



V-30/45-01-A

Volker
Vyskocil
independent watchmaker





Preface Preface

To give up a secured income for a jump in the unknown, I think that such a step can only be explained by a tremendous amount of passion.

And this is exactly what this little brochure is all about. About the fact that I "could not let it be", about my passion for mechanics and about all which arises from there.

There were many reminding words not to drive it too far, not to reveal all my thoughts / opinions / solutions (in particular in technical questions) in full width.

But it is as with my own way... and I think, it is right like that.



About me

Life washed me on land on September 26th, 1964, and confronted me with a most important question 16 years later: 'What are you going to do?'. My answer was: 'watchmaker'. Fate smiled and answered: 'Ok, you're going to be a toolmaker!'. Back then I could never fully understand this initial irritation. But meanwhile I am grateful for this stroke of fate. Because of it, I got in the benefit of a higher education, could develop machines during many years independently and under my own responsibility as a technical designer and beside could devote myself to my passion, i.e. watchmaking. Five years ago fate knocked at my door again to remind me of my former career aspiration. It thought that time had come ...





At an unknown place

Take the metropolis of watchmaking in England, Germany and Switzerland and draw a circle of 500 km radius from each of them. Where the circles nearly meet, there flows the left lower Rhine (linke Niederrhein) and is also located a place called "Nettetal".

Apart from this geometrical connection -admittedly a little bit far-fetched- to watchmaking I am not familiar with any historical one. To my knowledge, there has never been a watchmaking craft tradition at the left lower Rhine. But this is not relevant at all. What counts is what I bear inside from the spirit of the old masters (wherever they have lived) and which part of it flows in my current creations.

New ideas always originate from a mixture of tradition and individual deliberation. Both are important, and both have to be well balanced. Tradition alone only produces plagiarisms. Creations which are bound only to the present often miss a soul. It is this tightrope walk between the two worlds which makes my creations unique. I could not do this at a place oozing with tradition - that is like with my own development. It gives me a distance necessary to step outside the tradition without completely leaving it. Something rarely found today.





The "V-30/45-01-A"

(V: Vyskocil, 30: diameter of movement in mm,
45: height of movement in 1/10mm, 01: version, A: stage of extension)

The character or the nature of a mechanical watch is determined significantly by the interaction of design and technique. An interaction which should - like a composition - follow a certain harmony in order to please the beholder. When creating the V-30/45-01-A (from now on referred to as the VA), the guiding idea was to cope with a highly demanding feeling for harmony. A feeling, which lead to the complete redesign of a watch in her full spectrum. A composition, which is surely unique in this depth.

The look of the VA is characterized by a decentral second at 9 o'clock, a power reserve indication at 5 and by the central indication of hours and minutes. That the crown is not in line or at right angle to the second indication suggests that the movement construction does not follow classical rules. More about this will be discussed later. The positioning of the crown at 4 o'clock has, next to an aesthetic motivation, also the practical virtue that the crown cannot press itself into the back of the wearer's hand.

The letters H, M and S are printed above the indexes 20, 10 and 0 of the power reserve indication, referring to the double function of this display. The functions, which will be explained in detail further down, "individual hour setting", "minute lock in place setting" and "second stop", all adjusted by the crown, are visualized by the power reserve indication hand when the crown is pulled out. Depending on its position, the hand jumps on "H" (setting of the hour), "M" (locking minute) or on "S" (second stop). When the crown is pressed in completely again, the hand gets back to the indication of the power reserve. Thus an unadjusting of the minute hand by mistake while changing





the timezone, should never occur.

The case of the VA has a diameter of 38mm and a height of 10.5mm. The front and back side of the case are fitted with sapphire crystals. The whole appearance of the case is marked by curves. Last but not least to avoid dirt traps.





