

ENGLISH LEVER COLUMN WHEEL

Fly-Back Second - Split Seconds - Double Rattrapante Chronograph

8-2-2014

[english_lever_fly_back_double_chronograph_rattrapante.pdf](#)
[glycine_airman_black_25j.htm](#)
[6105_8000_6106_PARTS_FIX_RUST_DAMAGE.htm](#)



DOUBLE CHRONOGRAPH

A double chronograph has two center seconds hands plus a rotations counter hand at top. One center seconds hand is superimposed over the other center seconds hand. While one hand moves continuously, the other follows underneath until it is stopped, started or reset to zero. The stop and start function for the second center hand allows separate event timing while the main hand times the main event. A horse race, Main hand you time the race, but the second hand can time quarters of the track.



HORSE RACING

HORSE TAKES OFF AND YOU HIT TIMER AS IT TIMES THE HORSE ON THE ENTIRE TRACK START TO END, YOU CLICK A BUTTON ON THE TIMER WHEN THE HORSE REACHES 1/3RD OF TRACK; THE SECOND HAND PROVIDES YOU WITH HIS TIME, WHILE THE MAIN CENTER TIMING HAND HAS NOT STOPPED, YOU THEN CLICK TWICE, THE SECOND TIMING HAND SNAPS UNDER THE FIRST AND RESUMES TIMING SO YOU CAN CLICK AGAIN TO RECORD THE NEXT 1/3RD W/O LOSING THE FULL TIME. THE LAST CLICK OFFERS THE LAST 1/3 AND THE FULL TRACK. 4 TIMING EVENTS AT ONE TIME. 3 SUB ELAPSED TIMES AND A ONE TOTAL ELAPSED TIME.



CONTROLLERS

The control of the second time hand can be the crown, or like most, a button to the left of crown. The first push releases both hands. While one continues registering the time, the other hand can be repeatedly stopped and started..In order to stop and bring both hands to zero a watch has a return/reset/fly back feature in the crown, though some have it in the button.



United States Engineers & Ord. Dept. Military

One of these two "Fly Back Second" double chronographs belonged to the US Engineering Dept ["#1-property of US"] the other, the US Army ["2-Property ORD. DEPT."]. Both were manufactured in the first 15 [1901-1915] years of the turn of the century [1900].

The Fly Back Seconds began it's journey as a French Watch Invention called the RATTRAPANTE or DOUBLE RATTRAPANTE. Until app 1933/34 when the movement was miniaturized enough to place in a wrist watch, this timer was the one of the most expensive time pieces on earth.

We know the #2-PROPERTY OF ORD. DEPT., A CLASS A TIMER, SAW ACTION AND HAS A MILITARY SERVICE MARK DATING 1916. The "#2-PROPERTY OF US" had no markings. The #1 version was sent in by one of our greatest military watch collectors who has one of the most amazing collections. #1-one had high rust content and was missing parts. We invested in #2 about two years ago for 150.00. It was truly the better of the two and had most of it's parts.

But:

#1 and #2 were missing the hack control lever actuated by the column wheel. it was also missing from #2.. It had an excellent balance and , though also not operating, the condition was better and it had the parts that were broken on #1.

#1 had damaged main center wheel staff. where the two main hands fit for the RATTRAPANTE action [explained below]

The way this staff works is it fits through the hollow center wheel. This complicated machined staff fits through the center wheel from the top of the plate and "locks" by extending about a half mm out of the other side -- and plate seen with face side down. A heart clutch fits over an snaps onto the staff on the dial side. One main hand fits on the heart clutch, it is permanently locked. when timing the heart clutch moves with staff. when stopping the lever interacts with heart clutch stopping, when fly back it moves further snapping hand TDC, but we have a second hand! where dose this fit? On the staff itself, and it can also move independently in the hollow center wheel.

Though complicated, all I wanted to do was show that parts absent or damaged in these two timers meant lots of work and the requirement of two time pieces plus. Both were working to some degree. And when watches are working we all assume a service will fix. well read on by viewing pics.



WE ARE REBUILDING ONE FROM THESE TWO USENG #1 LEFT USOD #2 CASE RIGHT >>>>



SPARES

CASE AT BOTTOM

THIS STEM

DIAL WITH HANDS



NEW MAIN SPRING



JEWELLED ENGLISH LEVER. ROCK WROTE AN ENTIRE 10 PAGE PDF ON THIS LEVER.



