

# PARALLEL WORLDS

MB&F ISSUE 03



WELCOME TO

# PARALLEL

Creativity is an addiction. So powerful that there is no cure for it – we hope. “More, more, more” says our brain while adrenaline pulses through our veins. We feel elated, we feel invincible, we feel happy.

With Parallel Worlds we bring you what makes our heart beat faster – what we create and what we would have loved to create – in a whirlwind of amazing stories by some of the greatest writers we know.

# WORLDS

Every day we celebrate creativity, friendship, inspiration and the simple act of being meaningful.

If any one of these pieces or stories can engage you to think different or create something on your own, you will have brought that extra smile to our already sunny day.

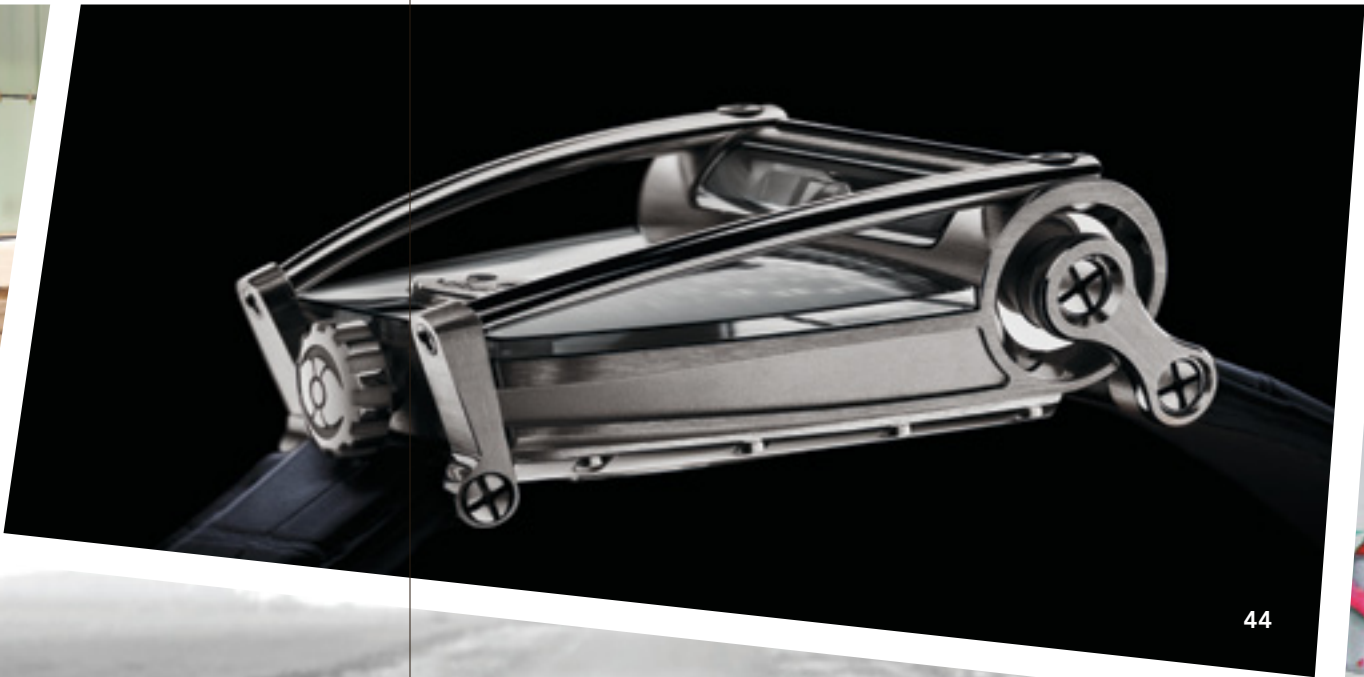
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Maximilian Büsser





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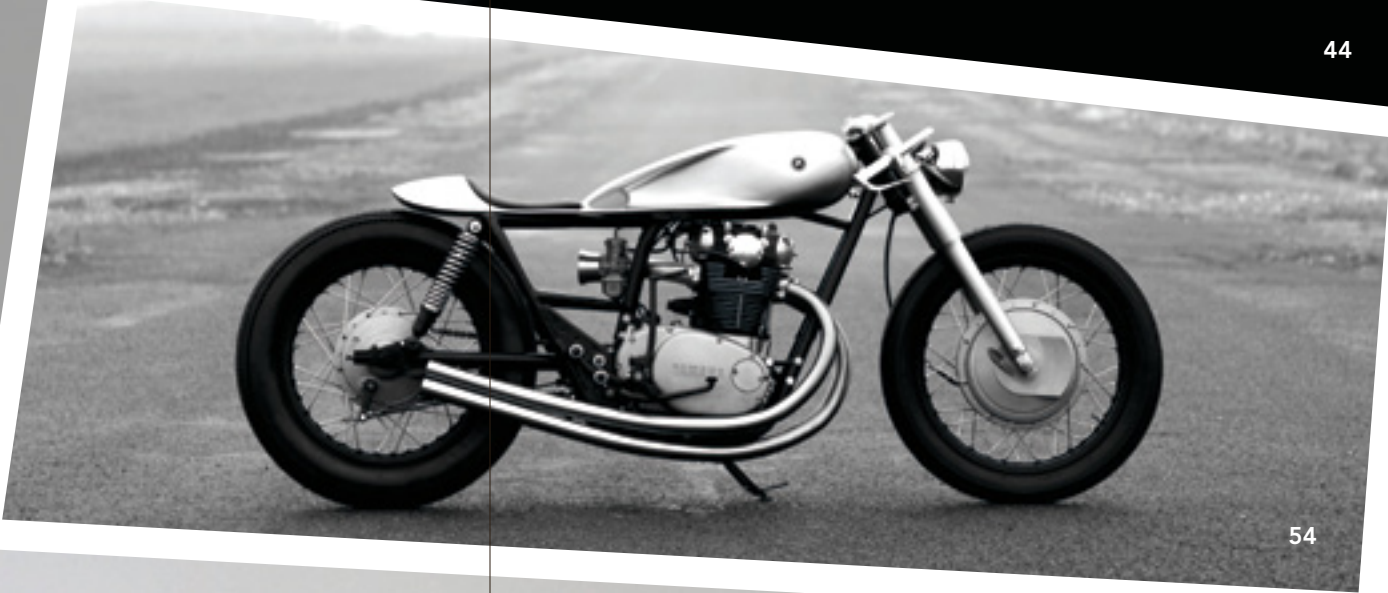
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# ANIMAL KINGDOM

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# LOVE BUGS

In "Mechanical Entomology," M.A.D.Gallery's first themed exhibition, four artists pay homage to the unexpected beauty of creepy, crawly critters.



For more information,  
please visit  
[madgallery.net](http://madgallery.net)

Written by Victoria Gomelsky  
Watch and jewellery writer for the  
*International New York Times*





**Top**  
Christopher Conte  
*Duellona* White bronze  
15 x 12 x 4 cm

**Bottom**  
Christopher Locke  
*Scissor Spiders S*  
13 x 10 x 6 cm

Upon seeing a spider or bug, most people have a universal reaction: euuuwww. For the four artists whose work appears in M.A.D.Gallery's new "Mechanical Entomology" exhibition, however, the opposite is true.

"Bugs are awesome!" says Chris Locke, an Austin, Texas-based artist who fashions spiders out of scissors confiscated at airports. "They're little tanks that run around and survive off of what we don't want anymore. Look at them up close – they're really elegant."

The grace and ingenuity of the anthropod world is a running theme of the exhibition, which lives at the intersection between natural history, metalsmithing, and, of course, mechanics.

Take Christopher Conte's arresting creations. The Long Island, N.Y.-based sculptor spent 16 years working in the prosthetics industry

before turning his attention to miniature biomechanical studies that sprung from his love of robotics.

"One of the things guys interested in robotics draw inspiration from is the insect world," Conte says. "Their miniaturization, the fact that they navigate all sorts of terrain: they walk up walls, they fly."

The "Duellona" cast bronze insect sculptures that Conte contributed to the exhibition feature articulated legs, hooked antenna, nonfunctional watch movements tucked inside belly-like cavities, and riveted exoskeletons engraved by master firearms engraver Michael Dubber.

"A lot of people have misnamed them spiders," Conte says. "They're more robotic insects. They're in a world of their own."

You could say the same thing about Gaby Wormann's "Mechani-





From left to right and  
top to bottom

Paul Swan Topen: *Single sprung rice paper*

Gaby Wormann: *Callipogon tertius*,  
*Lycosa tarentula*, *Dynastes hercules*, *Goliathus ex*

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**The artistry and effort required  
to transform some of the  
world's most repulsive critters  
into objects of beauty  
is not to be underestimated.**

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cal Creatures," or "McCre." Preoccupied with "humanity's uninhibited intervention in complex biological systems," the German artist – who counts the writings of Franz Kafka and the paintings of Swiss surrealist H. R. Giger as major influences – set out to develop a new hybrid life form combining organic insect parts with mechanical elements. The enhanced legs of Wormann's *Lycosa tarantula*, for example, transform the spider into a bionic arachnid, while a large-winged rhinoceros beetle endowed with mechanical gears looks like a tiny, fearsome cyber-bug.

Insects are "a marvel of creation," she says. "To modify their bodies is an artistic challenge."

The artistry and effort required to transform some of the world's most repulsive critters into objects of beauty is not to be underestimated. Locke, for example, describes the moment when he realized what the 30-pound box of scissors he'd stumbled upon in 2007 would become. "For about a week, I had scissors on the brain," he says. "Then one morning, I started welding and breaking and mutilating the scissors and then

it just happened. It was like the scissors said to me, 'I'm a spider'."