Movement construction

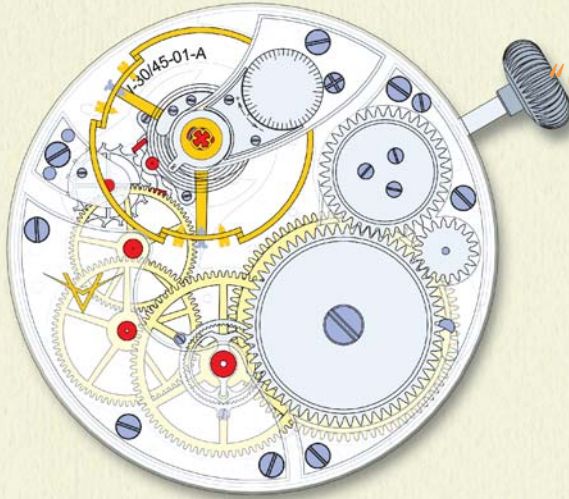
Large balance, voluminous mainspring barrel and a decentral minute wheel

In former times watchmakers were driven by the idea to use large and heavy balances in their constructions. Large enough that the mainspring was just about able to deliver enough energy to ensure a satisfactory amplitude. Therefore the mainspring barrel (energy storage) and balance wheel had to be dimensioned in a reasonable relationship to each other and still fit in the movement of a given diameter. A balance as large and heavy as possible (= maximum radius of gyration) was chosen for the fact that it is less sensitive to external influences than a smaller and lighter balance swinging at the same frequency.

In the 50's of last century the watchmakers broke new and better ground with the development of high-beat escapements. This provides the same stabilising effect as the previously described greater radius of gyration. Since high-beat balances are lighter than their slow-beating heavy cousins, the oscillating system is less susceptible to positional errors. Pivots of smaller diameter can be used, which in turn results in a better performance both in horizontal and vertical positions.

The not unimportant question is: Is the technically superior solution always the most beautiful? For the VA I chose the classic way: that means a big balance and a voluminous mainspring barrel. At the risk of being not absolutely up to date.

If you take a look at the movement you will notice the remarkable arrangement of the movement wheels (as known from Zenith's Cal. 135 and certain non round movements). This is a consequence of my attempt to implement a balance and a mainspring barrel of maximal diameter. Moreover,



"Construction of the movement"

V-35/40-01-A

with this layout, "big" wheels can be used, which is of great help when manufacturing like a craftsman.

Just a few words about the balance itself: It is an homage to the great masters Breguet and George Daniels. I bow deeply in the view of their sense for function and aesthetics.



