

The A. Lange & Söhne 1815

A homage to tradition - John Davis



When A. Lange and Söhne re-entered the world of high horology in 1994 with four new watches, each with dedicated, high-grade mechanical movements, they made a bold statement, the repercussions of which are still being felt. Under the careful guidance of Walter Lange and Günter Blümlein, this “new” company could claim the heritage of the Saxon watchmaking tradition in Glashütte while benefiting from the vision, dedication and marketing genius of these charismatic men.

If there is a stroke of marketing genius behind Lange's success, it is letting the watches do the advertising, indelibly imprinting an image of a grand Saxon watchmaking tradition in the minds of watch enthusiasts who gaze upon their display backs. The creamy waves of the German silver $\frac{3}{4}$ plate; the lustrous rubies, polished gold chatons and heat blued screws; and the elaborately engraved balance cock with swan-neck fine regulator offer a fanciful look into the horological

past executed to a degree of perfection never before attained. Using the most modern production techniques, Lange embraced the anachronism of modern mechanical horology, offering an expression of luxury and craft that is as much a simulacrum as a homage.

While lacking the iconic design status of the groundbreaking Lange 1, the 1815 is nevertheless immediately recognisable. Possibly the most distilled form of A. Lange & Söhne's aesthetic vision, the 1815 simple manual-wind is also the most affordable watch the prestigious company produces. As such, it serves as many collectors' entrance into the world of A. Lange & Söhne and serves here as our introduction to the horological approach of this enigmatic company.

The Case, Dial and Hands

This example, in platinum, is understated and elegant, luxurious to the wearer without attracting undue attention (except from other admirers of Lange watches). The softly frosted dial, stoic Arabic numerals and classic minute track are highlighted by the bold, alpha hands in blued steel. The only hints of ornamentation on the dial are the minute flourishes at twelve, three, six and nine and the diamond-shaped tail of the sub-seconds hand. The dial printing is perfect, and the quality of the hands is beyond reproach. With the back removed, the superb quality of the massive platinum case can be appreciated **1**. Five screws for securing the bezel pierce the hefty caseband that has milled recesses for the two case clamps. While typical of modern high-grade case

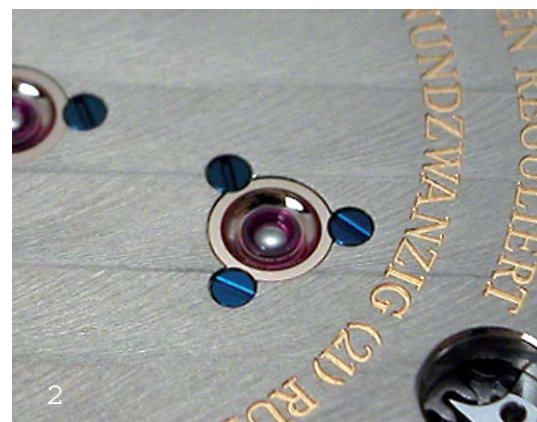
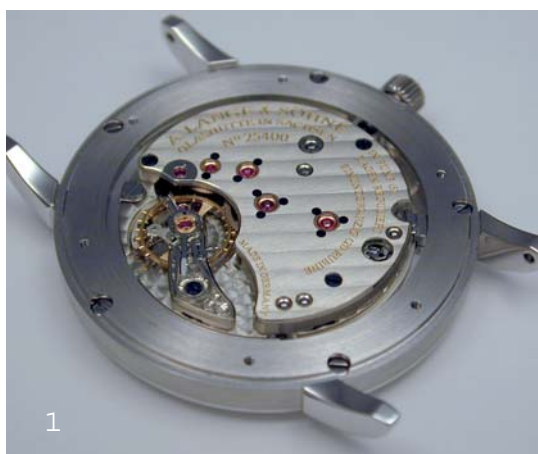
designs, it is perfectly executed. These are possibly the finest case, dial and hands that I've had the pleasure of examining.