That same sense of inevitability permeates the work of Scottish product designer Paul Swan Topen. "One of my earliest memories is digging with a spade in the back garden and coming across a chrysalis," he says. "I was fascinated that this was going to turn into a butterfly."

Born into a family of artists and professional tinkerers, Topen was equally beguiled by "an old grandfather clock that my father used to wind up every night," he says. "It had butterfly keys, like all traditional clocks. And as a young child, I was fascinated."

About eight years ago, Topen bought an antique frame that enclosed a butterfly specimen and decided to unite his childhood interests. His "Clockwork Butterflies" pair real (deceased) butterflies with cogs, wheels, and bridges derived from antique watch movements, resulting in pieces that are nothing short of transcendent.

"The wings are so delicate," Topen says, "if you breathe on them, they'll blow away." ■





Photography:  
Vivek Nityananda

For more information,  
please visit  
[jennyreadresearch.com](http://jennyreadresearch.com)

## MAN, MANTIS, AND MACHINE OR THROUGH ALIEN EYES

Written by Ian Skellern  
Technical Editor of *QuillAndPad.com*

“Despite their minute brains, mantises are sophisticated visual hunters, which can capture prey with terrifying efficiency. We can learn a lot by studying how they perceive the world,” says Dr. Jenny Read, a professor of vision science at the Institute of Neuroscience at Newcastle University. Read leads a team in stereo depth perception research.

Aided by the world’s smallest 3D glasses, Read’s team transforms the praying mantis from an insignificant insect to the fascinating subject of an experiment designed to ultimately find a way to transfer the three-dimensional recognition abilities of a praying mantis to ultra-modern robots and computers. Never has science looked so much like science fiction.

The alien-like eyes of the praying mantis view the world in stereopsis – a word that describes three-dimensional structure gleaned through visual information obtained by two eyes with normal binocular vision. While this might sound just like the way that human eyes process optical information, it differs because of the divergent positions of the creature’s eyes. Its depth perception is therefore much different to ours.

Read’s research received a £1 million grant to analyse and compute how mantises see in three dimensions. The research is accomplished by attaching a pair of the world’s tiniest 3D glasses to the mantis’ head, using beeswax to keep the “spectacles” in place. The mantis is then put in front of computer-generated animated images on a three-dimensional display screen.

By observing how praying mantises make errors in judgement with regard to the depth of the objects projected on the screen – in the same way that movie-goers are fooled into believing that 3D movies are more “realistic” than 2D films – the researchers can deduce a number of things about what and how the mantises are seeing.

If, for example, a glasses-wearing insect lunges at an object on the screen, it’s entirely possible that its three-dimensional perception is similar to that of a human being. This research has the potential to lead to novel approaches in implementing 3D recognition and depth perception in computer vision and robotics. ■



# JEEPERS CREEPERS

**A one-of-a-kind clock  
crawls out  
of the woodwork.**

Written by Wong Kee Soon  
Managing Editor  
of *Manifesto* Magazine

There was a period of time – probably just yesterday – when clocks looked like things you buy because you don’t love your walls, desk, fireplace mantel or wherever else you plan to plant them on. That is because most still come in a variety of boring, sorry round shapes that appear to audition for a second career as a pizza pan or Frisbee. If not, we were left with the option of a dusty ol’ grandfather clock, which one might actually need to inherit the title or be age-appropriate to be called a rightful owner of such designs. And while this clockmaking tradition is much appreciated by anyone with a love for old-school horology, they don’t profile as a first pick when it comes to planning out the décor for your upscale bachelor pad in Hyde Park or designer loft in SoHo. It’s not your fault; there just aren’t many designer clocks in the timekeeping universe that look the part, deliver the goods from day to night, and have guests at your house party wishing they saw it first – it’s akin to introducing them to your life partner who is also a runway model. That said, there are a few mechanical clocks that fall into this rare, unicorn-like bracket – one of which is conceived by MB&F and manufactured by Switzerland’s only high-end clock manufacturer L’Epée 1839.

Dubbed Arachnophobia – the fear of spiders – this limited edition table and wall clock is everything your wildest imagination has yet come to terms with as possible in clockwork. Once again, it’s not your fault. Birthed by MB&F’s mastermind and full-time hypebeast Maximilian Büsser for his brand’s decade-old resistance to traditional horology, Arachnophobia is loosely inspired by the bronze, stainless steel, and marble sculpture created by French-American artist Louise Joséphine Bourgeois in 1999 for an exhibition at the London’s Tate Modern (it is currently based at the Moderna Museet in Stockholm). This 30-foot tall sculpture named Maman (which means mother in French) features eight hairless but pointy legs connected to an economised representation of a spider’s body – its abdomen containing marble eggs is included in the set-up.

While Maman profiles like a cross between Martians from *War of the Worlds* and any character from Tim Burton’s whimsical universe,

MB&F’s Arachnophobia looks more welcoming and highly Instagrammable, though the warning label-sounding moniker suggests otherwise. The solid and brass body, beautifully plated in a black palladium or 18K yellow gold finish, flaunts a three-part mechanical torso as the heart of its operation. The head is where the exposed regulating system resides, gears moving and ticking like the faux spider on alert; and at its rear is the placement of the mainspring barrel, which is responsible for the eight days of stored energy that powers the time tracked on the central black dome located on the black widow spider-shaped abdomen. This concept of an all-encompassing time-telling dome is the calling card of some of MB&F’s greatest hits, having appeared in timepieces like HM3 Frog, MoonMachine and HM6 as well as the other L’Epée 1839 co-creation, the Starfleet Machine. And yes, the sleek space-age design of the hour and minute hands say that you’re living in the now.





Meanwhile, the surprise package here is with the double-jointed legs of the Arachnophobia. While all the clocks you know boast hands, MB&F is arguably the first to bring legs – eight of them to be precise – onto the table. What make them special are their articulated joints that allow free play of how the 203mm-tall spider is positioned on the desk or mounted onto the wall. That means the limbs of the spider-like *objet d'art* can be

fashioned in the same play-friendly manner as those of a Marvel comic action figure and in a stance that parallels your mood – that kind spider from *Charlotte's Web* or the menacing one from *Eight Legged Freaks*. If you're thinking about wall-mounting the Arachnophobia, explore the possible effects of shadow play utilising natural light or special spotlights. And you thought introducing a spider into your living space would be a bad idea. ▀




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And you thought introducing  
a spider into your living space  
would be a bad idea.

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Photography: Nicky Bay  
You can see more  
of his macro photography  
at [sgmacro.blogspot.ch](http://sgmacro.blogspot.ch)



To view the incredible photo  
collection, please visit  
[flickr.com/photos/usgsbiml](https://www.flickr.com/photos/usgsbiml)

## THE SENSATIONAL MACRO PHOTOGRAPHY OF NICKY BAY

In the world of nature photography, brightly coloured birds and cuddly animals attract nearly all of the attention. However, there is a larger universe of interesting insects, spiders, and invertebrates that we are rarely even aware of. And it's this miniature world that Singaporean photographer Nicky Bay captures so perfectly.

"Despite being an urban jungle, Singapore has an abundance of macro photography opportunities," explains Bay. "Its tropical climate provides a warm environment for most insects to thrive in."

He began shooting magnificent macro shots of creepy crawlies in 2008, and now his main equipment is a Nikon D800 camera, flash, and Tamron 90mm macro lens. Bay has also started working with ultraviolet light to reveal the natural fluorescence of the various critters he comes across.

Every year, Bay travels to tropical rainforests throughout Southeast Asia to take advantage of the diversity of creatures on offer. In 2014, Bay took an incredible 20,000 photos across 46 field trips in search of unusual photogenic subjects. He usually shoots at night because the

weather is cooler and the bugs are less frenetic.

While Bay has a continually growing wish list of rare subjects to shoot, one spider that has eluded him to date is the Singapore Blue tarantula; it has been sighted in the wild in Singapore, but not for many years. While the Singapore Blue is a popular pet – as spiders go, anyway – Bay prefers to shoot his minuscule models in the wild rather than stage shots. ■

## FROM SIMPLE INSECTS TO BUZZING INTERNET SENSATIONS

Two articles written  
by Ian Skellern  
Technical Editor  
of *QuillAndPad.com*

Head of the Bee Inventory and Monitoring Program at the U.S. Geological Survey (USGS), Sam Droege's task is to collect and catalogue all North American bee species. The reason is ultimately to observe the factors affecting their survival and changing habitats in this dark era. He hopes to avoid the day when "all the bees are gone and now we're screwed".

So Droege has armed himself

with a good macro lens in order to take extremely detailed photos for documenting and identifying the large range of bee species he receives from various corners of America. Droege and his colleagues set up a photographic catalogue rather than a physical collection of the creatures, which facilitates transmission of information without damaging specimens. "There are 4,000 species of (native) North American bees," he explains.

As detail is critical to properly recognise species, Droege and his team use multiple cameras fitted with macro lenses to document the

insects. By stitching the resulting macro images together, they make an incredibly detailed portrait that is completely in focus.

"The pictures are so detailed, they create a virtual museum for these specimens" the silver-haired biologist says. The deceased bees are mounted on small, metal support pins. Photoshop is used only to clean up any bits of dust and remove the unsightly pin; the colours have not been touched up.

Within a couple days of posting on Flickr, his page had garnered over 200,000 views: the bees have become buzzing internet sensations. ■

# BREAKING THE RULES

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THE LOVECHILD  
OF ART AND SMART



Written by Angus Davies  
Managing Director  
of [escapementmagazine.com](http://escapementmagazine.com)

Everyone loves a birthday celebration and in its 10th year, MB&F has marked the occasion with the release of an exceptional timepiece, the Legacy Machine Perpetual.

I confess, I am a huge admirer of the Legacy Machine family of models. The unique timepieces take their inspiration from a leftfield idea of Max Büsser, owner and creative director of MB&F. His notion is to transpose himself to 1867, one hundred years before his year of birth and conceive watches of the future.

