

**"A Royal 'Haagseklok'", Appendix Three, Open-Research.
MEMORANDUM D3: The Contentious Coster Relic† Timepiece**

† *Relic* is used in the sense of an historic artefact, without any negative implication.

Reviewed by Keith Piggott

D3 Timepiece; cartouche signed "*Salomon Coster Haghe met privilege 1657*" (replacement). Special features: barrel cap attached to the barrel with a 'dovetail' construction; transmission wheel between minute and hour hands, at the front not supported with a special cock but with an enlarged cock of the hour wheel; hinges of the dial plate combined with the hinges of the door. Reference 1, 118. (Museum van het Nederlandse Uurwerk, Zaandam). Dr.Reinier Plomp, <<http://www.kunstpedia.com/articles/46/3/The-earliest-DUTCH-and-FRENCH-pendulum-clocks-1657-1662/Page3.html>>, (*'Chronology'* 2008,), cited as Dutch Pendulum Clock number 3.



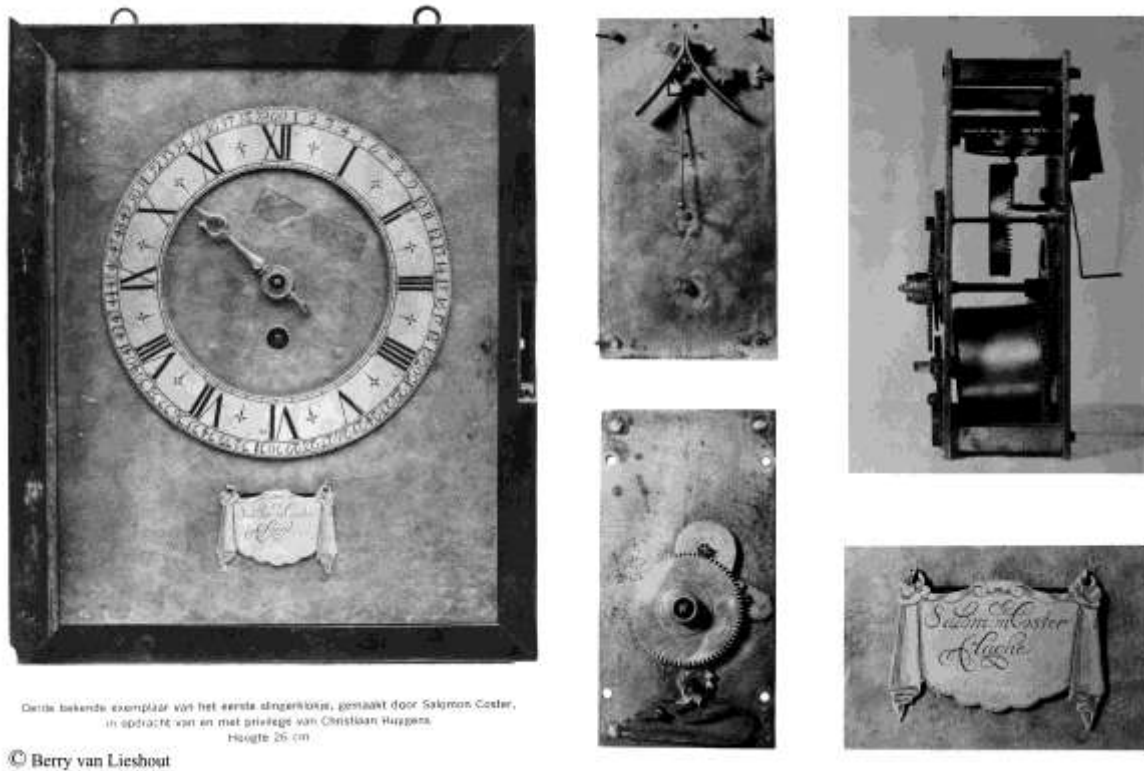
The Contentious Coster (D3)

Museum van het Nederlandse Uurwerk, Zaandam

© Image Courtesy of Sotheby's (New York) <[A1V1 D3](#)>

Ignoring this '*public face*', I move to the *relic movement* that has incited controversy.

