

## A Royal 'Haagse Klok' "Severyn Oosterwijck Haghe met privilege"

Reviewed by Keith Piggott

### NEW FINDS RECENTLY BROUGHT INTO 'OPEN RESEARCH'

Based on the author's paper 'FOR OPEN RESEARCH' at Teylers' Museum, 3rd December 2011,  
For the 'GOING DUTCH' symposium sponsored by the Museum van het Nederlandse Uurwerk

#### AN UNIQUE EARLY 'HAGUE MADE', WEIGHT-DRIVEN, PENDULUM TIMEPIECE HAVING CHRISTIAAN HUYGENS' CRUTCH, SUSPENDED PENDULUM, AND CHEEKS, circa 1657-1658.

I acknowledge the close collaboration of my co-author Michiel van Hees who rediscovered then arranged for this rare Huygens' pendulum relic to be a loan exhibit at the MNU symposium in December 2011. I am grateful for his consent to speculate in this initial report. In due course, a fuller evaluation will follow. Image copyrights, Michiel van Hees courtesy of University of Utrecht, digitally edited originations herein by KP.

Huygens' preference for weight-driven Seconds' regulators, first in 16<sup>th</sup> June 1657 patent† (Benjamin Martin woodcut† found by Andrew Crisford), then 'OP' type in '*Horologium*' of September 1658, is remarkable for the lack of surviving Dutch examples. Sebastian Whitestone and Jean Claude Sabrier describe a prototype Huygens' regulator, by Isaac Thuret of Paris, (see '*The Identification† and Attribution of Cristiaan Huygens' First Pendulum Clock*', *Antiquarian Horology*, Dec.2008, AHS). Where are the original Hague equivalents?

A year ago, at the University of Utrecht, the Dutch horologist Michiel van Hees relocated a neglected weight timepiece, previously noted by Dr Reinier Plomp. It is a 'missing link' between Huygens' weight Regulators, with Seconds' and Coster's spring-clocks without Seconds. It now has a later French case opening at the rear, with openings through the base for weight-lines to train and alarum, (but not long-pendulum); the repoussé shield is now signed 'Goudron(sic) AParis'. Nevertheless, the early pendulum movement has square-pillars and Huygens' suspended short-pendulum in cheeks; it recognisably belongs to the first *Coster-Fromanteel-Oosterwijck* canon; adding to the corpus of early *Dutch* pendulums, and to *Hague* pendulum *weight-clocks* in particular. I will justify a pre-1660 dating, also my attribution to Severijn Oosterwijck's hand even if then working from and/or in close co-operation with Salomon Coster's Hague workshop.

**Dial:** The small rectangular (220 x 165mm) iron dial, decked in old velvet, is fixed in later case by lower swivel-lugs and upper-pins. The superbly finished chapter-ring, (Ø144mm, ø104mm), fixed to dial-plate by four rivets, (**Plomp** Characteristic Properties, *P7*); having ordinal Roman hours, and half-hours marks is comparable in both quality and style to Severijn Oosterwijck's engraver, (*RH Patterns PCR4, PCR6*). A subsidiary minute dial (ø42mm) riveted at VI, has concentric but anti-clockwise Minutes & Quarters indicated with a brass-pointer; (compare Ahasuerus Fromanteel's *Tidal-Dial, RH Appendix Seven*). The hour-hand lobes reversed like Coster *D5*, see *Pattern PH2*. Coster *D1-D4*, are *Pattern PH1*; ditto *RH*, (refer *RH Supplementary Views; Patterns Oosterwijck*; also refer *Matrix* plate/dial sizes *Rows 17 and 20*. c.f. Salomon Coster *Rows 9-10*, Claude Pascal *Row 24*. **nb.** Row numbers change). The Zaanse-type alarum hand to the numbered cannon-boss is associated, as is probably Dutch repoussé 'shield', c.1660's, now riveted over uncut velvet; formerly hung upon loops with the velvet cut for access to stop/start the extant short-pendulum. (Nb. French cartouches typically cast, Thuret #327 excepted), The signature is unconvincing in all respects; i.e., calligraphy, proportions, and also misspelled over uneven ground of a former name being erased?