Nature has been kinder to Max Büsser than it has to me. Although born in the same year, he exhibits a younger, more lithe appearance to my own. However, we will have both been exposed to similar influences. I remember the science fiction movies of our youth such as *Star Wars* and *Close Encounters of a Third Kind*. The films evoked thoughts outside of our usual frame of reference. The futuristic concept cars exhibited at motor shows and early synthesiser music also arrested my attention at the time and fuelled my imagination.

My adolescent dreams of future buildings, clothes and various forms of transport may not have always followed the path I predicted. There have often been notable differences between reality and the fanciful ideas of my youth. Büsser has masterfully capitalised on this phenomenon, producing an ingenious array of timepieces over the last 10 years which reference an imagined world never realised.



  
**GPHG**  
GRAND PRIX D'HORLOGERIE DE GENÈVE  
2016  
Calendar Watch Prize

LM PERPETUAL  
**PERPETUATING  
THE LEGACY**



I recall when the very first Legacy Machine, the LM1, was launched. It looked unlike any other timepiece I had ever seen. This watch reminded me of my young, fertile imagination and those gadgets I once imagined back in my salad days. Moreover, the advent of this timepiece fuelled my own creativity and I began to think of how the watch could evolve still further. Indeed, it is this very aspect which Max Büsser capitalises upon when he works with his various 'friends'. During its history, MB&F has always exploited the synergistic relationship of its contributors, collaborating with them to create ingenious timepieces which surpass the likely outcome from one person working alone.

Later, the LM2 followed and thereafter, the LM101. Now, with the advent of this latest Legacy Machine, the Legacy Machine Perpetual, Max

Büsser and his friends have, once again, set aside convention, inviting us to look at time from yet another wholly new perspective.

#### A NEW PERSPECTIVE

The Legacy Machine Perpetual is equipped with a perpetual calendar. However, this is MB&F, hence the historic complication has been reimagined from 'outside the box'.

In addition to the hours and minutes, a perpetual calendar will typically display the day, date, month and sometimes the moon phase. However, unlike a complete calendar or annual calendar, the watch mechanically computes the length of each month, with the date requiring manual adjustment only in 2100, 2200, 2300, etc., when the leap year rule does not apply.

This latest machine draws on



the expertise of Stephen McDonnell. Max and Stephen have history together. It was Stephen who helped Max, along with an ensemble of other talented friends, to realise the very first MB&F horological creation, the HM1.

Stephen McDonnell, a son of Belfast, Northern Ireland, looked at the complication and questioned the approach taken by watchmakers for generations. The talented, independent watchmaker who both trained, and later taught, at the world renowned WOSTEP, Neuchâtel, felt that there was an inherent weakness in conventional perpetual calendars.

The problem identified by McDonnell is that many of the movement parts relating to the date spend the first 28 days of each month walking at a relaxed tempo. However, thereafter, the date and month indi-

cations are expected to increase the pace of their gait, in order to display the first day of the following month.

McDonnell's premise is simple. All months contain a minimum of 28 days, his mechanism capitalises on this fact. However, courtesy of a separate device, a so-called 'mechanical processor', McDonnell's movement displays '28', '29', '30' or '31' days, adding the extra days as required and then performs an instant date change. Stephen's approach ensures there are no annoying extended periods whilst the date transitions to the first day of the following month. Moreover, the even tempo of the date cycle avoids extreme forces, enhancing the reliability of this sometimes problematic complication.

Furthermore, McDonnell identified another inherent weakness in the majority of perpetual calendars, namely the potential to damage the

movement when adjusting the indications at an inopportune moment. All indications on the Legacy Machine Perpetual can be adjusted via the crown or the four, neat and unobtrusive pushpieces on the case-band. Some perpetual calendars are equipped with correctors recessed into the case which require a correction tool to alter the indications. MB&F sought a more user-friendly approach, equipping the watch with pushpieces that are simple to press but do not unduly protrude, preventing accidental operation. Furthermore, they operate with a wonderfully positive action, reminiscent of a fully integrated chronograph movement. However, this should come as no surprise as the movement of the Legacy Perpetual is not modular in design, employing a separate base movement, but is a fully integrated perpetual calendar.





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**This is a timepiece which beckons the wearer to bring the watch close to the face and drink in each detail.**

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#### MECHANICAL LEVITATION

The mechanical prowess of the Legacy Machine Perpetual does not come at the expense of aesthetic allure, it proffers beauty as well as intelligence. This is a timepiece which beckons the wearer to bring the watch close to the face and drink in each detail. The secret is not to gulsily quaff the whole mouthwatering composition, but to savour each delicate note of the watch's flavour. Indeed, wherever the eyes choose to focus, there are soupçons of exquisite detail that should be slowly relished.

McDonnell clearly has an empathy for the interaction of wheels, pinions and levers and he has generously shared this microscopic world by displaying aspects of the watch where his deftly applied tools have been skilfully employed. The Legacy Machine Perpetual eschews conventional dials, revealing many of its 581 movement parts, seemingly levitating under the unusual domed sapphire crystal.

The hours and minutes are presented on a small subdial at noon. In common with other Legacy Machines, the white lacquered canvas of the dial floats resplendently and is adorned with Roman numerals, denoting the hours. In isolation, these elements, along with the blued hands, accord a sense of classicism; however, step back and the whole composition looks neoteric, yet harmonious. This is a timepiece which provokes thought, inviting further scrutiny and investigation.

Three additional subdials, consisting of slender circlets of lacquered metal, float above the underside of the coloured mainplate, an aspect I will return to later. The central part of each subdial indulges horological voyeurs with freely disclosed compo-

nents normally hidden from prying eyes. The finishing of each component is exemplary, refined to the nth degree where only absolute perfection exists. Day, month and date indications are shown at 3, 6 and 9 o'clock, respectively.

At 5 o'clock, a power reserve indicator reveals the amount of available energy stored within the twin barrels, presenting the information on an arc-like scale. At 7 o'clock, a similarly styled indicator informs the wearer of the leap year cycle.

Whilst there is much information on the dial display, it is not at the expense of lucidity. Each portion of data is judiciously parcelled into a user-friendly form, proving simple to interpret whilst remaining eminently attractive to behold.

A signature of all Legacy Machines is the arcing, V-shaped balance bridge, formed from one piece of metal. Each contour of its highly polished surface is expertly chamfered by time-served hands. Its mirror-like finish is the result of patient endeavour with diamantine paste. The styling of this watch may be avant-garde, but MB&F has not eschewed the traditional Swiss craftsmanship synonymous with the rarefied world of haute horlogerie.

The balance floats above the dial, oscillating to and fro at the comparatively relaxed frequency of 2.5Hz. Four poising weights on the rim of the balance wheel are set in-board, mitigating turbulence and thereby optimising the precision of the watch. The hairspring features a Breguet overcoil, enhancing the isochronism of the balance.

Interestingly, the escapement is located on the opposite side of the mainplate to the balance wheel, necessitating the fitment of the world's longest balance wheel pinion.





### A WATCH FOR THE COGNOSCENTI

Removing the watch from the wrist, the wearer is recommended to devote a few moments to looking at the view of the movement, visible via the exhibition caseback.

The bridges are exquisitely decorated with the *Côtes de Genève* motif, each stripe beautifully defined and contrasting magnificently with its neighbour. Gold chatons stand testament to the exalted creation of this fine movement. The wheels are circular grained, while the screw sinks are polished to a brilliant gleam, featuring chamfered slots and rims, reinforcing the sense of peerless creation.

Two of my favourite aspects of the movement are the clear view of the pallet lever interacting with the escape wheel and the gleaming brilliance of the hand drawn bevels, with the interior angles shining brightly.

### WHICH ONE TO PICK?

The MB&F Legacy Machine Perpetual is offered in a choice of three case materials: 18-carats red or white gold, or platinum 950. There is also a choice of mainplate colours: an ardoise-toned backdrop (red or white gold), a striking blue hue for the platinum case option, or a bold purple for the limited white gold edition. I have no doubt that for some, the decision regarding which version to select will prove challenging to make.

Prior to seeing the Legacy Machine Perpetual, I vacillated between the three earlier iterations of this family, pondering which model

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Clearly, the various ‘friends’ responsible for creating all the Legacy Machines have left an indelible mark on watchmaking for future generations to enjoy.

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was my favourite to date. Sometimes, it would be the LM101 and then I would spot an LM1 gracing a sartorially clad arm and my opinion would change once more. In reality, I adore all iterations of the Legacy Machine as they all impart the time magnificently, whilst evincing their own unique charm.

### A LEGACY?

The name ‘legacy’ suggests a sum of money, an item of property or, more pertinently, a body of work bequeathed to an individual, a group or society at large. Clearly, the various ‘friends’ responsible for creating all the Legacy Machines have left an indelible mark on watchmaking for future generations to enjoy. However, perhaps where I question the name is that it suggests the inevitable passing away of the talents involved in the creation of each machine. Contemplating this thought leads to a moment of melancholy ensnaring my soul.

As a self-confessed watch lover and enthusiast, I prefer to focus on the nomenclature of this latest version, ‘Perpetual’, suggesting a lifetime of pleasure which will never ebb with the onset of years.

Indeed, as I write this article, my fervent imagination is already envisaging the next MB&F model to bear the ‘LM’ prefix. May this legacy continue to shine brightly and indulge the boyhood dreams I continue to harbour, despite being 49 years old. ■



Written by Ian Skellern  
Technical Editor of *QuillAndPad.com*

Photography:  
Michael Loos

For more information,  
please visit [coelux.com](http://coelux.com)

# COELUX SKYLIGHTS BRING SUNSHINE



Holidays – even winter holidays – are usually synonymous with bright sunshine. And it’s no wonder because sunlight makes us both happier and healthier. Unfortunately, those benefits are of little use to those working or living in rooms below ground or with no windows.