KP: COSTER 'D3', Salomon Coster pendulum timepiece, circa 1657, has become the "*contentious Coster*"- with divided opinions being expressed in the Dutch antiquarian horology forum of *TIJDSchrift*. **Caveat:** The author has not inspected this clock! However, Sotheby's, the Museum van het Nederlandse Uurwerk (*MNU*) at Zaandam's *Zaanse Schans*, also 'Berry' van Lieshout, have all provided me excellent images; Berry also provided access to his private **Archive Nr.985**, made when Dutch clock dealer **Geerd Wijnen** discovered the relic in 1974, in France; Berry also provided "*De Haagse klokken van Salomon Coster en Johannes Fromanteel*", (Berry van Lieshout, private circulation, 07 March 2005). Dr Reinier Plomp and Berry van Lieshout remain this movement's steadfast champions, that fact alone fully merits its inclusion here and in ongoing '*open research*' studies, for which I make no apology.



Geerd Wijnen's advertisement of his "discovery of a third Coster pendulum clock" .

When the relic was first advertised in the Dutch *AntiekRevu*, (also in '*De Telegraaf*', 6 Sept.1974), it was shown in a semi-reconstructed state; still having a **single**, carved, gilt-brass '*teardrop*' hour hand ¶. Some thought it might be the missing Coster, (J.Drummond Robertson, Op.Cit. pp.77-78). Its hinged *oak* stile, with *unveneered* inner face having *exposed* hinges mounted *flat* (unrebated), now possessed a case after the manner of the Coster timepiece at Museum Boerhaave, Leijden (Plomp **D1**). The dial, too, had also acquired a replica silver shield, engraved with Coster '*signature*' and *Hague* address, even '*scribed* with Huygens' "*met privilege*" and dated "*1657*". ¶Van Lieshout's archive possesses a similar brass hand and records an unassociated Salomon Coster signature shield in *solid silver*, (Archief #986, STEN-659). Its genuine signature, more florid than **D1** or **D4** signatures, was exactly copied for **D3's** replica shield*.

[* Antiquarians in other fields of the fine arts hold there is no such thing as a "*replica signature*", only a deliberate forgery. Even a '*refreshed signature*' is frowned on in the finer arts. It is a dictum long flouted by antiquarian horologists, as I raised with the Antiquarian Horological Society, (*Antiquarian Horology*, Letters, March 2000). Forgery should debar all further consideration; but despite any work of art being otherwise anonymous, its actual maker's '*autograph evidence*' always remains, often permitting a valid authentication of its true period and sometimes even an attribution to a particular artist. (I recall a fine *Ernst Stuken* masterpiece, variously signed in its recorded history, by none of those, but a pupil of one)]

Later, the 'reconstructed' clock, now having replica Coster hands in silver, was illustrated and discussed by Dr. Reinier Plomp in his "*Spring-driven Dutch pendulum clocks 1657-1710*," p.118, ("*Pendulums*", 1979, Interbook Inter-national BV, Schiedam), also in his later "*Chronology*" (Op.Cit.), there cited as '*Dutch pendulum-clock number 3*' (**D3**). I suggest that chronology may now have to be reconsidered.

For the past thirty years this clock was at **Seth Attwood's** remarkable **Time Museum** in America, now dispersed at auction, in several parts; **D3** was sold by Sotheby's New York on 13-10-2004, as lot 519. There it was bought by respected Dutch dealer Mario Crijns, who also knew it when found. It was later 'accepted' by the knowledgeable board of *Museum van het Nederlandse Uurwerk* (MNU) at Zaandam's Zaanse Schans. Others have made their own judgements, mostly on the balance of its physical evidence and known historic probabilities, that the relic does in fact merit a place in Coster's pendulum *Oeuvre*.

Although the movement has been authenticated by Van Lieshout, Dr.Plomp and others, it was necessary to review it to ascertain dimensions and wheel train for "*A Royal 'Haagse Klok'*" *Appendix Three*, also for the new "open-research" project. Autograph evidence of construction, together with new evidence of workmanship, will provide future academics with the tools to make a sound judgement. The MNU has helpfully provided their record of the movement's typical Coster four-wheel going-train: numbers in green signify a wheel or pinion count common with Severijn Oosterwijck's *Royal Haagseklok (RH)*.

SALOMON COSTER TIMEPIECE (PLOMP D3 : NMU N3) COMPARABLE TRAIN RH.
 Wheel-train provided by 'Museum van het Nederlandse Uurwerk'. [<Table 4>](#) (Originality not shown).