BAD



GOOD



HAS REVERSE



NO GD



RUSTED MECHANISM



RUST REMOVER



BOTH MAINS ARE N/G



PARTS



METAL 0 JEWEL LEVER



LEVER WITH JEWELS



MAINS RUSTED



HEAP DEM PARTS



WINDING MECHANISM



PINIONS



ENGLISH JEWEL LEVER



REPLACED



CHROME MISSING



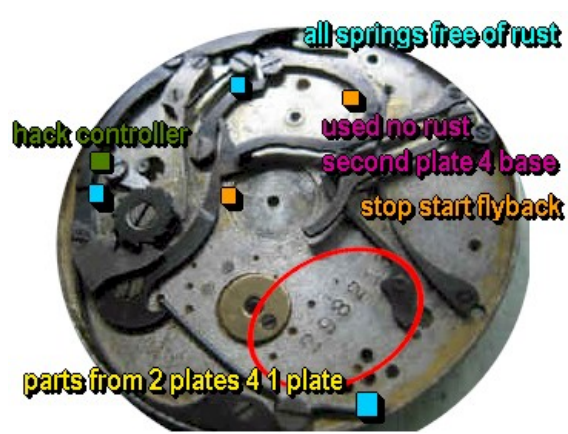
TESTING UNIT



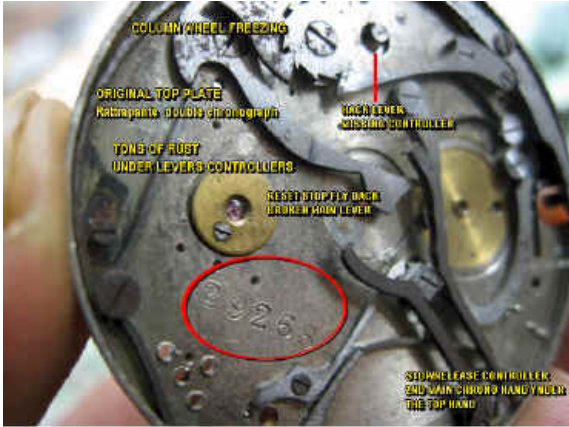
EXAMINING PINIONS



READY FOR ESCAPE



#2 MISSING THE FLYBACK CONTROLLER.

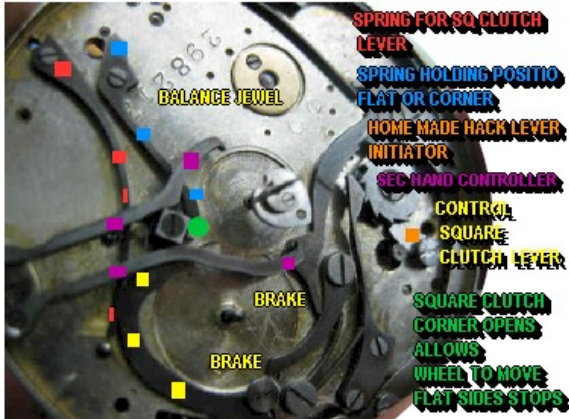


#1

#1



#2



THE CENTER WHEEL OPERATION #2



#2

ABOVE WE HAVE RARE TWO HAND WHEEL WAS DAMAGED ON #2 THE WHEEL FITS OVER CENTER WHEEL STAFF

#19

ABOVE IS SAME DIAL AS #2 MILITARY BOTH TIMERS WERE EXACT EXCEPT LEVER AND THE MILITARY HAD DAMAGE WHEEL

NOTE PARTS MAY HAVE A SPECIFIC NAME OTHER THEN STATED



HEART CAM #2



NOTE 2ND HAND WHEEL CONTROLLER #19



BAD BALANCE ON #1



NEW SOD #3 W/O HACK CONTROLLER



THE NEW USOD #3



BALANCE ON RIGHT WILL BE SET



CLEANING BALANCE / HAIR SPRINGS



COMPLETED AND RUNNING



HAS THE FLYBACK CONTROLLER. #3

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Will Update As Soon As We Mount Dial

[english_lever_fly_back_double_chronograph_rattrapante.htm](http://goldsmithwatchworks.com/AUGUST-2014/New%20Folder/english_lever_fly_back_double_chronograph_rattrapante.htm)

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