However, Italian company CoeLux has the answer: a virtual skylight that looks as though it is illuminated by the sun. In reality, it is actually a very clever light using nanotechnology to not only offer the health benefits of the sun, but to also replicate the look and feel of natural light.

The colours of both our blue sky and yellow sun derive from an effect called Rayleigh scattering, which is the diffusion of light (or other electromagnetic radiation) by particles that are much smaller than the wavelength of the radiation itself.

CoeLux began as a research project developed by Professor Paolo Di Trapani at the University of Insubria in Italy, who was obsessed with “the visual effect of the sun and the sky and a dedication to the notion that we are not built to live in dark boxes”. Di Trapani adds, “We didn’t just want to reproduce the effect of sunlight, we wanted to reproduce what happens in nature.”

After 10 years of development, the CoeLux lightbox consists of a bright, low-energy LED shining through a layer of nanoparticles that replicate the Rayleigh scattering effect of our 10-kilometre (six mile) atmosphere in just a few millimetres.



# INDOORS

“We built a sky by taking nanoparticles that act in the same way as when air molecules fluctuate and scatter sunrays. We compressed the earth’s atmosphere from 10 kilometres down to a solid layer of a few millimetres,” Di Trapani elaborates.

The layer of nanoparticles creates an illusion of depth to make the LED “sun” seem far off in distance. The effect looks so authentic that CoeLux has been hailed as being virtually indistinguishable from the real sun.

CoeLux is available in three models, each offering a different “feel” of light: the CoeLux 60 beams sunlight at 60 degrees to generate “a dramatic slice of tropical light” with the “maximum luminance contrast of light and shadow”. The CoeLux 45 delivers a 45-degree beam with a Mediterranean vibe, while the CoeLux 30 uses a 30-degree angle beam reproducing “a warm, Nordic grazing light” more suited to wall mounting.

Having sunny skies on tap day and night comes at a hefty price,

though, with CoeLux skylights costing upward of \$70,000.

Just as the invention of the elevator in the 1900s gave rise to skyscrapers, CoeLux skylights could lead to “earthscrapers” and “iceberg” homes featuring multiple underground levels, all brightly shining with happy and healthy faces. ■



The HMX Black Badger brightens the MB&F booth (and this watch writer's day).

## HMX BLACK BADGER THE LOVECHILD OF ART AND SMART

Written by Barbara Palumbo  
Freelance Writer and Founder  
of [WhatsOnHerWrist.com](http://WhatsOnHerWrist.com)

First posted on [whatsonherwrist.com](http://whatsonherwrist.com)  
on March 30, 2016





Ever get a Facebook friend request from someone so popular, so well-loved, and so seemingly untouchable that you think to yourself, “there must be some mistake”? Well that’s what happened to me when I saw a notification stating that \*the\* Maximilian Büsser wanted to connect.

I had read all that I could read about Max and his “friends” up to the moment that the notification bar lit up. I had known of his connection with Jaeger-LeCoultre, and Harry Winston, as well as his involvement in the Opus series, and with independent watchmakers. I skimmed pages of articles on his MB&F projects, and read about his ten-piece limited edition partnership with Hodinkee in 2015 that produced the LM101 in stainless steel. I watched videos of his interviews,

and flipped articles for future reading, but never did I think he’d be someone I’d call a friend.

That was, at least, until Baselworld 2016.

Heading toward the back of The Palace at Baselworld, I could see Max strolling in my direction. His swagger is unique and undeniably his – and he walks as if he were eight feet tall (he is not). He saw me and smiled a very Max smile and I’m sure I turned six shades of chartreuse as a result, but when we reached one another it was as if we’d been schoolmates for decades. “*Finally!*” I said, going in for a hug, to which he replied, “*We see you later today, yes?*” Then off we both went to our intended destinations, thankfully without my passing out from sheer fangirl glee.



When the time came for my scheduled meeting with Max’s Chief Communications Officer, the tremendously kind Charris Yadigaroglou, I decided to show up a few minutes early to take some photos of the booth and of course, of Max’s “machines”. That was when Jason Heaton walked in.

“*Dude! What are you doing here?*” Which as I think about it now, was a rather stupid question to ask one of the most recognizable watch journalists in Baselworld. But before Jason and I got to talking, this super-animated bearded guy walks in, turns to Jason and exclaims rather vibrantly, “*Adventureman! I was hoping I was going to get to meet you!*”

“Beardguy”, I soon came to realize, was none other than James Thompson,

the composite specialist and industrial designer responsible for this year’s MB&F “Performance Art” limited edition watch series, the HMX Black Badger, so it made all the sense in the world that he would be in Max’s booth. He got to talking to Jason about stuff I’m still learning about but since I have a decades-long background in the jewelry industry, my eyes, while he spoke, were fixated on his rings.

Me: “*Hey man, can I see that ring?*”  
JT: “*Yeah*” (handing it to me) “*Go for it.*”  
Me: (Now turning the piece and inspecting it because that’s kind of what I do). “*Hmmm. What’s the inlay made of?*”  
JT: “*Ahhh, see? Now, that’s the secret.*”

What I quickly learned, however, was that this was the exact “secret” that led to James’ and Max’s partnership. James



The result is an intricate timepiece that doubles as something that could entertain your Scout troop or chess club for hours.

uses alternative materials such as DuPont™ Corian®, brightly colored lume, surfboard resin, and carbon fiber. He also mentioned something about digging through the trash to get hold of a certain substance to experiment with, which is right around the time that Charris walked into the lounge and saved me from my own curiosity.

*“Performance Art. Are you familiar?”* Mr. Yadigaroglou said to me, and while I was familiar (both with the MB&F version as well as the “what my friends did for extra credit in college” version), I wanted to make sure I had all of my information correct, so I beckoned my host to explain. In a nutshell, MB&F “Performance Art” pieces are limited edition works (either watch or machine) that are made in collaboration with various jewelry houses, designers, artists, and manufacturers who happen to tickle Max’s and his team’s fancy. This year’s version was no different.

James Thompson (aka – “Beardguy” – aka – Black Badger) first met Max back in 2013 at London’s SalonQP exhibition. Says JT of the meeting, *“I wasn’t campaigning for a job or anything, I really just wanted to meet him and tell him how much I liked his stuff. Clearly he had better and more important things to be doing, but we had a really nice, genuine chat. To be honest I wasn’t expecting anything more of it than that, but then he emailed me a few weeks later and we started bouncing around ideas... I mean seriously? That’s like Sinatra asking what you thought of his new tune.”*

The two eventually got together at the M.A.D.Gallery in Geneva and started putting things in motion. The result (or, “lovechild” for the sake of this post) is an intricate timepiece that doubles as something that could entertain your Scout troop or chess club for hours. Made in Grade 5 titanium and stainless steel with either blue, green, or purple high-efficiency luminescent details (known as “rocker covers”), the HMX Black Badger is, according to the MB&F



website, *“eye-catching by day, (but) it’s when the sun goes down that they really come out to party.”*

The pieces are limited to eighteen in each of the three colors, with every one being a technological symphony of components (forty-four making up the case, two hundred and twenty-three making up the three-dimensional horological Engine). The watch has a forty-two-hour power reserve, and its functions include bi-directional jumping hours and trailing minutes, displayed by dual reflective sapphire crystal prisms with integrated magnifying lenses.

But at the end of the day what I will take away from my experience with Max, James, Charris, and the HMX Black Badger is this: I don’t remember laughing as hard as I did for the rest of the week in Baselworld, and I truly mean that. I can’t even recall what exactly it was we were talking about; all I know is that the three of us were in that darkened room using flashlights and cell phone lighting to try to get a picture of all of the watches glowing together, giggling like fools. I felt as if I were

camping out with my friends from high school and trying to light a cigarette without my parents catching me. It is this feeling – this innocence of adolescence, and this joy of journeys past – that is the cornerstone of what I believe “Max Büsser and Friends” is all about.

*Friends. Freunde. Copains. Amici. Vänner.* No matter how any one of us at that meeting could say it or which language we could say it in, I feel we all were in agreement that “friends” is the core word in this entire project, and I thank Max, and his team, for accepting me as one of theirs. ■



# ON THE ROAD

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## **HOROLOGICAL MACHINE N°5**

THE CAR MACHINE





Mercedes 190SL

Written by Christian Barker  
Editorial, social and  
content consultant, journalist

# AIR DRIVE

## THE WISH-FULFILLING FLYING CAR PHOTOGRAPHY OF RENAUD MARION

**Below**  
*Aston Martin DB5*

**Bottom**  
*Lincoln Continental*



Boys and their toys. Fellas and their Bellas. Yes, it's wrong and terribly sexist, but there's this inexorable nexus unifying the male's fascination with voluptuous machinery (cars, watches, whatever) and alluring women. Speed, danger, beauty; possession, aspiration, status; sight, sound and the tactile; tinkering and dinking. The parallels are plenty.

A dozen years ago, interviewing the playboy pop star and noted

motor fancier, Jay Kay of Jamiroquai, amid the impressive specimens of his car collection (including a clutch of super Ferraris, classic Porsches, and Coco Chanel's Mercedes 600), among other things, I asked him about the link between girls and cars. His reply ran along the lines of: "Oh yeah, definitely. It's like: She's German – reliable, turn her on and she goes perfect, every time. She's Italian – temperamental, expensive, high-mainte-

nance, but once you've got her opened up, SO exciting!"