The $\frac{3}{4}$ Plate

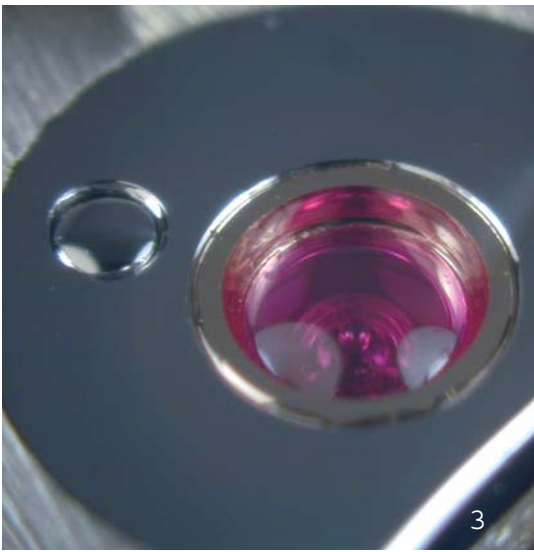
The finish and elaboration of the $\frac{3}{4}$ plate is unparalleled. Lange's use of untreated German silver (mallechort, an alloy of copper, zinc and nickel) for the bridges gives them a very soft, creamy quality when decorated with the perfectly applied Glashütte stripes. Most watch movements use bridges and plates made of brass which is then plated with gold or rhodium for corrosion resistance. While German silver will not corrode with simple exposure to air, these unplated bridges must be handled with the utmost care as they can easily be scratched and even more easily stained by oil or other contaminants.

The train jewels on the top-plate are secured in beautifully polished gold chatons with blued screws **2**. The chatons, while quite attractive, are purely decorative, the jewels themselves being the same friction-fit variety used in other modern movements. The blued screws are a slightly lighter and brighter shade of blue than was once thought desirable for watchmaking purposes but this more electric colour has become the industry standard for heat blued screws. They are perfectly executed, with bevelled heads and chamfered slots.

The cap jewel for the escape wheel is



secured in a gold chaton set into a black-polished steel setting that fits seamlessly into the main plate **3**. The chamfer on the outer portion of the jewel setting also blends in perfectly with the highly polished anglage [bevelled—ed] of the bridge, which is likewise perfectly executed, although lacking any of the more challenging, sharp or interior corners. Anglage that includes sharp, well-executed interior corners is an irrefutable sign of

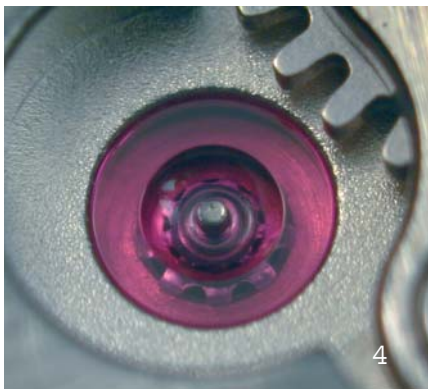


highly skilled handwork, whereas anglage applied to rounded shapes can be perfectly executed with polishing wheels.

The combination of colours created by the highly polished steel, the soft German silver, the gold chatons, the rubies and the blued screws is truly magnificent. This ethereal effect is brought to life through a meticulous, redundant assembly process. Adjustments and final checks are performed on the assembled movement after which it is disassembled so the final decoration can be applied. The finishing of the top plate is all of the absolute highest quality and the elaborate design features convey the image of exquisite, traditional Saxon watchmaking.

Under the Dial

The unplated German silver bottom plate is fully perlaged [spotted—ed] with the exception of the milled hollow for the keyless levers and motion work, which is matt-finished. A stark contrast to the elaborate, screwed-in gold chatons of the top plate, the jewels on the bottom plate are pressed into unchamfered holes 4 Polished countersinks are not a functional necessity any more than gold chatons, but similarly,

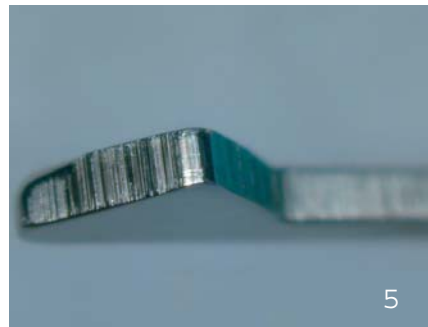


they are a demonstration of fineness and craft that would seem appropriate here. The edge of the milled hollow is also unchamfered. While the machining is of the highest quality, other than the nicely applied perlage, no elaboration or refinement is applied to the bottom plate. The screws on the bottom plate, while not blued, are highly polished and bevelled

with chamfered slots.