GOING TRAIN: **G1 72, G2 8/70, G3 5/64, G4 5/27 = Count: 70/5x64/5x54/60 = 161.8 beats**

MOTION WORK: **Identical to Oosterwijck RH** **Nominal Pendulum 3.8 cm**

G4 Escape (*gangrad*) p.5 / 27 teeth ® **First and Escape are common with RH train.**

G3 Contrate (*kroonrad*) p.5 / 64 teeth ® **G2** Arbor Plain, little or NO taper or relief.

G2 Centre (*centrumrad*) p.8 / 70 teeth **G2** Pinion 8 Leaf, set at back-plate, on centre wheel.

G1 First (*veertonrad*) 72 teeth Flying Stop-work was never fitted to barrel or wheel **G1**

Significantly, **D3's reconstructed** train is also the only known that exactly matches Museum Boerhaave timepiece, Coster **D1**. Here I need not repeat known Coster trains for timepieces and striking clocks shown in my [simple matrix](#). My [user access matrix](#) records comparable trains, also the dimensions, of contemporary pendulum clocks. These matrices are instructive, but must be seen as *unprocessed raw data*, ie. without consideration of their varying degrees of conservation, restoration or **reconstruction**.

In my preamble to Appendix Three, Open Research Project, I summarised the constructions of the five similar timepieces attributed to Salomon Coster's workshop - *even if not made by his own hand*. All have plates of a near standard size, all have short square pillars, all pinned at the back-plate. All have similar layouts and all have typical Dutch escapement blocks for a short horizontal verge to a crutch that drives a short pendulum suspended by thread between controlling curved cheeks. Variations between Coster's wheel-counts may well infer a different chronology for those early clocks given numbers **D1** to **D5**.

I suggest that to come to any valid conclusion on the relic timepiece movement **D3** requires one to strip away all distractions; to concentrate solely on the plates, pillars, wheel train, motion work, horizontal verge escapement with crutch, pendulum suspension cheeks. Nothing else is relevant. Here I ignore the clock's *public face*, in my view a pastich of a Salomon Coster clock of the first Hague period. Actually it represents a different era of horological scholarship, dealing and collecting. Its crude case and rivetted on chapter-ring may well be provincial French; even if made by Nicholaas Hanet or Claude Pascal when in the Hague; it is a *nonsequitur* among Coster's, (see [Supplementary Views](#), Patterns, Chapter-rings).

Backplates and side elevations of the extant 'Coster' timepieces, **D1, D2, D3, D4, and D5 alarum**, are all well known from the standard references; Dr.Plomp's "*Pendulums*" (Op.Cit.) and exhibition catalogues. Those elevations inform there is no such thing as "*standard*", each movement (also its case) is different. Therefore I begin not with standard elevations, but with obscured front-plates; **D1, D2, D3, D4, D5**. It is instructive to familiarise one's self with these. All have in common, tall and narrow, rectangular plates, standardised sizes and proportions, layouts, visible tool marks, unfinished pillar rivets, all these aspects being self evident. Obvious differences, are in individual bridges, ratchets, clicks, springs, and cocks. Subtler differences, may also be seen in the individual placement and sizes of holes for dial-feet; also **D4's** unique use of red-copper steady-pins, rather than the usual brass or steel. So, if one man, say **John Fromanteel**, had made all of them, as now purported, then he had made life more difficult for himself.

FRONT-PLATES OF THE COSTER TIMEPIECES

© Dr.Reinier Plomp



Bridge: trapezoid iron plate set on brass feet. Steel click and spring, having a brass cock to steel ratchet, vertical motion cock on wide foot.

© 'Berry' van Lieshout



Bridge: wrought brass lobed plate, doubling as a motion cock, on a single foot. Steel click and spring, pinned ratchet. Small dial-studs and rivets.