My bedroom walls, as a young adolescent, were plastered with what my father, with a wink, referred to as 'autoerotica': posters displaying Lamborghinis, De Tomasos, Ferraris, Porsches and the like, their sexy fuselages draped with the equally beautiful curves of bikini-clad or artfully nude models. Those teenage dreams would come true, to a certain extent,



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**When the first few shots went viral online, collectors soon offered their prize automobiles up to be photographed against Parisian backgrounds carefully chosen by Marion.**

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many years later when I found myself being chauffeured around the Alps in a million-dollar 1957 Mercedes 300 SL Gullwing driven by supermodel Yasmin Le Bon (fully clothed, of course, but *pas mal* fantasy fulfillment nonetheless).

One automotive hope – held by men of the generations spanning Jules Verne, the Jetsons and the *Back to the Future* trilogy – that remains outside our grasp is the flying car. The ‘Air Drive’ series by Renaud Marion, shown at the M.A.D.Gallery, made this flight of fantasy seem tantalisingly attainable. Depicting an array of classic automobiles retrofitted for takeoff, positioned floating in front of stark, modernist 1970s architecture, the series includes a Chevrolet El Camino, Mercedes 300SL Roadster, Jaguar XK120, Lincoln Continental, Jaguar E Type, Mercedes 190 SL, Aston Martin DB5, Porsche 356, plus the very model in which Mrs. Le Bon kindly shuttled this intrepid reporter across the Swiss/Italian landscape, the Mercedes Gullwing.

Graffiti artist turned photographer and wish-granting digital-imaging magician Marion began the series guerrilla style, shooting cars he’d spotted on the streets of Geneva and painstakingly reworking the visuals. When the first few shots went viral online, collectors soon offered their prize automobiles up to be photographed against Parisian backgrounds carefully chosen by Marion. He says he felt ‘70s architecture best embodied the “retro-futuristic” aesthetic, while mid-century cars were in keeping with the period when jet-set motoring was considered an impending inevitability.

Sadly – or in some cases, not so much – many of the sci-fi visions of the middle 20th century failed to eventuate. No matching silver jumpsuits. No pleasure-packed ‘Excessive Machines’. No ‘ape shall not kill ape’, no Soylent



Jaguar Type E

For more information,  
please visit [renaudmarion.com](http://renaudmarion.com)  
or [madgallery.net](http://madgallery.net)

Green-guzzling dystopia, nor Star Trekking multicultural utopia. For the moment, we’ll just have to make do with tiny pocket super-computers that give us the ability to access the sum of all human knowledge anywhere, anytime; summon conveyances and pizzas at a moment’s notice; right-swipe random sexual assignments; or send inane Emoji-filled messages.

And for those of us who once filled our walls with ‘autoerotica’, there’s now the far classier wish fulfillment of Renaud Marion’s ‘Air Drive’ to decorate our dreams. ■



# HM8

In the 1960s, Formula One racing cars were basically high-speed death traps with drivers juggling the insane demands of controlling up to 600 horsepower with relatively poor brakes and low tire grip. Driver (and spectator) safety wasn't so much a secondary issue in the early '60s, it was barely an issue at all. While helmets were compulsory, they didn't have to be *protective* helmets. Unsurprisingly, drivers died with regularity. But the high risk of death was just considered part of the job description.

Naturally, race teams in North America looked at the mainly European Formula One series and thought, B-O-R-I-N-G. What we *need* is more power. A lot more power. Unrestricted power. In fact, unrestricted everything!

The Canadian-American Challenge Cup series – aka Can-Am – launched in 1966. The class rules were basically “anything goes”. Engine size? As big as you like. Power? However much you can develop (without blowing up). Ground effect aerodynamics, which work superbly... until they

## CELEBRATING THE RAW POWER OF THE CAN-AM

Written by Elizabeth Doerr  
Co-founder of [QuillAndPad.com](http://QuillAndPad.com)








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The drivers didn't really relish the idea of dying, so the Can-Am cars were fitted with roll bars. Long, sexy, shiny, chrome roll bars imbuing the cars with a visual identity that was as powerful as their engines.

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don't and transform the car into a stunt plane? Yes, please.

One thousand-horsepower engines, double the strength of most Formula One engines of the time, soon became quite normal. But even that wasn't enough for some. In 1972, Porsche brought out a 917 with a flat-12 motor producing up to an incredible 1,580 horsepower. Called the Turbopanzer, it was capable of over 380km/h (240mph) on the straights. Imagine that amount of power today in a car fitted with 40-year-old brakes and tyres.

While it may have looked like the North Americans were just a gaggle (or is it a pride?) of big boys playing without adult supervision, the drivers didn't really relish the idea of

dying, so the Can-Am cars were fitted with roll bars. Long, sexy, shiny, chrome roll bars imbuing the cars with a visual identity that was as powerful as their engines.

The oil crisis of the 1970s and subsequent recession sounded the death knell for the Can-Am and by 1974 it was all over. Especially outside of North America, the Can-Am was largely forgotten.

But one man hadn't forgotten those fire-snorting behemoths of his youth: Maximilian Büsser. Reminiscing on the Can-Am, he thought that a powerful engine located between two long, sexy, shiny, chrome roll bars would be just the thing for a streamlined, super-charged machine of his own, a horological machine.



**HOROLOGICAL MACHINE N°8!**

Like a cat to a laser pointer, some – and I’m one – will be first drawn to HM8’s inverted movement with its animated battle axe winding rotor fully visible on top of the watch, a feature first seen in HM3. But for most it will be those sensual, polished titanium roll bars. Yes, they might be (tentatively) described as offering practical protection to the case, but their main attraction is that they just look so damn COOL! Paradoxically, for a fully mechanical watch the effect is nothing short of electric. Each roll bar is machined from

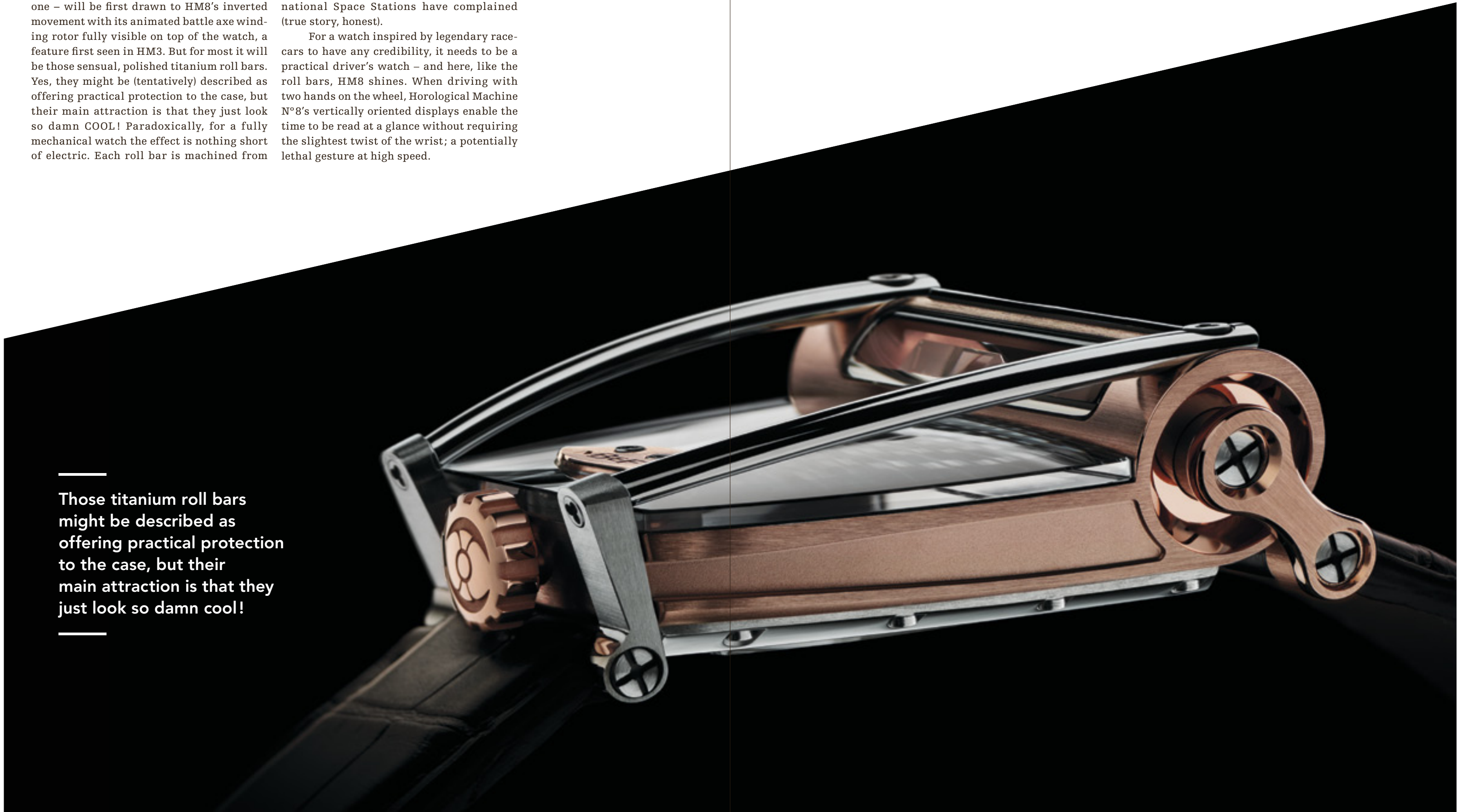
a solid block of titanium, which is then polished to a mirror shine until it blinds. It’s even rumoured that astronauts on the International Space Stations have complained (true story, honest).

For a watch inspired by legendary race-cars to have any credibility, it needs to be a practical driver’s watch – and here, like the roll bars, HM8 shines. When driving with two hands on the wheel, Horological Machine N°8’s vertically oriented displays enable the time to be read at a glance without requiring the slightest twist of the wrist; a potentially lethal gesture at high speed.

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Those titanium roll bars might be described as offering practical protection to the case, but their main attraction is that they just look so damn cool!

