## MEMO STRYP: A Royal 'Haagseklok', App. 3, Open-Research.

 A Rare Netherlandish Timepiece, signed 'J.Bernard van Stryp Anvers', E.H.Brookes Bequest, Reg.1991.1008.1. (Ref. David Thompson, "Clocks", pp.66-67, British Museum Press, 2004; also H.Alan Lloyd, "Old Clocks", Plate 14, pp.65-68)

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KP notes: J.Bernard van Stryp - Antwerp. A rare Flanders pendulum timepiece, having an early 5 -wheel train, c. 1660 . This counter-intuitive single-hand pendulum, reading minutes, was re-inspected at the British Museum on 23-11-2009. Those present were the British Museum's David Thompson (Curator of Horology), Oliver Cooke (Horologist), the author. The movement was not dismantled nor separated from dial or case, PhotoShop did that. The opportunity was taken to compare, directly, Severijn Oosterwijck's Royal Hague clock, having older 4-wheel trains but also with hour-strike.

SEVERIJN OOSTERWIJCK'S ROYAL 'HAAGSEKLOK' J.BERNARD van STRYP, ANVERS c. 1660


General similarities in form, between these Hague and Antwerp clocks, are obvious, but the numerous technical differences only become apparent on a closer inspection of movements.

STRYP (STRIJP)• was then a village, now absorbed by the city of Eindhoven. Probably, Bernard in Antwerp and Pieter (Pierre) van Stryp in Rome, both originated from there and may be related. (•Mr.P.Th.R. Mestrom Ph.D., author of "Uurwerken en uurwerk-makers in Limburg 1367-1850")

Van Stryp's early five-wheel train is now recorded in new the BM's records (below). My reason for re-examination was to study its oddly mixed Anglo-Dutch features. Generally, it follows Coster's example, but it has a 5 -wheel train (Fromanteel?), very heavy balluster (East-like) pillars, and its tortoiseshell also ebony veneered case has an Oak (not Deal) carcass being more like English boxcarcasses than Coster's; whereas its framed backboard is typical of Coster 's cases (except D4),


The small size of Van Stryp's case, dial and movement is close to Salomon Coster D1,D2, and the plates are similar to Coster's D3, D4, D5, (being Dr.Plomp's chronology of the very earliest Dutch pendulum clocks). Accomodating its newer (Fromanteel 1658?) 5-wheel train adds 18 mm to give taller movement plates, laid out much like Coster D5, also with ratchet work set on back plate, (see R_Ratchet_B); unlike Coster's other ratchets on frontplate D1-D4, or barrel D8, D10. Escapement, crutch, cheeks, potence block, dial, latch and case all follow Coster's originals. Its door lacks a lock, having an untypical side mounted swivel hook. Unusual for early pendulums it has just one hand for hours and minutes. Dr Plomp's characteristic properties are met by P1 (Box), P5 (Potence Holes).

CASE: OAK Carcass, framed Backboard; H. 250 mm W. 203 mm D. 103 mm No windows, profiled frame, tortoisehell veneer, (cf.Coster D8, Hanet F5).
DIAL PLATE: $\quad$ H. 215 mm W. 168 mm with access hole ( $19.5 \times 46 \mathrm{~mm}$ ) to pendulum.
Dial-feet (4): Octagonal-pinned, $\quad$ D. $5.7 \mathrm{~mm} \quad$ L. 11.5 mm
Chapter Ring: $\quad$ Silver? D. 141.1 mm Anulus 24.8 mm Hours have 'zig-zag minute' scale
Hand - Silver? L. 108.8 mm Radius Hour part 49.0 mm Radius Minute part 69.4 mm
MOVEMENT: Plates H. 125.8 mm W. 58 mm Thickness 2.5 mm
Pillars (4): $\quad$ Bold Balusters, Pinned, D. $15 \mathrm{~mm} \quad$ L. $44.8 \mathrm{~mm} \quad 34.6 \mathrm{~mm}$ 'tween Plates
Going Barrel:
Diam. 43.1 mm Length 27.4 mm
Steel Ratchet: $\quad$ Diam 29.2 mm 22 teeth, steel click and spring. Stop-wheel: 7 teeth
Centre Arbor: L. 55.8 mm No Taper, Pinion 22, Ø 16.8 mm Wheel 78, Ø 33.1 mm
Cycloid Cheeks: Round feet, Laminae 38.5 mm long. extant physical pendulum $\mathbf{1 7 . 1} \mathrm{cm}$.
Train: 60_22/78_7/72_6/70_5/29 $($ Coster D8 $)=\mathbf{1 5 0 . 7 9}$ beats $/ \mathrm{min}$, nominal pendulum $\mathbf{1 5 . 7 4} \mathrm{cm}$.
I was intrigued to look further into its mixed construction. All is of high workmanship, yet has only a single-hand display with sundial-like zig-zag 10-minute scales between the Roman hours. Further inspection reveals other noteworthy features, not so far published which may have some bearing on this movement's proper chronology in the Anglo-Dutch-Netherlandish oeuvre of early Hague-type pendulums. Flanders did produce early Hague-type clocks, although it appears these are now rare.

## NOTEABLE FEATURES, Pendulum Timepiece, "J.Bernard van Stryp Anvers";

1. Stop-work present, sited on rear barrel cap, the centre-wheel overlap being much reduced by the very large centre-pinion of 22. (When present, Coster stop-wheels are set on the front cap - Coster D3, D4, never had stopwork).
2. Barrel arbor has single pinion leaf to stop-wheel. (When present, in Coster D1, D2, D5 all have a stop driving pin set into the arbor; $\boldsymbol{D} 5$ had 'Reijnaert' pinion of report).
3. Motion work and bridge are unnecessary, centre arbor holds the only hand.
4. Ratchet Wheel, circumfrential spring and single click are all of steel, sited on the back plate (like Coster $\boldsymbol{D 5}$ alone), all finely made and nicely detailed; the ratchet is set on squared barrel arbor, held by a pin through integral domed collet, its spring and single click are each fastened with screws (not pins).
5. Five-Wheel Train, I believe originated in England, with Fromanteel or East?