Precision timing

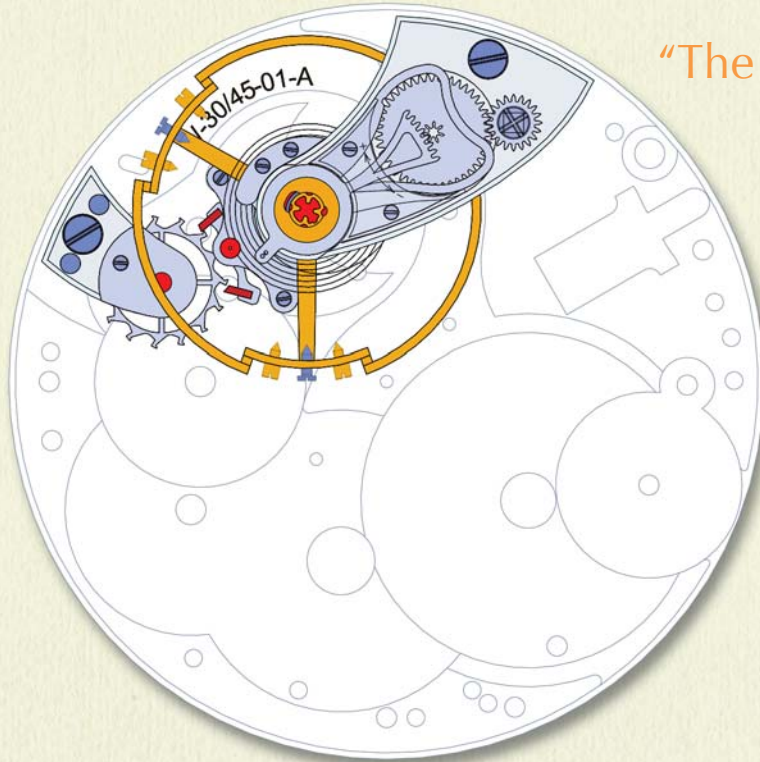
Remains from another time

Before the age of timing machines, precision timing of wrist- and pocketwatches was spread over several days sometimes even weeks. Direct comparison with a reference clock was the standard procedure. The second was the unit that had to be kept within limits. In order to be able to make a reasonable assessment of the rate of a watch, the timeframe between two measurements usually spread over 12 or 24 hours. Corrections were done by moving the regulator or, if present, by adjusting the regulation screws of the balance.

The latter ones had and have the advantage of defined and accurate adjustment. The amount of how much the screws are turned can be easily controlled, which results in an exactly definable change of rate (similar to when regulating a pendulum by the pendulum screw). The only danger there is that the poise of the balance can be disturbed easily.

Adjusting a watch by moving the regulator is trouble free in this respect, but another problem gets into one's way.

The accuracy of the bare regulator is not reliable at all. Thus moving the regulator a 1/100mm is enough to affect the rate by several seconds. One does not move a 1/100 mm just like that out of the blue. Therefore a precision adjustment device has been added. Only such a construction enables a controlled move of the regulator of a 1/100mm but at the expense of increased technical complexity.



“The precision adjustment”

V-35/40-01-A



This was the past, but nowadays we have timing machines. With their help, the current rate of a watch is determined within seconds. A "too much" or a "too little" of the regulator adjustment is determined within seconds (what an achievement compared to the 24h time frame of the formerly described older method) and corrected just as quick. The fine adjustment device therefore actually seems redundant.

Even worse : the regulator curb pins are not necessarily favorable in the long run to maintain a precise rate of the watch. It is not without reason that many of nowadays watches are designed without a regulator. Considering this, one is tempted to ask why the "VA" features a precision regulator.

The answer to this question cannot be found at a rational, time-measuring-related level. Rather in the more subtle sphere, where characteristics are attributed to things which are normally only reserved for human beings. The precision adjusting device adds a bit more soul in this watch. It is a link with the past.





The power reserve

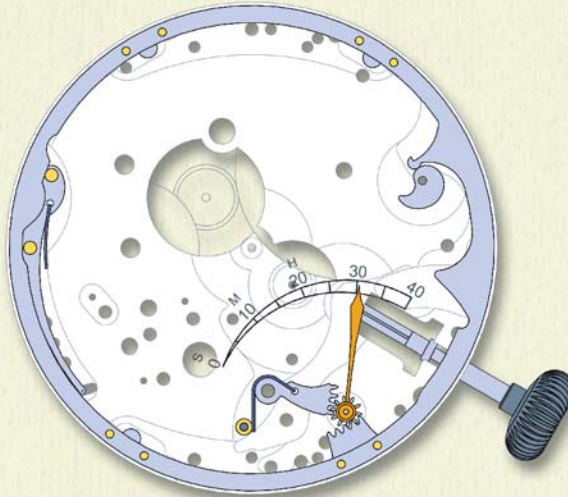
A true power reserve indication without setting

Power reserve indications were found mostly in high-grade timepieces. Among other things, the reason for it was that they had to be wound up once a day if possible at the same time each day. Thus, they always unwound under the same conditions, day after day, week after week, month after month. And when the winding up was forgotten, one could see it on the power reserve indication. Therefore a winding up "only to be on the safe side" could be avoided, which would have disturbed the regular course of the timepiece. It was however common to all those "oldtimers" that they had built in in their mechanism a well-defined "fully wound" and a well-defined "run out" stage. Be it the fusee in chronometers or the setting in mainspring watches. But today's watches don't feature this - for good reason: a setting only bears risks; and even stops the watch if it does not work properly. The absence of a defined zero-point in modern watches makes it difficult to construct a power reserve indication. A friction coupling is an often used solution which masks this drawback.