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But transitioning from a horizontal movement to a vertical display is no easy task. Ingeniously, HM8 uses dual optical grade prisms (first seen in HM5) to vertically project horizontal discs displaying jump hours and minutes, using no moving parts. That makes for a more reliable machine, which is important because, no matter how much power you have, you can't win unless you finish. Super-LumiNova-rich numerals, efficiently charged by having unfet-

tered access to light streaming through the sapphire crystal engine cover, ensures that reading the time of HM8 by night is as easy as by day.

Sadly, today's safety and environmentally conscious world has no place for the dangerous, fuel-guzzling monsters of the Can-Am. But its crazy, unrestricted spirit lives on in the high-octane MB&F Horological Machine N°8. Gentlemen, please start your engines! ■





# THE BEAST OF TURIN ROARS AGAIN

Written by Ian Skellern  
Technical Editor of *QuillAndPad.com*



The journey was recorded in a series of beautifully shot photographs by Stefan Marjoram, who documented the restoration process from repainting the exterior panels to reassembling the motor and the occasional smile from something gone right.

Photography:  
Stefan Marjoram



The "Beast of Turin" doesn't have its own website (though it deserves one), but to find more information about it, please visit [grrc.goodwood.com](http://grrc.goodwood.com)

What types of cars and engines come to mind when you think of Fiat? Small, economical, and even mundane might be accurate adjectives today, but back in 1910 Fiat sensationally created a monster.

"First and second gear were okay, third gear called upon all of my experience as a racing driver, and fourth gear needed the courage of a hundred men!" Pietro Bordino thus described his 1911 world speed record in the so-called Beast of Turin. Bordino would go on to win the 1922 Italian Grand Prix.

The Beast of Turin, officially called the S76, was an extraordinary piece of machinery built by Fiat in 1910 specifically to break the world land speed record. Only two examples of it were ever made.

The Beast was powered by a gargantuan 28.5 cubic litre (1,739 cubic inch), four-cylinder engine producing

an incredible (for the day) 290 horsepower thanks to the very latest technology, which included four valves per cylinder, an overhead camshaft, and three spark plugs per cylinder. And all of that power fed through a four-speed chain drive that would look more at home on a bicycle!

To put the size of that motor into perspective, the massive V10 engine in the Dodge Viper is eight litres (for all 10 cylinders), while just one of the cylinders in the S76 is more than seven litres. And there are four of them!

However, to hide the secrets behind its then-cutting-edge technology, the Beast was dismantled after its record-breaking runs faded into obscurity except for the occasional mention in automotive history books. And then, 100 years later, British car restorer Duncan Pittaway managed to buy S76 chassis #1, which had no

motor, followed by the engine from S76 chassis #2 a few years later. He then spent the next ten years meticulously hand-building all of the missing components, including the dual-chain drive gearbox, radiator, and the complete body.

Pittaway debuted the newly restored Beast of Turin at the 2015 Goodwood Festival of Speed, where it became a crowd favourite and was awarded the prize for best 'Car of the Event'. Pittaway is now in the process of "improving" his very special Fiat to make it go even faster, though one only hopes he keeps Pietro Bordino's words foremost in his mind every time he changes up to fourth gear. ▀



# AUTO FABRICA

Motorbikes transcending  
transportation

For more information,  
please visit [autofabrica.com](http://autofabrica.com)  
or [madgallery.net](http://madgallery.net)

There was a time when motorcycles were no more than a means of transportation and mechanical watches no more than a means of knowing the time. Those days have long gone, and although both machines still serve their elementary and original purposes, they have evolved into much more as well. They have become *objets d'art*, with parts so refined, shaped, and sculpted that they stimulate the senses even when not in use.

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Written by Martin Green  
Freelance journalist and editor  
of *Timetation* magazine







Few things in the world are as sexy as motorcycles, and few motorcycles are as sexy as those created by Auto Fabrica, a boutique brand by brothers Gazmend and Bujar Muharremi, who founded their workshop in 2013. Where most workshops creating custom bikes generally like to add something, the Muharremi brothers are keener to take things away. Less is more, and less is more beautiful, seems to be their credo. Their bikes are a lesson in elementary design, where form follows function, or in this case, the form is also functional.

In their workshop in the United Kingdom they spend an extensive amount of time creating a bike before it even begins to exist. They start with drawings, then move over to the digital universe where they bring the bike to life on screen. When completely satisfied, then – and only then – do they pick up their tools and actually make their ideas a reality.

The attention to detail in the sensational designs is incredible – and not surprising given the brother's backgrounds: Gazmend studied product design at Anglia Ruskin

Polytechnic University, while Bujar holds a master's degree in automotive design from Coventry University. Before founding Auto Fabrica, Bujar worked for various clients, some of which craft supercars.

While this previous knowledge forms a solid base, it must be said that they learned the craft of customizing bikes the old-fashioned way: by trial and error. In custom-building their own bikes, they began a process of aligning minds with abilities – abilities that also incorporate embracing trades that are dying out like panel beating and metal forming. Yet for Auto Fabrica these crafts form an elementary building block of what makes the boutique brand's bikes so unique and refreshing. The clean designs emphasize details, and the brothers realize that perfection in these details has to be found in order to allow the overall design come seamlessly together.

This perfection is emotional – not true perfection, as in absolutely flawless. Should that be achieved, an object will capture attention but not hold it. The brain needs to be con-

stantly stimulated by the object to command its full attention. That is why the Muharremi brothers strive for visual perfection, combining old-school craftsmanship with the acceptance that the result of this manual labor can result in slightly asymmetrical details. And in those imperfections true connoisseurs find perfection.

One of those connoisseurs is Maximilian Büsser, whose M.A.D.Gallery Geneva location had an Auto Fabrica Type 6 and Type 8 on display. The Type 6 started its life as a Yamaha XS650s, one of four recovered from a remote farm in Cornwall. In order to create a strong visual base for the bike, the Muharremi brothers lowered the headstock and moved it back slightly. While the aluminum tank and seat add elegance to the design, it is the exhausts that lend it raw sex appeal, channeling the exhaust fumes from the engine with its stunning single-carb conversion and oversized pistons.

The Type 8 started its life as a Honda CX500. Although it was the recipient of a similar approach to

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**The result of manual labor can result in slightly asymmetrical details. And in those imperfections true connoisseurs find perfection.**

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that used for the Type 6, the result is higher in testosterone. Color plays a role in this, but it's the engine that is the decisive difference. Like the heart of a prize-winning bull, the air flow of the Honda engine has been reworked for extra performance.

One of the most amazing elements about Auto Fabrica's work is that when a bike is done, it is suspended in time. No longer is it lodged in the era of its donor bike; it seems to unite past, present, and future in one breathtaking yet functional machine. And that is an achievement many artists can only dream about. ▀



Auto Fabrica Type 6



Auto Fabrica Type 8





# THE CAR MACHINE HM5

Written by Ariel Adams  
Founder and Editor-in-Chief  
of *aBlogtoWatch.com*

Car-inspired watches are a concept that predates even the current luxury watch market – which for the most part is a product of the last 25 years. In fact, as products cars and watches more or less enjoyed a similar rise to fame, given that they were both industrialized around the same time. Henry Ford’s famous car company was incorporated in 1903; two years later in 1905, Rolex was incorporated in England by Hans Wilsdorf. The two companies banked on worldwide demand for their products, as well as the fact that with each new generation of products came innovations and improvements. Both cars and watches are highly functional machines that are still able to combine a sense of beauty and style in the carrying out of their primary functions. No one ever complained about a lack of character in their toaster, but people will never choose to buy a car or watch that doesn’t excite them visually – even if they are really just buying the functionality.

Thus, since the beginning these two product categories have existed along different, albeit parallel paths and appeal to the same part of people’s psyche. Nevertheless, while

there have been plenty of timepieces designed for driving or the needs of auto racing, very few watches directly inspired by cars ever feel natural or even tasteful.

This enduring fact about watch design and the difficulty of combining two related and equally appealing worlds is a not a rule but rather an observation based on statistics. The holy grail of concepts to appeal to both audiences is a product that celebrates the world of automotive emotion in a timepiece that can exist in its own right.

When Max Büsser of MB&F told me that for the fifth iteration of the Horological Machine watch series he was doing something based on the rear of 1970s-era sports cars, I was clearly skeptical. It was not Max’s imagination that had me concerned but rather the “car watch curse” as I outlined above. Even after Max unveiled the HM5 “On the Road Again” watch to me, I didn’t hear the growl of an engine in my ears as I put this fascinating “wedge” watch on my wrist.

Despite the clever use of louvers on the “top” of the case, that let in light that charges the lume on the



discs, and which remind one of a Lamborghini Miura, HM5 is really a high-end modern incarnation of historic driving watches. What Max Büsser so correctly did is find inspiration in time-pieces that were actually designed not by cars, but for drivers. Adding some subtle automotive elements that are nevertheless also functional is the genius of the brand which makes up a special secret sauce no one in the brand's roughly 10-year lifespan has been able to replicate.

With its dazzlingly weird yet ultimately wearable design, the HM5 refrains from useless gimmick and is in reality one of the most use-



Photography: Watch Anish



Photography: Watch Anish

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**No one ever complained about a lack of character in their toaster, but people will never choose to buy a car or watch that doesn't excite them visually – even if they are really just buying the functionality.**

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ful and appropriate of all the Horological Machine pieces. More so, it is designed at the “more affordable” end of the brand's price spectrum and still happens to be one of their least appreciated watches. I proudly give the title “true car machine” to the Horological Machine N°5, because the collection really has nailed the car/watch duality in a way that felt so right we didn't even know what we were looking at first. ■



# DEFYING GRAVITY

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ICELAND AS YOU'VE NEVER SEEN IT



# LM2

## THE DOUBLE BALANCE OF TIME AND ART

Written by Tom Mulraney  
Founder of [LuxuryContentCreators.com](http://LuxuryContentCreators.com)

Since the launch of MB&F some eleven years ago, I have closely followed the brand's every rebellious move, delighting in its devil may care attitude to "current trends". The message from the start was clear: "We do what we do for us and only us. If you happen to like it, great, if not, there are plenty of other options out there". It was such a refreshing approach, so different, so authentic and most importantly, one that was backed up by some seriously impressive – not to mention outlandish – timepieces.