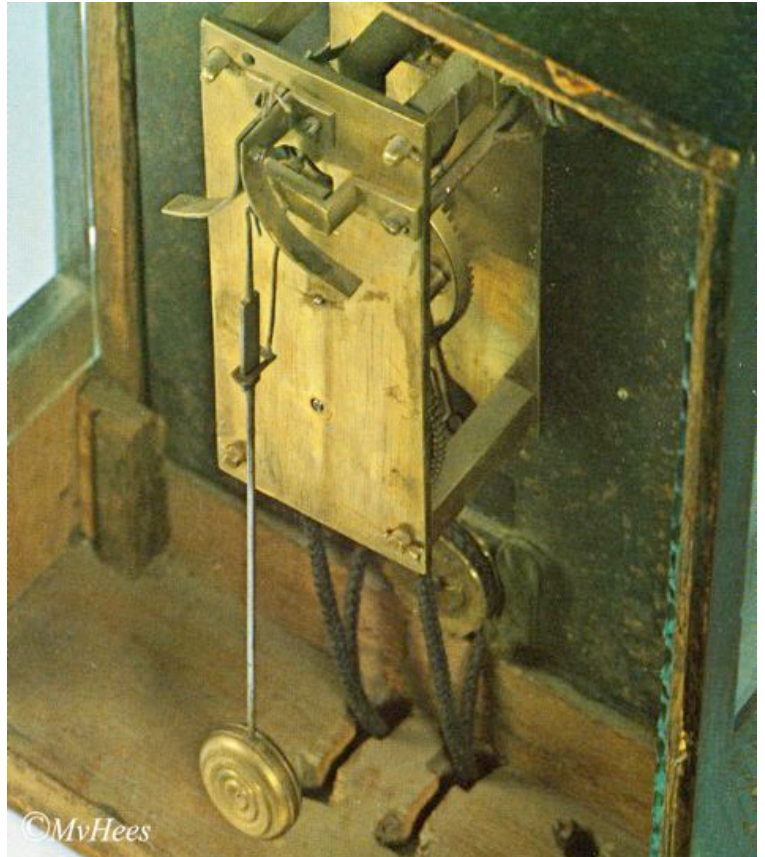
**DIAL Unusual Single-Hand Display with Subsidiary Minutes and Quarter Hand turning Anti-Clockwise.**



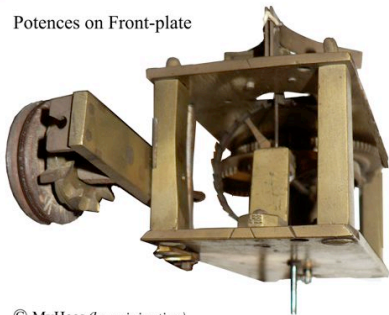
**The Dutch Repoussé Shield:** As stated, despite the present misspelled 'Goudron' signature, this repoussé signature-plate is Dutch post-1660, French shields are almost invariably cast, (Thuret #327 excepted). The present signature is unconvincing in its execution and form, there appears to be vestiges of earlier engraving (marked in yellow) from polishing-out original name.

scallop suggests the pulley was higher before this access-hole was cut for its short-pendulum, (filled holes in dial match the pulley-plate rivets' spacing). Was this movement at first intended to have long-pendulum for some original Seconds' train? The weight-alarum on the top pillar at IX side may be a replacement, boss setting-hand resembles later Zaanseklokken.

**Movement:** Small plates (116x52.5mm); having four square pillars pinned at backplate, (**Plomp** Characteristic Properties, **P4**); being ported for the escape-wheel (**Plomp**, **P3**). Michiel reports an original rare 3-wheel train with 3-spokes, with pinions of 6-leaves; the cheeks mounted like Oosterwijck's '**RH**'. Potences are of Dutch form, cocks have Fromanteel flourishes, exceptionally being mounted on the front-plate, (not **P5**), having untypical long-verge across the plates. The large hour-wheel canon, set on a steel-post, is driven by the minute-pinion below, (geared 12:1); the brass Minute-Quarter pointer, turning anti-clockwise off main-wheel, but no evidence for 'Seconds'.



Potences on Front-plate



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**Original ? 3-Wheel Train: G1 90, G2 6/66, G3 6/27 giving 148.5 beats/min., nominal pendulum 16.2 cm. (refer **RH**, openresearch matrix, Sheet Two, Row 13\*)**

\* rows may change

Its unequal train cannot produce Seconds except by contrate reduction-gear like Treffler's; of no consequence without a Seconds' dial. Oosterwijck's potences set on front-plate of **Bruce #2/3** mark him as the most likely maker here too; but the unusual 6-leaf pinions are more typical of English Fromanteels. (**RH**, *Supplementary Views*, p.2., *Appendix Eight*, square pillars, 'cycloid' cheeks - mounted like Oosterwijck's).