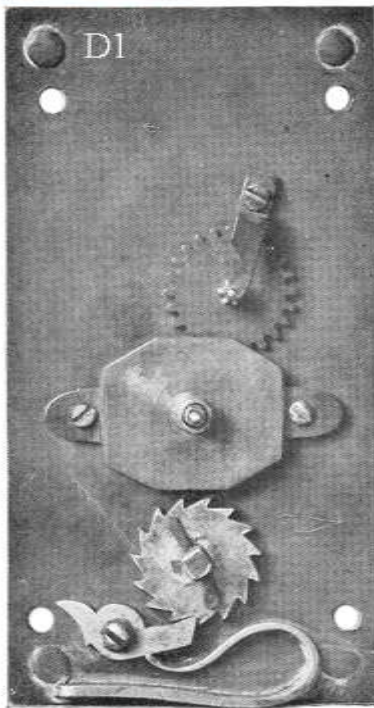
© Keith Piggott courtesy of Science Museum



Bridge: trapezoid iron plate set on brass feet. Steel click, brass spring, pinned ratchet-wheel, vertical motion cock on a narrow foot. Nb. Red copper steady-pins are only found in D4.

Thick brass, pinned, click-springs are reminiscent of similar brass springs in Oosterwijck's *RH* striking clock. Till now, no authority ever connected these two clock-makers at this early date (1657).

Courtesy Michiel van Hees



Bridge: iron plate on brass feet, Steel click, brass spring, pinned ratchet, small canted motion cock.

D4 Bridge and Ratchet-work.



© Keith Piggott courtesy of Science Museum

Among these five '*Coster*' front-plates, already, one sees a *house-style*, also individual features in bridges, cocks, etc, ie. suggestive not of a *division of labour* but of a *random allocation* in finishing, ie. red-copper pins only found in D4. Or, a still *evolving development*.

D5

© Berry van Lieshout



Bridge: appears to be iron plate on brass feet (cf. D1, D2, D4). The ratchet work is removed onto the back-plate. Motion cock similar to D1, but offset for alarm-work.

Of the five timepieces, **D4** bridge clearly relates to **D1**, **D2**, and **D5**; whereas **D4** Ratchet relates only to **D1** and **D3**; only **D2** Ratchet is held by a brass cock; whereas **D5** Ratchet is on the backplate. **Coster's** timepiece-alarum **D5** departs from relic **D3**, also from **Coster's** timepieces **D1,D2,D4**, in having ratchet-work relocated to the back plate; it also has an Alarum trip actuator and large return-spring necessitating relocation of the reverse minute wheel cock. And the presence of integral alarum work -rather than added as an afterthought, like **D8's** former alarum when found- probably points to chronology. **Coster D5** also departs from **D3** and **D4** in another respect because, unlike them, **D5** formerly also possessed *stopwork* - known by evidence of the vacant screw-hole in its barrel-cap; its arbor now lacks a stop-pin or a pinion drive. **D5's** replaced, plain, unpinned, arbor probably is indicative of it having had the rarer '*Reijnaert-type*' stopwork, thus inconsistent with a '**D5**' chronology. (For further details go to [MemoCosterD5](#)).

Returning to the Relic Movement 'D3', this is the only extant timepiece of the early *Coster timepiece series* to have a *formed brass* bridge that also *combines a cock* for the reverse-minute wheel. Whereas **D1**, **D2**, **D4**, **D5**, all have regular bridges of iron or steel plate set upon stubby brass pedestals; although **D5** possesses a similar round plate. Dr Plomp privately recalls an early Severijn Oosterwijck striking clock, c.1660-65, having the same distinctive iron bridge-plate set on brass pedestal cocks, the sole exception to typical *RH* patterns of wrought brass bridges in the earliest Hague striking clocks which I have identified, (see R.Plomp, "*Pendulums*", Op.Cit., #84, pp.178-179, see [Frontplates](#)). Oosterwijck's Striker (#84) also incorporates an early Alarum, its bell set on the dial. Those features must reopen questions of who actually made **Coster's** five extant timepieces. So besides John Fromanteel, might Severijn Oosterwijck (whose *RH* striker appears to have been a prototype model for **Coster's** extant strikers **D8** and **D10**)- have lent a hand? Perhaps Oosterwijck inspired or made the typical *Coster* timepiece bridge -so singularly unlike its English counterparts that it must be peculiar only to the Dutch-made pendulum clocks?

Of these five known comparable pendulum timepieces, **Coster D1**, **D2**, and **D5** all have *flying-stopwork*, or had stopwork at one time. But neither the relic **D3** nor the fully authenticated **Coster D4** timepiece ever had stopwork fitted. Only comparative examinations on the bench can resolve their *chronologies*.