To be honest though, I never really thought of MB&F as a watchmaker, at least not in the traditional sense. Models like the Horological Machines N°2 and N°3 seemed more like extremely complex pieces of miniature sculpture to me, so unlike a traditional watch in any way, shape or form barring the fact that both also happened to be capable of displaying the time. That all changed for me with the creation of the Legacy Machine series and in particular with the launch of the Legacy Machine N°2.

The concept behind the Legacy Machine series – the brainchild of MB&F co-founder Maximilian Büsser – is quite a simple one; if MB&F had existed a century or two ago, what type of watches would it have created? In the case of the Legacy Machine N°2 for example, inspiration was drawn from the 18th century – where three horological visionaries (Ferdinand Berthoud, Antide Janvier and Abraham-Louis Breguet) were all independently experimenting with the idea of dual balance wheels in a bid to improve timekeeping accuracy.






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The domed crystal and three-dimensional design means the piece will spend as much time in your hands as it does on your wrist as you examine it from every possible angle.

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This approach is not a unique one per se in watchmaking; brands often look into their own pasts or those of other accomplished watchmakers to find inspiration for new movements or models. But typically this results in the re-engineering or re-interpretation of an existing model, not the creation of something completely new. Redoing what has already been done however is simply not in MB&F's remit.

A visually arresting timepiece, the Legacy Machine N°2 was quite unlike anything I'd seen before. The dual mesmerising balances suspended over the dial have an almost hypnotic effect on the viewer, whilst the domed crystal and three-dimensional design means the piece will spend as much time in your hands as it does on your wrist as you examine it from every possible angle.

What really stands out for me though is its sheer mechanical complexity. At its heart is a raised planetary differential which is responsible for performing three different roles including transferring power to each of the regulators, receiving the individual timing rates from each balance and finally transmitting the average rate of the two regulators to the gear train, where it manifests itself as the displayed time.

Everything has to be just right to ensure the highest level of accuracy is achieved. Even with the modern-day advantages of high-tech computer aided design programs and ultra-high-precision CNC machines, it still comes down to skilled assembly and regulation to achieve good timekeeping over a range of positions. This is why MB&F chose once again to partner with award-winning watchmaker Jean-François Mojon

and his team at Chronode to bring its incredible concept to life.

Likewise independent watchmaker Kari Voutilainen was again called upon for his exemplary understanding of movement finishing techniques. Tasked with ensuring the movement's aesthetic style was consistent with high quality traditional timepieces of the 19th century and with specifying the superlative hand-finishing, he has achieved results that speak for themselves. Immaculate Geneva waves, gold chatons, mirror-polished bevels and bridges designed with deliberate internal bevelled angles (which cannot be finished by machine) showcase the movement's peerless fine finishing.

Bold, complex and above all gorgeous, the Legacy Machine N°2 sums up everything I have come to love about MB&F. You owe it to yourself to take a closer look. ■



Written by Sandra Lane  
Founder and  
Editorial Director of *àMano*

# DAMIEN BENETEAU

For more information,  
please visit [damienbeneteau.com](http://damienbeneteau.com)  
or [madgallery.net](http://madgallery.net)



Even at a glance, a Damien Bénéteau sculpture is compelling – its monochromatic purity, its strong geometry, its play of intense white light and blacker-than-black matt surfaces, the metronomic regularity of its oscillating pendulum or pulsing light.

But look at it for more than a few seconds and a strange thing happens: it seems to soften, to become more organic than mechanical, the rhythm more like breathing or a heartbeat, the repetition increasingly trance-like, the boundaries between light and dark harder to discern. You feel drawn into it, no longer simply an observer. And the longer you look, the deeper you are drawn and the harder it becomes to







look away. It is both disquieting and deeply calming.

A decade of working as a photographer (starting in the mid-1990s, his career spanned portraiture, architecture and avant-garde fashion) triggered Bénéteau's fascination with light and shade and, particularly, its effect on our perception of space and volume. He cites a project photographing white balloons suspended in a white room and lit only by a skylight as a particularly strong impetus to his move from simply capturing images of light and shade towards using light itself to create three-dimensional works.



Bénéteau's light sculptures are distinguished, above all, by movement – this kinetic element being a natural outcome of his lifelong fascination with machinery. Movement – in the way that it produces optical illusions and retinal persistence – is what gives his works their depth and transforms light into something almost tangible.

Although largely hidden from view, Bénéteau's mechanisms are things of beauty in themselves: elegant constructions of plates and rods in mirror-polished steel that often bear more than a passing resemblance to clockwork. ■





Written by Elizabeth Doerr  
Co-founder of *QuillAndPad.com*

"This is just the fun of two watch creators," Alain Silberstein, the French icon of playful, modern watch design, said to me one afternoon as we sat down to discuss the latest Performance Art pieces he had completed for MB&F. "And it's a never-ending dialogue," he grins as he refers to his way of working with Maximilian Büsser, MB&F's founder, owner, and creative director.

Silberstein seems relaxed and happy with this position as a guest artist or "Friend," to MB&F. He should, actually, for this Legacy Machine N°1 edition is not the first Performance Art piece that Silberstein has designed for the Geneva-based boutique brand. The first one actually appeared five years ago in the form of HM2.2.

# LM1 SILBERSTEIN

AND ITS THREE  
FAIRY GODFATHERS







If you know Silberstein's own artful designs, then you know that he is quite enamoured of primary colours and geometry. Therefore, to some of Silberstein's passionate followers the dark appearance of HM2.2, all Bauhaus purity and restraint, may have looked rather shocking. "That one was truly a joint creation – as is this one," Silberstein grins. "This one is definitely more my style, but we did have so much fun creating the Black Box five years ago." Silberstein's new version of the HM2 was not just a tweaking of design elements; the French interior architect actually even redesigned its case.

"I simply gave Alain the watch

and said, 'Enjoy yourself!' And he caught me completely off balance," Büsser said at the time. "He produced a 'black box' where I was expecting something very colourful!" Silberstein still chuckles at people's first reactions to it – even Büsser's and my own, which were not dissimilar. "The truth is, when I saw the original case of HM2, miniature box cameras of the 1940s flashed into my mind. The portholes reminded me of lenses. I decided to construct a new personality for the watch," the Besançon-born designer explains.

When presented with the LM1 as his new playground – yes, he had carte blanche – Silberstein also

instantly knew what to do: he took one look at this watch and immediately decided which two elements would make all the difference – and it wasn't the obvious addition of his primary colours. "When I saw LM1 for the very first time with its round subdials, I didn't understand why they were convex rather than concave." Since the sapphire crystal dome protecting them is convex, signifying protection in design language, it seemed to him to provide a shower of energy. "This should be received by something of the opposite shape, to move the energy properly." Therefore, the first change he made was to subtly transform the curve of

the subdials displaying two time zones to concave, so as to attract and welcome energy into the movement.

It was, by the way, this immediate subdial reaction that sold Büsser on Silberstein's idea. But the second element is the one that is perhaps most visually spectacular to anyone and everyone: Silberstein said to Büsser, "Let's remove the bridge to make a true flying escapement." But how to accomplish that was the next – and all-important – question, one that took about two years of research and development to answer. After first attempting to minimize the existing metal bridge, Silberstein suggested making it out of sapphire crystal. Finding the right proportions and, most importantly, the right supplier and

*"I like the fact that Max's creations are always sort of challenging."* Alain Silberstein







method of manufacture, as its precision must be about ten times more accurate than that of a case, was a much harder proposition than one might guess. “But the result is amazing!” Silberstein exclaims, though he doesn’t forget to give credit where credit is due regarding the flying escapement. “First, MB&F, in conjunction with Jean-François Mojon, imagined this classic escapement on top of the movement. But I think we went to the end of what you could do to achieve something that is completely flying.”

“What we went through with this sapphire crystal bridge, is, I would say, a quite important point for the future because this expertise may be useful for another creation,” the designer adds. “And I like the fact that Max’s creations are always sort of challenging.”

#### BOLD AND BEAUTIFUL COLOUR

Silberstein fans won’t be disappointed with the visuals of LM1 in other respects, either: this timepiece

is chock full of his geometric symbolism, such as the red and blue hands and yellow index markers formed in his three signature shapes (blue cone, red cube, and yellow sphere) as well as the three-dimensional power reserve indicator featuring all three. Then there are six-pointed crowns comprising two overlapping triangles, which also reinforce the collaborative aspect of this Performance Art piece: the shapes and colours of the crown are pure Silberstein, while the battle-axe logo represents MB&F.