**Mounting:** Exceptionally the movement front-plate is located by two 'lugs' in the upper dial-plate, fixed by single dial-foot below. The plate's upper corners are chamfered for the plate to slip up-and-under dial-lugs, movement then is pivoted downwards to locate onto the single foot, and pinned to fix securely. The method is counter-intuitive, as plates, usually, are fitted square-on because of motion-work, but this only has an hour-wheel, also direct minutes. Awkward perhaps, yet it works. (see **RH**, *Supplementary Views*, p.2., *Appendix Eight*, *Lugged Mounts*). I only recall seeing similar lugged-mounting in contentious '*Jan van Call*', (Symposium slide #22 refers); that Berry van Lieshout found exceptional in our 1986 view. [We welcome any evidence of similar 'lugged' fixings].



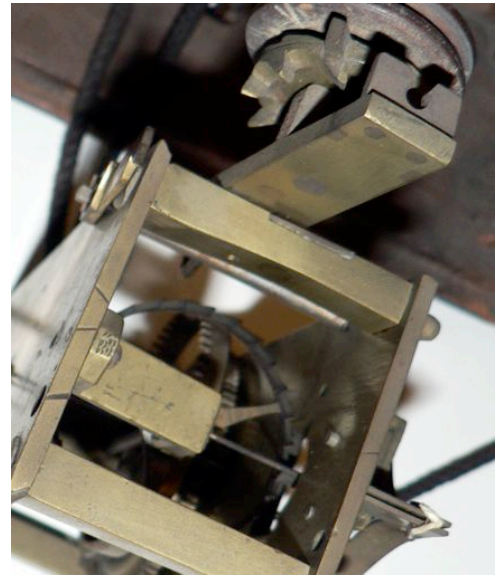
Movement slides into two 'Lugs'

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**Left:** Huygens' maintaining-power pulley forms a '*double-ratchet*', the broad sprung-click serves both faces and holds the rope within the pulley. Note the filled rivet-holes for original location of the large pulley plate over a later access hole to short-pendulum. Note, a single brass dial-foot locates and secures the timepiece movement.

**Right:** Alarum up-stand apparently is re-located, suggesting this movement originally also had similar alarm. Nb. Holes in front-plate for alarm lever.



**Left:** Associated Alarum Setting-Hand, that Michiel van Hees suggests is from '*stop-work*'.

Escape-potences mounted on front-plate is an extremely rare feature in early Hague clocks, the only other so constructed known to the authors is Severijn Oosterwijck's 1662 sea-clock, Bruce #2/3, with front-potences and long verge; like the similar London-made sea-clock Bruce #1/4, (*RH Appendix Five*). Front potences are also seen in J.P. Treffler's time-piece, (*RH Memo Treffler*), that is presumed to be derived from the 'Coster' pendulum-clock sent to the Grand Duke Ferdinand II di Medici by Senor Burattinij on 25<sup>th</sup> September 1657.

Notably, the rare physical evidence of potences set on front-plate has a counterpoint in Christiaan Huygens' *second* weight clock pendulum design, his so-called '*OP-gear*' in '*Horologium*' (1658). This unconventional and rare feature might well suggest links not previously envisaged. This single feature, of escape-potences mounted on the front-plate, must somewhere have an origin that might point to an unknown craft link, or evolution previously not suspected. Perhaps the Medici 1657 Coster timepiece too had its escape-potences set on the front-plate like the subject relic weight-movement; and, conceivably, Severijn Oosterwijck who used the construction in a 1662 sea-clock, may possibly have been involved in Coster's pendulum workshop, even before John Fromanteel arrived at the Hague for his 3<sup>rd</sup> September 1657 Coster-Fromanteel Contract?

Therefore, the subject early Hague made pendulum weight-movement with square pillars is an important find for our open research. It could well have been exported to France, perhaps among Huygens' first book-packages sent to Paris, being there adapted by some lesser clockmaker [probably not *Gaudron*] and re-named on an associated Dutch? repoussé shield, possibly circa 1680, during conversion from a long-pendulum to a short-pendulum for domestic use, at the same time being given it present, then fashionable, French? case.

We ascribe this rare Anglo-Hague 'missing-link' weight-timepiece, having a small dial and very small plates, to pre-1660, even 1657/8, although the presence of Huygens' endless-rope 'pulley' maintaining-power would better fit 1658. It fills a gap in the hitherto known corpus of Huygens' type Dutch pendulum weight-clocks. Appearances suggest this early pendulum relic originates from Coster's Hague workshop, with inputs by John Fromanteel, (if *square pillars* can be ascribed *solely* to him), and surely inputs by Severijn Oosterwijck, (if sea-clock like *front-potences*, and his typical chapter-ring *engraving*, are accepted as his unique hall-marks). As italics suggest, there is a long way to go before any firmer attribution is possible. Eventually this relic movement will be published in more scholarly papers than these first brief notes and speculations, here only intended to stimulate open-research pending a much fuller evaluation for the University of Utrecht.

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