Given **Coster's** pendulum time-frame is only from June 1657 to December 1659, and John Fromanteel's is from August-September 1657 to Mayday 1658, is there now any certainty that all five movements were made by but a single craftsman; and to a single and imposed format? Already, it seems more likely there is one plate-maker - but probably several finishers. Without close inspection of **D2**, its well finished brass cock to the ratchet-wheel and its flat screw head fixing are both untypical, but, like **D3's** combined brass bridge and motion cock, are probably significant pointers to their respective *chronologies* too.



View [<A1V5 D3hinge>](#) (Image courtesy of Michiel van Hees). Although the relic movement **D3** is already looking more credible among its "*Coster peers*", its reconstructed case has an untypical, *unveneered*, inner-face to its untypical *oak* door and an untypical *exposed* (unrebated) combined flat hinge to door and dial. However, I shall leave the case for others more closely involved to debate.

Whereas, at discovery and in its first public advertisement the relic movement **D3** possessed an unusual carved hour-hand of untypical "teardrop" pattern - not **Coster's** "*lobed*" pattern. With short trident tail, more appropriate for balance-wheel table clock having alarum.

View [<A1V4 D3hand>](#)

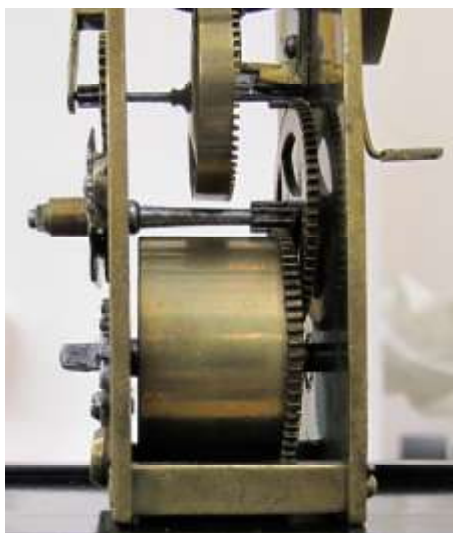
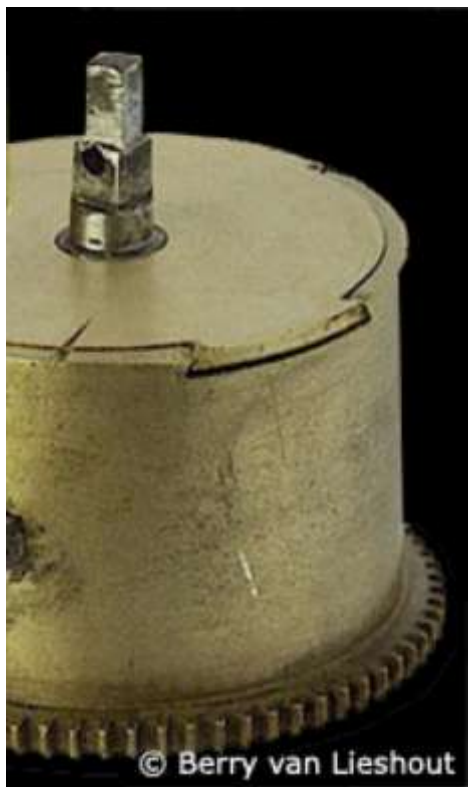
D3 hour hand



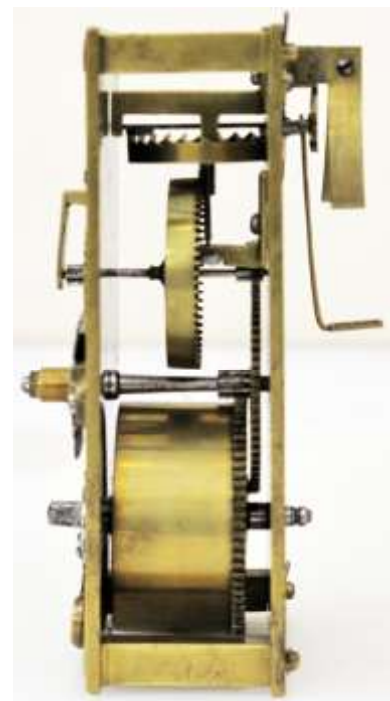
I know no comparables, although Van Lieshout records a very similar but unassociated hand.

