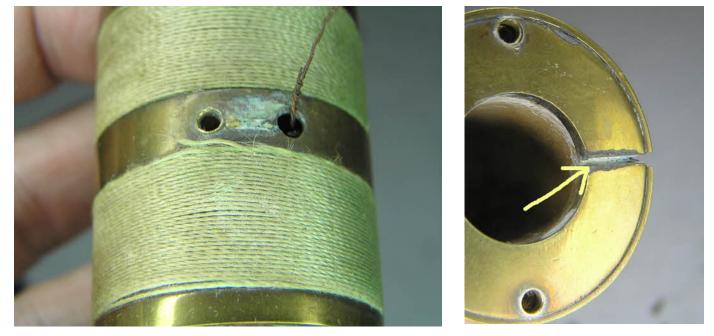


The photo above shows the extension to the arbour that holds the magnet. This extension is a method of standing the clock away from the case. There were two methods of securing these to the case. One is by the use of brass tags which are then screwed into the case from the front using wood screws, or in this case by machine screws through the case from the rear



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These photos shows the poor condition of the cord around the coil casing. The brass has been cleaned for many years with a brasso like substance which has eaten into the cord leaving dry, brittle and dusty. You can also see the deposits left in the joints.



Thankfully the pendulum rating nut is complete and has not been drilled or turned down to lighten it.

The mark on the frame shown here is where a resistor would have been located. These early clocks had low resistance coils of around 700 Ohms, whereas the later ones were around 1200 Ohms. It must have been realised that this was too low a resistance giving too great a swing of the pendulum and a shorter life for the battery. It was therefore decided to add an extra resistor between the battery and coil at a convenient point on the frame

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This photo shows an original resistor from another Bulle clock. It is simply made and has a resistance of 275 Ohms. It may be that the resistance varied slightly to match the main coil. I will use this as a template for making a new one for this clock. All the parts are simple turning and threading jobs. The coil itself is easy to wind



on the lathe.

and Eureka restora-

tion parts.

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This photo shows the main components of the resistor. The body is a 3mm rod threaded to take 2mm nuts. The ends are capped with standard fibre washers found on Bulle clocks. The other two parts are a spacer and a loop to attach it to the clock frame.

At left are the new parts turned up on the lathe. While below we see the two together. Old and new.

I decided to add a small insulated bracket to make it easier to attach the silver contact wire.



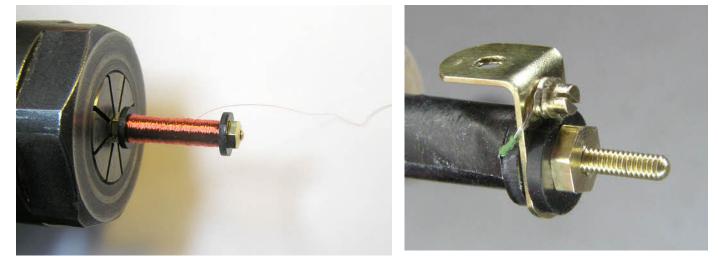




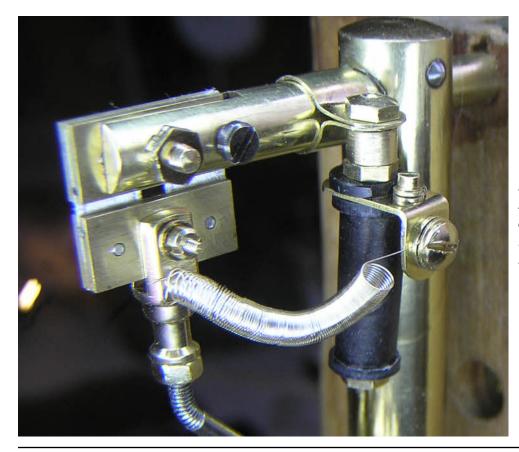


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Here we see the winding in progress. I used 44 swg enamelled wire to give a resistance of 300 Ohms. This would give a total resistance of about 1050 Ohms. One end of the wire was passed though a hole in the main body of the resistor and soldered while the other end was secured with a 1.4mm screw to the insulated bracket as shown above. The "flow" of power would then be from the battery up the frame to the resistor via the loop which holds it onto the frame. Then through the resistor winding out to the end and screwed to the insulated bracket. This would then attach to the silver contact spring as show in the photo below.



The photo at left shows the resistor in position and connected via the coiled silver contact spring. The winding itself is wrapped in plain black paper.