The keyless work is grained on top with a small polished bevel on its non-functional edges and on straight functional edges. This maximises the contact area of the levers' surfaces for secure functioning and is sensible as well as traditional. While the functional surfaces (the sides) of the clutch and setting levers are somewhat polished, the sliding surface of the nose of the setting lever spring is unfinished 5. The rough edge shows some slight burnishing from rubbing against the post on the setting lever.

The undersides of the keyless levers do not



show a decisive finish of any kind 6. Somewhere between matte and polished, they also show some rounding of edges. A flat, mirror polished surface would seem more appropriate here. All the sliding surfaces were lubricated with Molykote (a thick grease), appropriately, if heavily, applied 7.

The basic execution of the bottom plate is of the highest standard and the surfaces are all virtually flawless. Still, it lacks some of the refinement found in other high-grade watches. While it cannot be faulted for its workmanship, it is a drastic departure from the top-plate finishing. While some degree of contrast exists between the top and

bottom plates of watch movements of every grade, the perfect and elaborate execution of the top-plate makes the lapses in the bottom plate more readily apparent.

The Barrel and Power Train

Only visible through a small circular opening in the $\frac{3}{4}$ plate 8, the click and spring are attached to its underside 9. The German-style click is highly polished and chamfered on the barely visible top side and straight-grained underneath.

The click mechanism, while offering the



same functions (restraining the mainspring and allowing recoil at full wind) and being more attractive than some contemporary designs, is possibly prone to more wear as well. I found a very small amount of debris in the grease near the click's engaging beak. It seems the dragging and sliding action of the click creates more wear than the pivoting action of other click designs. This is a minor issue and likely not a potential cause for failure or even part replacement over the course of the life of the watch, but it is more wear than I would expect to find around this component in a new piece.

The barrel is nicely made, with decorative snailing top and bottom 10. The pivots and working surfaces of the barrel arbor are highly polished and the arbor runs in



jewels on both sides. The inside of the barrel has circular satin graining on the top and bottom. While this is a perfectly acceptable finish, polished surfaces would result in less friction and smoother transmission of power.

The power train is well-executed and laid out in a very straightforward manner. The wheels are neatly crossed out and slightly bevelled and the wheel teeth and pinion leaves are highly polished. In addition to the circular graining, the wheels also have a brightly polished track near the hub. In all respects, the train wheels appear to be of the highest quality **11**.

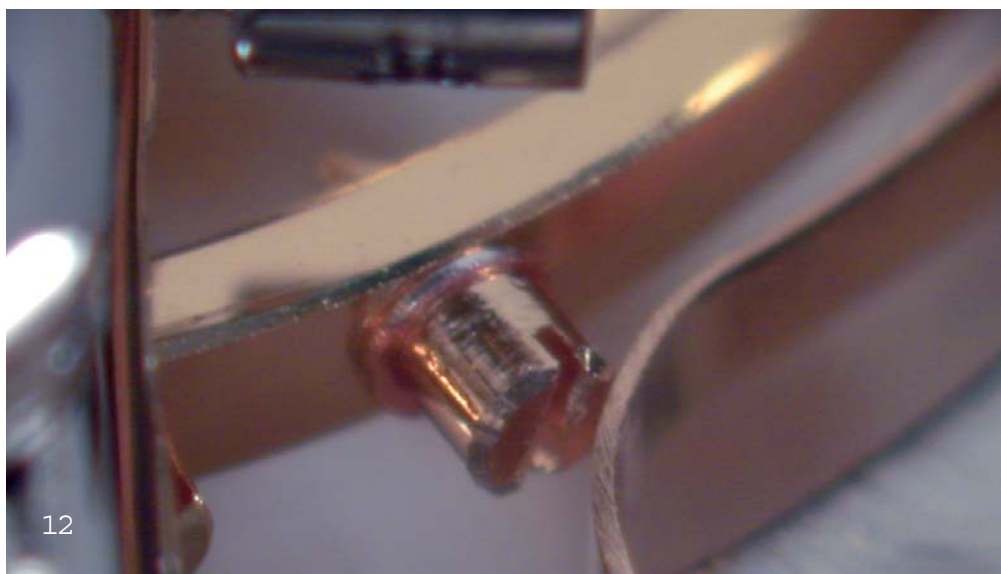
The crown wheel in the 1815 is not attached to the underside of the 3/4 bridge as might be expected, but rather has its own free-standing bridge below the top plate. The large beryllium copper hack lever passes between the centre and third wheels in the power train so that its delicate, curved end can lightly press against the balance and stop the watch when the crown is pulled into the set-hands position.