In the VA, the conditions are different, no need for a friction coupling, because things are like in the old timepieces. There is a zero point again. Not achieved by a setting, but by a second stop -to be in line with today's time- which engages precisely after 40 hours. The functions of this mechanism



“The power reserve”



V-35/40-01-A

are explained in the picture above. The cam disc at the right side of the figure turns 240° in 40 hours. During this the finger of the control lever gauges the position of the cam disc and transmits the information through a gear segment and a pinion to the power reserve indication. After the 40 hours have passed, the control lever additionally activates the lever which operates the seconds stop (shown in the left part of the figure). This mechanism is surely unique. It combines the virtues of the "old masters" with the requirements of today.



The hour

A must for a contemporary watch?

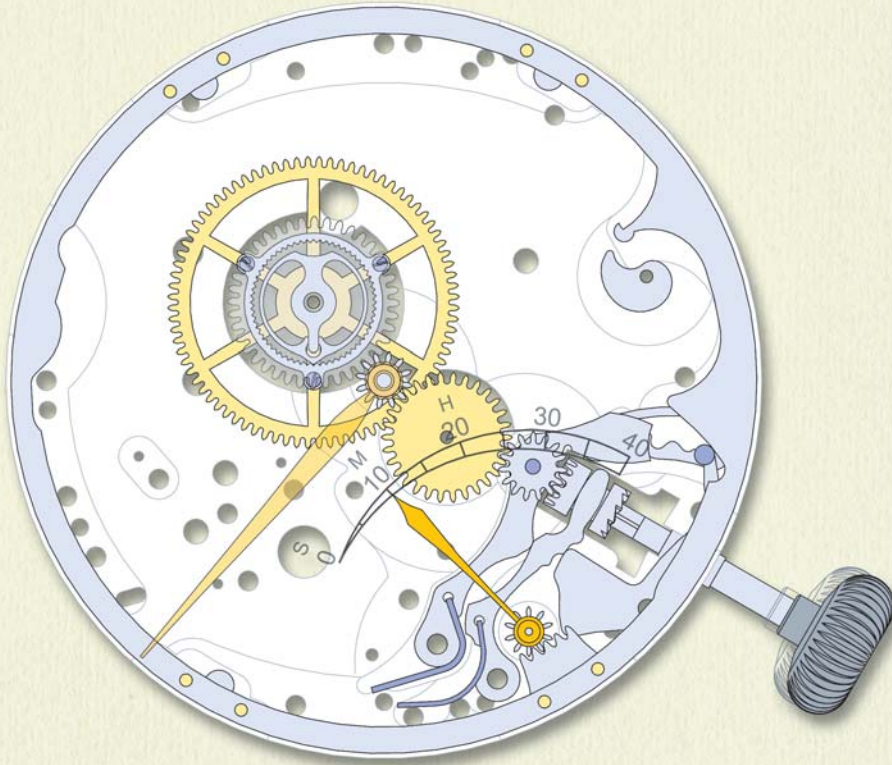
Nowadays the change from winter to summer time and backwards is regulated by law. Furthermore, a network of time zones spans the globe, cut in hour steps. What suggests itself more than to be able to set the hour hand independently from the rest ? Namely by using the crown rather than additional pushers. A task which could not be written down any simpler. A task which has its difficulty in it, since the available space around the winding mechanism is limited, the travelling distance of the crown is very short and the human spirit only too often imprisoned in traditions. It took me quite a while before I came up with a solution. A solution up to all expectations : an additional lever and a double gearwheel. Nothing more ! And still, the gearing set up appeals that much to me and according to my opinion is refined in such a way (I am almost tempted to write "ingenious") that I named it "hour adjustment by Vyskocil". Let's see if it becomes common property for better watches.