Might this be an original **Coster** pendulum hand? Remarkably, the teardrop pattern soon reappears in Oosterwijck's **D9** and *Lieberge* clocks; **Coster D10** also has a lobed teardrop hour hand, perhaps reflecting **Coster's** original? See [<Supplementary Views>](#), Patterns/Hands.

However, the *core relic*, **D3**, in most respects, meets all criteria of construction method, dimensions, form and wheel train of authentic Coster timepieces, **D1, D2, D4, D5**. **D3's** escapement block is convincing; like **D4** it always lacked stopwork; only its *dovetail* barrel cap* differs from other Costers. Nevertheless, in most respects it closely matches Coster **D4**, seen here. [*Van Lieshout considers this '*renaissance*' feature arises from Coster's training -(his pre-pendulum *balance-wheel* table clocks have dovetail caps)- in Berry's words, "*perhaps the only true Coster-Coster extant?*". Have his watches dovetail caps too?]

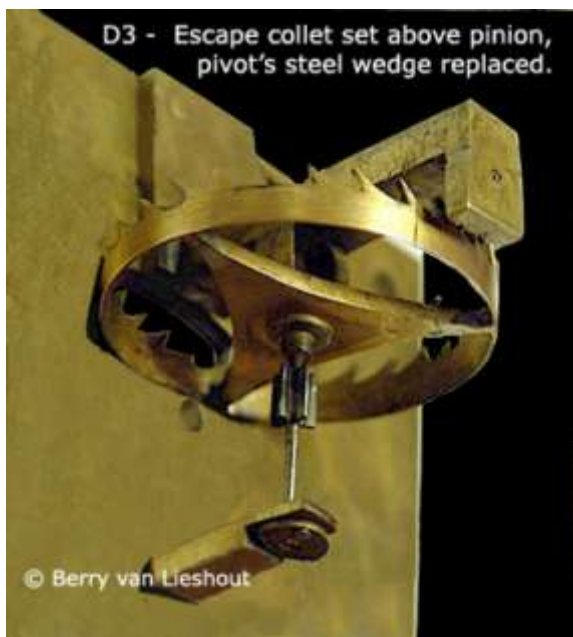


Coster D4 (Science Museum), shares all typical features of plate-size, square pillars, potence block, train layout with **D3** movement. Both **D4** and **D3** lacked stop-work; perhaps pointing to their possibly earlier pendulum chronology?



D4 - compare **D3** in 1974 advertisement

D3 barrel-cap has untypical "*dovetail*". The hole in lower square is for the pin fixing the *ratchet-wheel* on frontplate.



D3 Typical '*Coster*' pendulum-escapement layout. The lower pivot-wedge dovetail now cut away, with brass pivot rivetted in place.

D4 Coster-Potence (Watch-practice?)



D4 - Going Train



The few differences may well be pointers to a chronology.

OBLIQUE VIEW, MOVEMENT 'D3'.



(© Image Courtesy of Sotheby's New York) [<A1V2 D3 movement>](#)

The dialplate and movement *D3* exhibit all the normal features of Coster's known timepieces, the Dutch escapement block with cut out for the escapewheel is typical. The present suspension cheeks are obvious reconstructions, and their form appears to be cycloid - incorrect before 1660. The typical Dutch block potence has integral studs with an internal screw to the backplate. Note potence block's two steady holes (**P5**) at the top of backplate, like all Costers. [Being unlike Oosterwijck's *RH* strap potence also longer verge across the plates; whereas Oosterwijck's *D9* and *Lieberge* clocks revert to Coster's block potence].

As stated, holes in the frontplate for very short (6mm) round dial-feet are untypically small (cf. *D1*, *D2*, *D4*). That smallness is repeated in the backplate-holes, for the very narrow studs of typical square-pillars of otherwise correct dimensions and number. The barrel arbor is the second known protruding beyond the backplate, but to a lesser degree than *D4* and without the latter's decorative turning; Chronology again, or simply a different hand - randomly allocated to finish the *ébauche* (rough plated-movement)?