The Balance and Escapement

The L941.1 movement uses a 8.4 mm Glucydur balance, measured across the screws, and a flat Nivarox 1 hairspring. The balance is well polished above, while the underside is left plain, a feature common even in high-grade watches. The balance wheel is computer poised initially by removing mass from the rim itself but the timing screws are used to dynamically poise the balance and hairspring combination using an eight-position dynamic poising process. This time consuming process results in maximum consistency of rate in the vertical positions and in addition to Lange's final 10 position adjustment and regulation accounts for the excellent timekeeping Langes are known for.

The screws in the balance rim are also used to bring the balance to time with the addition of timing washers. Because Lange uses a very traditional one-piece regulator arm/index assembly, gross rate adjustment must be made using timing washers while the swan's-neck regulator can be employed for fine regulation. In this example, one



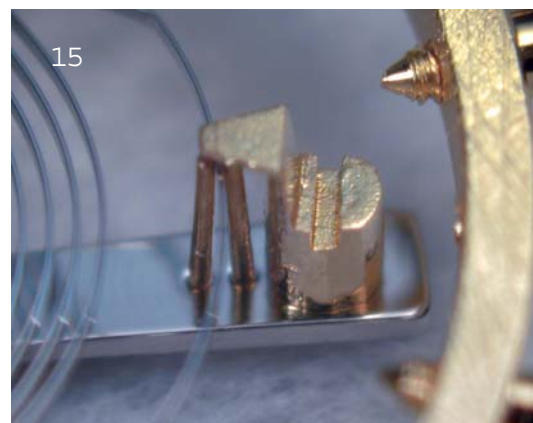
pair of screws has timing washers and these screws show some evidence of having been handled **12**. Oddly, the same screws that have timing washers on them also appear to have had some material removed from them in the form of a small bevel. The reason for adding weight in the form of timing washers while also removing weight in the form of a bevel is impossible to ascertain as the timing washers were not sufficient to center the index finger on the stud anyway, a goal of Lange's final regulation process that was somehow not realised in this example.

The balance cock is wonderfully hand engraved **13**. The engraving stands out as the only visible handwork on the movement, and is of a very high standard. The swan's-neck mechanism is a beautiful touch and provides for very precise regulation.



The hairspring stud is an old-fashioned triangular pinned stud, while the collet is a modern Greiner-style collet **14**. The well-made stud offers some vertical adjustment but makes centring the hairspring more difficult. While a Geneva stud (which cannot be adjusted vertically) can be allowed to relax into a natural position before it is locked into place, and an Etachron stud can be rotated to optimise the centring of the hairspring, the hairspring in the L941.1 must be manipulated at the stud or at the end of the regulator curve to correct any centring issues. This stud design, held in place with a locking movable stud carrier, was clearly

chosen for its traditional look while the hairspring collet (which cannot be seen through the display back) is entirely modern.



A Greiner-style collet lessens the possibility of hairspring errors associated with a traditional, pinned, split collet while sacrificing the serviceability of the former (Greiner collets cannot be easily removed from the balance staff). Greiner collets are almost completely ubiquitous throughout the industry while possibly inferior in some respects to the laser welded Nivatronic collets used by some manufacturers.

The curb pins in the L941.1 are a very traditional variety with two curb pins and a regulator boot. The execution of these components is not particularly fine and the curb pins are adjusted incorrectly. The curb pins are planted quite far apart and ought to be bent so that they remain parallel. Instead, they are simply bent inward **15**. In this example the incorrect curb pin adjustment resulted in a variation of several seconds between the dial up and dial down positions. This variation is a consequence that is unsatisfactory in light of the ease with which it could have been corrected in an otherwise exceptionally well adjusted movement.

Yet another nod to the past is the presence of banking pins for the pallet lever **16**. Modern production methods make precisely machined fixed bankings convenient and easy to produce and they are totally ubiquitous in current production watches. Pins, however, allow for adjustment of the lever bankings, something that was sometimes necessary in watches that involved more handcrafting. Lange's decision to use banking pins, while likely a nostalgic consideration, is possibly also a subtle response to the impermissibility of banking pins within the criteria of the Geneva Seal, where fixed bankings are required.