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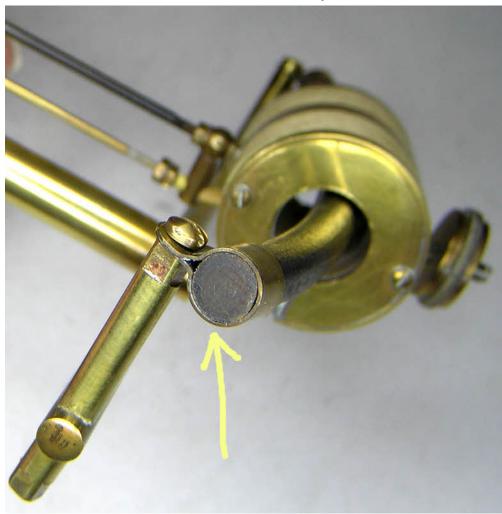
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The photo at left shows the two coil cap spacer bars that have threaded holes to accept the pendulum rod and rating nut. Note that they are different sizes and that they are made from solid bar. Later ones are the same size and made from tube. The photo at right shows the early magnet brackets on the right and the much thicker ones from later clocks on the left.





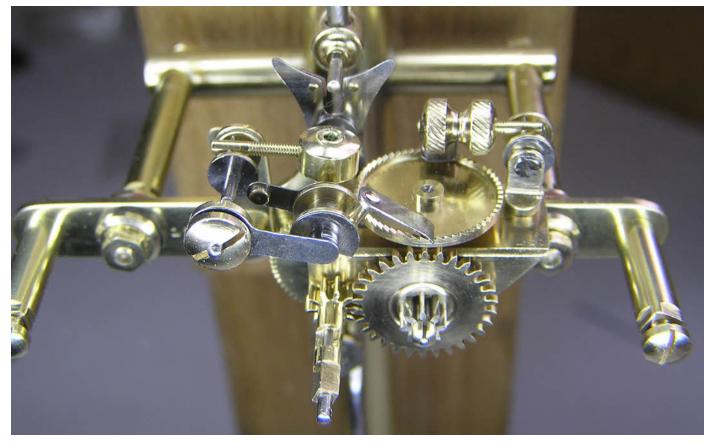
The early brackets in place. They need to be handled carefully as being quite thin, they can be easily snapped

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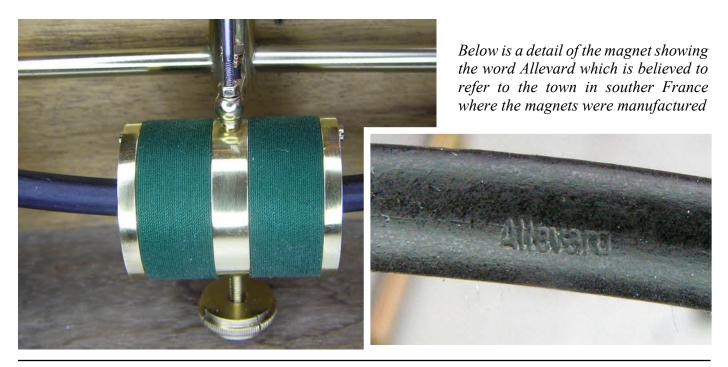


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Above is the restored movement back in place on the frame. Below left is the restored pendulum bob.

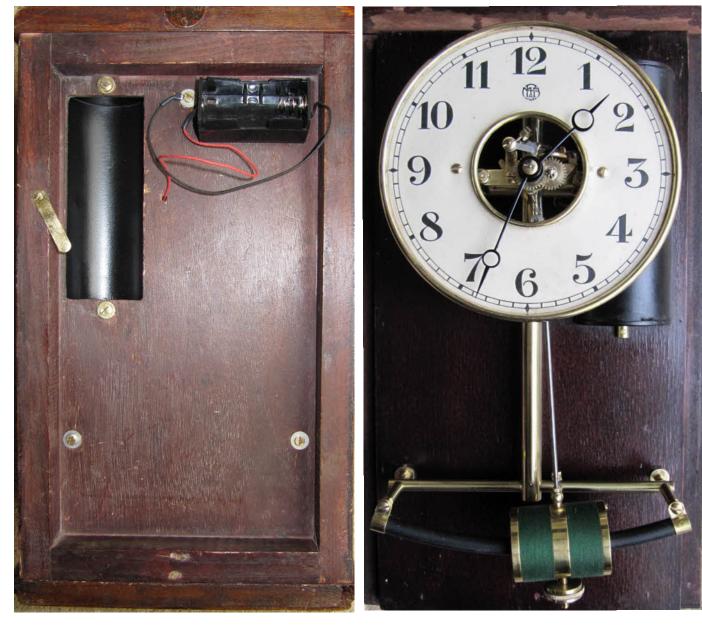


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The rear of the clock with restored steel battery compartment. The battery holder has long terminal leads to allow the battery to be changed easily when the clock is on the wall.

The restored movement back in the case.



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The finished clock.