The minute

The resting minute hand

Everyone should know how to set the time on a watch. The crown is pulled out into "setting" position and the hands are set by moving them. The ones who really care, pay attention to the position of the minute hand in regards of where the seconds are, for example, if the seconds are at 30, the minute hand should be set between the indexes. With the "VA", this is different. Although the solemn act starts the same way, i.e. by pulling out the crown and by turning it, the minute hand automatically locks in the right position to the second hand.



“The minute”

V-35/40-01-A



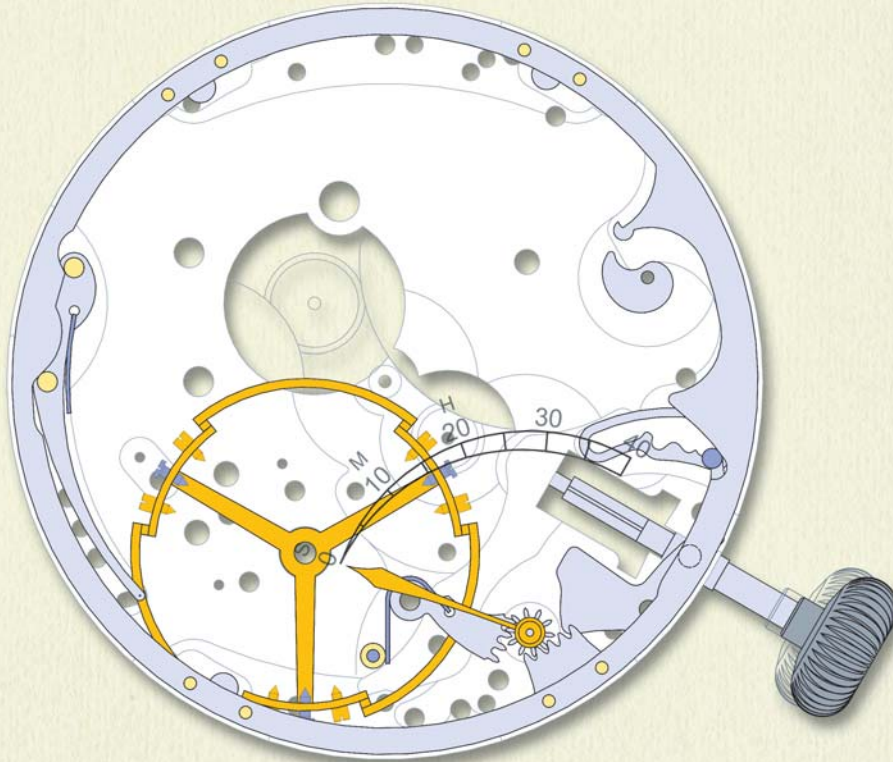
The second

Second stop on demand

Some watches are equipped with a second stop which engages as soon as the crown is pulled into "setting" position. A quite doubtful affair if you ask me. In particular when the crown is also used to set the date. The second stop of the "VA" only engages when the crown is pulled out in the extreme "non locking" position. Therefore in the "VA", hour, minute and second can be set completely independently from each other. Thus when waiting on the official time signal, there is no need to focus on the minute but full attention can be put on the second. Once the seconds have been set, the minutes and if necessary the hour can be adjusted in all peace.



“The second”



V-35/40-01-A



In table form

Case

Diameter: 38 mm
Height: 10,15 mm
Dial side: domed sapphire crystal
Movement side: flat sapphire crystal
Materials: yellow (3N), rose (4N) , red (5N) and white gold; platinum

Movement

Designation: V-35/40-01-A
Power reserve: 40h, manually wound
Diameter: 30 mm
Height: 4,5 mm
Alternation: 19800 A/h = 2.75 Hz
Escapement: Swiss pallet escapement
Diameter of mainspring barrel: 13,9 mm
Diameter of balance: 13,85 mm

Crown functions

Position 0: Winding
Position I: Setting of hours (locking at full hours)
Position II: Setting of hours and minutes, minute locking to align with seconds hand
Position III: hacking seconds