- G5 5/29, Escape -gangrad, (Ø 22.5 mm ), 3-spokes, domed collet above the pinion, unringed, no marking out observed, sharp teeth, [Query?]
- G4 6/70, Contrate- kroonrad, ( $\emptyset 26.7 \mathrm{~mm}$ ), unringed, hand cut, odd pinion, Dome-collet to front, (D2-D4 ogee/front, D1-D3 square/rear, D5 domed/rear)
- G3 7/72, Intermediate -tussenrad, (Ø 29.7 mm ), pinion of 7 (cf. D4), collet.
- G2 22/78, Centre -centrumrad, ( $\emptyset 33.1 \mathrm{~mm}$ ), untypical high pinion count, unique octagonal steel collet at front of oversized pinion, arbor untapered.
- G1 Barrel Wheel -veertonrad, ( $\varnothing 50 \mathrm{~mm}, 60$ ), at rear of barrel with untypical low number, (cf. 1658 Fromanteel 60; Oosterwijck RH and all Costers 72).

6. Suspension Cheeks have untypical round cocks (cf. Oosterwijck RH), but widely splayed well beyond 'cycloid' form; (parodies; or later reshaping?)
7. Verge cock to right, untypical bi-fid foot, with a straight arm to the verge pivot. (Coster D3 has tri-fid foot, to right; Oosterwijck RH has angular foot, to left).
8. Engraved 'lambrequin' (Stryp's name shield) flanked by Porpoises closely matches Severijn Oosterwijck's designs, (see "Huygens Legacy", nr.11, p.34, in repousee; also engraved, see Dr.R.Plomp, "Spring-driven Dutch pendulum clocks 1657-1700" p.178). Repousee, usually, is derived from the engraved, perhaps a common source inspired both clockmakers, or a single engraver?
9. Potences - both upper and lower potences on cocks being internally screwed into the backplate, (cf. D3, D4), the upper potence has two screws, the lower a single screw with steady pins - (group of 3 holes is visible on the back plate).
10. Pillars - untypical thick balusters, Diam.15mm, spaced 34.6mm ('Horologium' gives "1.5 inches" spacing), pinned at the back plate. Pillarhead rivets are shown at page 5.
11. Dialplate is made of brass, covered in old deep maroon velvet, set off by silver hand, chapter-ring and signature plate, all finely engraved.
12. Chapter ring 141 mm diameter/ 25 mm anulus is smaller than most Coster clocks, having an inner line with Quarters scribed, half-hours are a scored to quatre-foils, single minutes unmarked; extrapolated by reference to 10 -minute divisions by
13. 5-minute sundial-like zig-zags. (Thompson 2004 p. 66 gives 'minutes')
14. Hour Hand is Silver, engraved, lobed trefoil pointer derived Coster, no collet.
15. Dial-feet to tall movement are octagonal, just 6 mm long (like Coster D4).
16. Dial Pivots fixed behind the dial, the lower plate with steady-pins and screw.
17. Box Case veneered in ebony with tortoiseshell veneered moulded door.
18. Backboard also Box-carcass are entirely of OAK, (only Coster D4 has OAK backboard but DEAL carcass); spikes stop case displacement when winding.
19. Backboard is framed by its box - like all Coster cases, (excepting D4).
20. Door Hinges under ebony veneers, no internal rebate needed for hinge posts.
21. 'Ophangers' - round iron loops screwed well into the case, showing no stalk.
22. Early credentials are also confirmed by case features: windowless box case (P1), smaller than all but one of Coster's (Science Museum's D4), its frontal elevations are slightly smaller than Oosterwijck's earlier RH, but 1.05 cm deeper (incl.door profile).


Compare, Coster "D5" also Oosterwijck "Lieberge"
"A Royal Haagseklok" cites the unknown originator who first combined a going-barrel with stop work, and the likelyhood this innovative mechanism was not Salomon Coster's but was a device obtained through negotiation, possible being the 'secreet' in the September 1657 Contract. So here I am unsurprised to discover another early pendulum maker, and one probably never licensed by Huygens nor Coster, also using a ubiquitous going-barrel, having its arbor fitted with developed pinion-leaf and stop-work. Such evidence lends support to my hypothesis (Perspective), and may well infer an English influence that is similarly evidenced by Oosterwijck's Royal Haagseklok.


Comparing Backboards: Oosterwijck $R H$ full span: Van Stryp framed.
Professional Horologists may form a view on this new data, and perhaps relate certain features to Coster's or Fromanteel's pendulum oeuvres. However, my observations justify "open-research", to establish more complete data for new studies of early pendulum evolutions and chronologies.

Supplementary Views taken by Oliver Cooke ©, courtesy of Trustees of the British Museum. For research purposes, any image may be had in higher-resolution, by application.

Oblique of Suspended Movement


Plate
Frontplate (details): showing the unpolished file-marked plate and unfinished rivet-heads to pillars

Brass Dialplate with Movement demounted (Compare Oosterwijck RH and late Costers)


Engraved Dolphin Signature
Compare Severijn Oosterwijck's use of Dolphins; Plomp, "Pendulums", p. 178 - being also engraved, "Huygens Legacy", p,34, (Plomp D9) repoussé.