The centre arbor has Coster's typical round steel 'collet' against the frontplate, but having hardly any taper to rear pinion attached to centre wheel, not entirely typical of Coster's timepieces. My [user access matrix](#) shows comparative dimensions among Coster's similar pendulum timepieces. To address and resolve the matter of the relic **D3** movement's origin, I have reduced the question to consideration only of the movement and dial, being put to subjective (*non-forensic*) antiquarian tests:

- Q.** Are the relic's components a later copy, or a modern fake, or is the relic **D3** of the period?
- A.** On the evidence of visible tool marks, materials and construction of components, my considered opinion is this relic pendulum movement, given chronology **D3**, is "of the period". Therefore;
- Q.** Given **D3** relic's form and construction, being singularly like Salomon Coster's extant pendulum timepieces, what might that mean in terms of its possible (alternate) origins in the early period?
- A contemporary copy by a Dutch, or a French, plagiarist? (*'Horologium'* cites plagiarism)
 - Or made by one of the two -Coster or Fromanteel- earliest known pendulum workshops?
 - If John Fromanteel made these in the Hague, then why could he not have made **D3** in London?
 - If a Coster Hague workshop movement, was it then exported to France as a complete clock? Dr.Plomp identified several that were sent to Paris, (*Antiquarian Horology*, December, 1972),
 - Although their whereabouts is now unknown, might the relic **D3** in fact be one of these exports?
 - Was the extant ['Nonsequitur'](#) chapter-ring rivetted to the dial-plate in provincial France? [It is unlike Coster's *pendulum* or even *pre-pendulum* chapter-rings; nor even like Parisian *pendules*;
 - Might a thicker original silver chapter ring have been robbed for its metal, replaced by a thinner?
 - Might **D3**'s original chapter-ring have been Coster's own, his ['First State'](#) or ['Second State'](#)?
 - Or is the extant chapter-ring a workshop original, but made by a French hand - Hanet or Pascal?
 - Or was the dial modified in France to suit local taste, then became distressed and reconstructed?
- A.** Given what is known of the relic **D3**'s recent reconstruction history (BvL Archive 985), and given the relic movement's *core* elements, my personal *antiquarian (non-forensic)* judgement is;
- the relic **D3** did originate in the earliest period of Hague type spring-driven pendulum clocks;
 - almost certainly made in the workshop of Salomon Coster or one closely involved with Coster;
 - then or later it was exported to France, there it was modified, eventually it became distressed.
 - The chapter ring is imponderable. But given the relic **D3**'s typical plates, pillars, going-barrel, and other found components; and given the evidence of assembly, also toolmarks; I do suggest that it would stretch credibility to assign this particular relic movement to another and also now unknown workshop, or another time than Coster's shop between June 1657 and December 1659.

D3 Opinion: Whereas, the poor case and combined dial/door hinges of iron are all irrelevant to the core movement, but only relate to the remnant door-stile found with the relic movement. Whatever else has been modified, added or improved in 1974 reconstructions of the relic **D3**, does not go to the heart of the matter of its originality, nor fix its true origin. Again, taken with all the other evidence, I suggest that the presence of a combined bridge and motion cock of brass, (not an iron-brass bridge and separate motion cock), points more to its chronology rather than to a purported origin outside Coster's Hague workshop. The 'dove-tail' barrel cap probably also points to an earlier chronology within Coster's own *Oeuvre*.

Futhermore, if the basic relic movement, **D3**, were found today, could any authority unequivocally or even reasonably ascribe it to a another time, or workshop, or maker, ie. other than to Salomon Coster in the Hague? Except by *proving* it is the product of contemporary industrial espionage, I suggest not.

We must acknowledge obvious faults and deficiencies in creating its public face, a Coster *pastiche*; [like the 1658 Fromanteel timepiece at Lyme Park]. Certainly, it is to be hoped, today, the forged signature, the speculative date 1657, the replaced hour-hand, the poor hinges and *joiner's* case with untypical door, would be approached and conserved very differently. Nevertheless, and in my judgement, one still would have to accept this **D3** relic' has a *bona-fide* Coster workshop origin, circa 1657/8; or even as late as 1661 if it were completed by Hanet or Pascal, about which I am ambivalent. Those latter makers would have a keen eye on new demand by an eager French market - that Dr.Plomp identified. © **Keith Piggott 2010**

PS 2011: I am informed a Dutch Symposium on Coster D3 reached same conclusions, now without dissent. Further early pendulum memoranda may be accessed at ['Supplementary Views'](#)