The escape wheel is consistent with those found in most modern watches, perfectly functionally finished without exhibiting any extraordinary craft. The pallet lever in the L941.1 though, is a more complex design than those usually found today, even in very high-grade watches. It has an elaborately formed safety dart and horns and is decently polished and bevelled. Surprisingly though, there was some debris on the horns **16**. Upon close examination, I found some of the same debris on the roller table and impulse jewel as well. This would doubtless cause some inconsistencies in the functioning of the escapement at some point.

Conclusion

Although offering the appearance of utterly old-world horology executed to standards of perfection that are heretofore unseen, underneath, the high-tech production methods (CAD design, spark erosion and CNC milling for example) are more evident. While the results of these modern

techniques are remarkable, they do not benefit from the same (extraordinarily) lavish finishing of the top plate. The movement is a homage to Saxon watchmaking that is torn between modern goals and methods and an aesthetic sensibility from another time.

This neo-Saxon approach, as defined by Lange and now mimicked by other German manufacturers, is in some ways a breath of fresh air in this often staid realm. What is even more refreshing is Lange's commitment to excellence in bringing their vision to fruition.

The end result though is a curious mix of signals that, while not to my tastes exactly, is intriguing because of its unprecedented success with collectors and watch enthusiasts as well as for its implications for the future of high horology and luxury goods in general.

It is important to remember that as fine as the watches of A. Lange & Söhne are, they are ultimately still serially produced pieces. While we still value the concept of handcrafted goods as being somehow superior or finer than industrially produced objects, the modern consumer by and large does not appreciate the subtle inconsistencies that are inherent in true handcraftmanship and Lange does not deliver such inconsistencies (the inconsistencies in this example being of a wholly other kind), intentionally or otherwise.

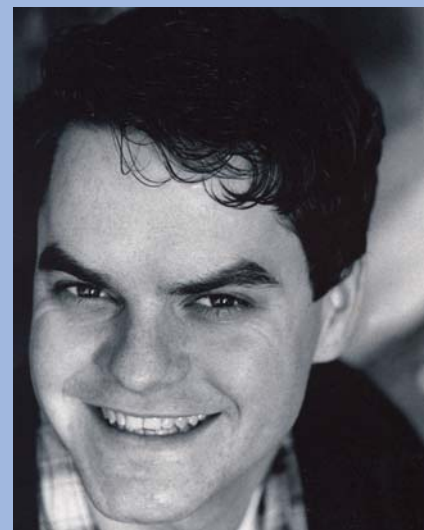
If Lange's watches do not suffer from (or enjoy) any of these idiosyncracies, it is a testimony to their excellence even while it belies the industrial methods that they (and all other serial production watch manufacturers) now employ.

Author notes

John Davis began studying horology in 1997 using the standard watchmaking texts combined with some tentative tinkering before finding a watchmaker in San Francisco willing to take him under his wing. Seeing John's voracious appetite for all things horological, his mentor recommended that he enroll in one of the WOSTEP schools in the US and become a proper watchmaker. While this meant parting ways with his band mates of nine years in an experimental punk rock ensemble, at 32 years of age, he felt it was time to get serious about landing a real job.

Shortly before moving to Seattle, Washington with his future wife to attend Watchmaking School in 2001, John was approached by ThePuristS.com founder to moderate a general watch discussion forum and write in-depth technical reviews of modern production timepieces. Finally his University degree in writing would be put to some use. Over the course of the 2 year/3000 hour watchmaking programme, in his free time he disassembled and photographed a variety of watches for a series of articles published originally on ThePuristS, attempting to analyze the construction, design and craftsmanship of modern calibers from every tier of the industry.

In 2003 John graduated at the top of his class from North Seattle Community College's Watch Technology program, receiving a WOSTEP certificate, and



was offered a position in the Swatch Group US Prestige Service division in New Jersey. While there he serviced and repaired watches by Omega, Blancpain, Glashütte Original and Breguet, specializing in the Type XX automatic flyback chronograph.

In 2005 he left Swatch Group to work for another manufacturer's service center in New York, where he supervises a team of watchmakers performing warranty and after-sales service and repair. His career as a horological journalist was short lived however, due to insurmountable conflicts of interest that arose upon taking a paid position within the watch industry.

Further articles by John Davis, and much more, can be viewed by doing a search of www.thePuristS.com. A specific list of links can be obtained by emailing any of the HJ editorial team.