Dial

Colour: Black / White

Indications

Central hours and minutes
Small seconds at 9 o'clock
Power reserve at 5 o'clock
Display of crown position

Strap

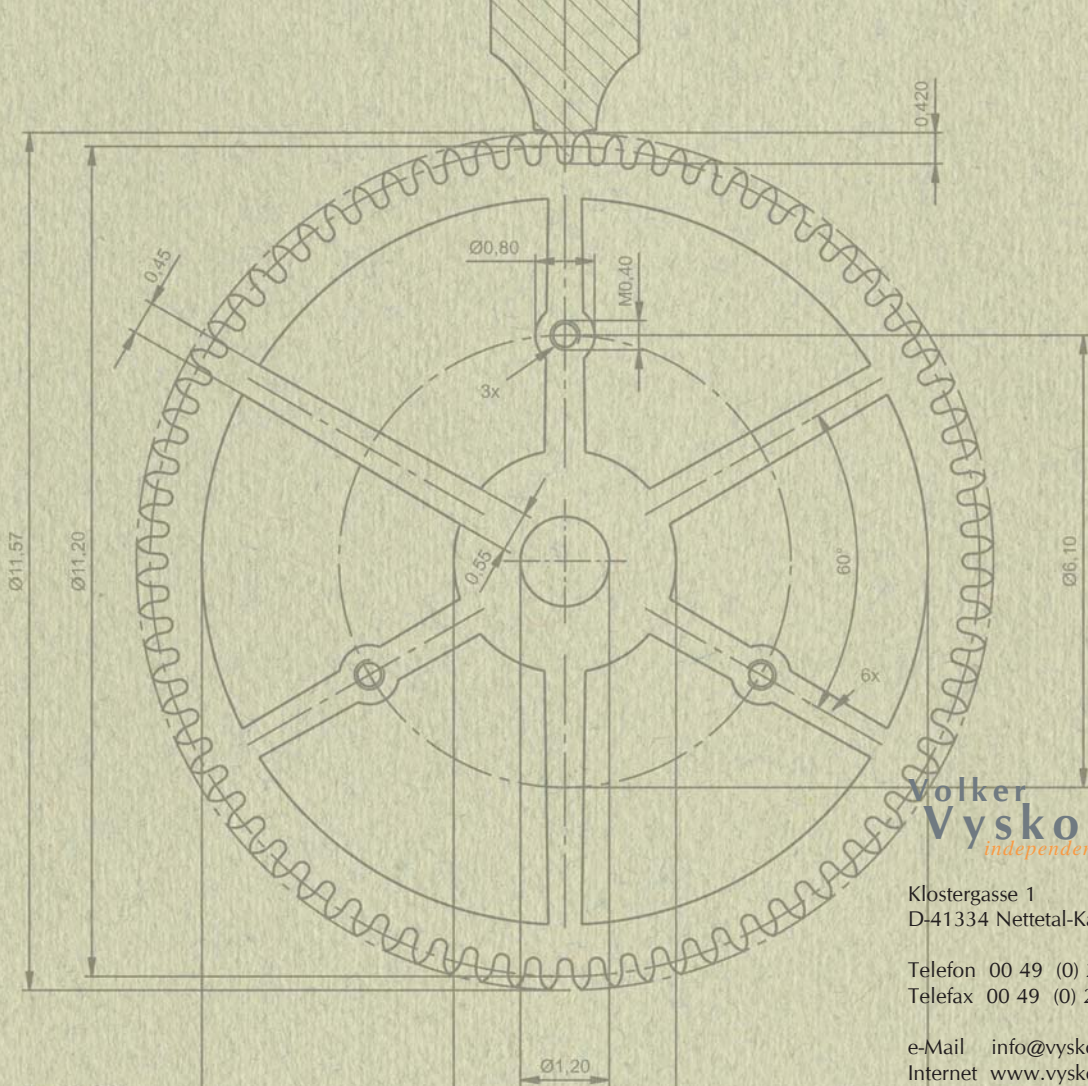
Material: Leather Size: 20/18

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