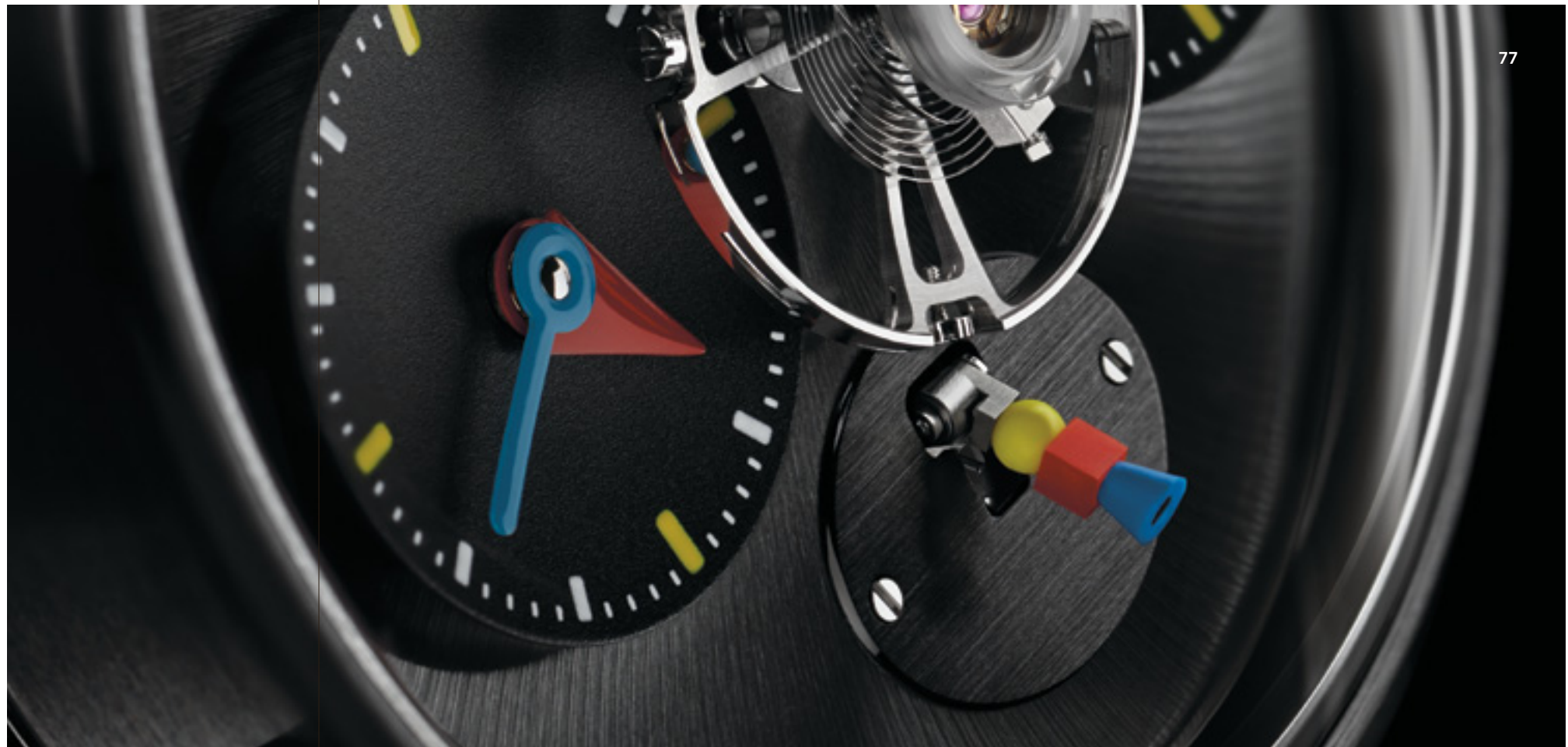
Silberstein’s use of contrast sneakily guides the eye to key elements on the dial: the brightly coloured hands are glossy and bright, while the underlying dials and movement plate are more subdued in hue with matte finishes. “I like playing with materials and finishes: the more matte there is, the more the high polish pops,” the French master of fun design explains. “I was a little shy with the Black Box, but not here! While this is a true MB&F piece, it is also fully an Alain Silberstein creation because you have all my colour

codes. And it was so fun with the power reserve with my three genetic logo elements.”

#### THE ENGINE

While the movement is perhaps the underdog here when it comes to the observer’s attention on this version of LM1, it should not suffer for attentive scrutiny if the observer is also a watch enthusiast. “This watch is like a fairytale: around the baby basket, you have Max, Kari Voutilainen for the movement, and I as a watch designer. We’re like its three fairy godfathers,” the Frenchman with the ever-present moustache chuckles. “I was honoured to work on one of the best movements ever. And we should pay homage to our master watchmaker, Kari, who was able to overcome all the technical challenges.”

When Büsser originally launched LM1, he described it as his first ever classic watch; its codes all originate from the traditional side of Swiss watchmaking. “It’s very interesting, the root of the word tradition:



it’s a Hebrew word that means ‘to move forward.’ For many people, tradition is just to look backward. But tradition is a sort of a dynamic process of moving forward,” Silberstein philosophically explains.

LM1’s three-dimensional movement was developed for MB&F by Jean-François Mojon and his team at Chronode according to Büsser’s sketches. Voutilainen assumed responsibility for the historical accuracy of the style and finishing of LM1’s movement, not an easy task with such an unconventional balance element. Legacy Machine Silberstein is a limited edition of 18 pieces each in red gold, titanium, and black PVD-coated titanium. And a whole lot of bold and beautiful colour. ■

*“This watch is like a fairytale: around the baby basket, you have Max, Kari Voutilainen for the movement, and I as a watch designer. We’re like its three fairy godfathers.”* Alain Silberstein





# METROPOL PARASOL

Written by Ian Skellern  
Technical Editor  
of *QuillAndPad.com*

For more information,  
please visit  
[mbandf.com/parallel-world](http://mbandf.com/parallel-world)

“Organic” and “biomorphic” are terms often used in architecture to describe buildings and structures with one or more curved surfaces. But these adjectives pale in reference to the absolutely mind-blowing, fluid form of the Metropol Parasol in Seville, Spain. The Metropol Parasol is not only the most intricate multifaceted timber structure ever constructed, it’s also reported to be the world’s largest wooden structure.

J. Mayer H. Architects in Germany found inspiration in the vaulted ceilings of the cathedral of Seville and the fig trees in a nearby park. Situated at the Plaza de la Encarnación in Seville, the eye-catching series of six amorphous shade canopies measures an impressive 150 metres long, 70 metres wide, and around 26 metres high. As these look a little like giant mushrooms, the locals affectionately call the structure *Las Setas* (“the mushrooms”).



In 1990, the city planned to build an underground car park with a ground-level market on the then-disused site. However, that was scrapped after initial excavations discovered ancient Roman ruins beneath it. So not only was digging down then out, authorities also had to cover and protect the historic ruins. In 2004, having already spent 14 million Euros for a hole in the ground, Seville decided to try again to develop the area and solicited bids and ideas from around the world.



Running across four levels, one below ground and three above, the Metropol Parasol highlights just how effective constraints and challenges can be in inspiring innovation. The underground level houses the Antiquarium museum displaying the Roman ruins responsible for the whole structure. At street level is the main market and an open-air plaza, while levels two and three offer panoramic terraces with bars and restaurants.

Seville is hoping that the Metropol Parasol will put the city on the contemporary architecture map in a similar way that the Guggenheim museum has done for Bilbao. Only time will tell if that goal is reached, but if nothing else, city centre has gained a lot of beautifully shaped shade. ▀





HM6 RT  
18k 5N+ red gold

Until recently, MB&F's Horological Machines have tended to look more like intergalactic spaceships rather than reflect shapes naturally occurring in the real world. But that all changed with Horological Machine N°6 (HM6) Space Pirate, whose biomorphically curved case, pulsating balance, and "winking" tourbillon cover could indeed be parts of some kind of living organism.

Biomorphism is an art movement that began in the twentieth century and encompassed artistic and design elements reminiscent of nature. The Sagrada Familia cathedral in Barcelona by Antoni Gaudí and the glassware, furniture, and textiles by Finnish architect and designer Alvar Aalto are all prominent examples of biomorphism.

MB&F's HM6 is also a perfect lesson in biomor-

# HM6

## A BIOMORPHIC DISTRACTION

Written by Elizabeth Doerr  
Co-founder of *QuillAndPad.com*



phic design. Its case looks like it could be the shell of a creature with a curvaceous bug-like body, outfitted with four big, round, bulging eyes and an extra hump on the back to store water or perhaps allow vitamin D-rich sunlight to enter the nervous system. While no creature looking like this can actually be found in nature, HM6 gives the impression that such a creature could conceivably exist.

The design, comprising 80 case components – including ten made of ultra-difficult-to-machine sapphire crystal – and a three-dimensional, shaped automatic movement composed of 475 individual parts, was so brilliant that it won a 2015 Best of the Best Red Dot award in the freshly established watch category – and justifiably so.

Its very obvious curvaceous design, which appeals to both dyed-in-the-wool MB&F collectors as well as a broader audience than these mini sculptures might usually attract due to its light and easy wearability, makes it seem like it should be soft to the touch – almost like a warm, fuzzy animal. We know that metals are not warm, nor is this Machine organic, but HM6 leaves the observer with the impression that it might well be.

Not only that, but it is much easier to read the time on HM6 than one might think. The generously-sized domes allow for large legible numerals, meaning that once you get used to their unfamiliar positions – hours on the left and minutes on the right of the forward-end domes – the time is quickly and straightforwardly accessed.

HM6 Space Pirate also has one more function that is not instantly noticeable: it incorporates a retractable shield that can cover the flying tourbillon under the sapphire crystal bubble in the center of the case. Operated by the crown on the left side of the case (the right-hand crown is for setting the time and manually winding the movement), the cover can be closed to protect the escapement from ultra-violet rays that might dry out its lubricating oil faster. And it's just plain fun.





HM6-SV RED  
Sapphire and 5N+ Red gold

Right page  
HM6-SV PLATINUM  
Sapphire and Platinum 950

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Wouldn't you  
find it amazing to  
be able to see  
through the top  
of the case?

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#### VIEWING THE SKELETON: HM6 SV

So what if MB&F took this whole vaguely organic thought process one step further and allowed us to see the skeleton and organs of the creature it designed? As comfortable as the incredibly aesthetic titanium or red gold cases are to wear, watch aficionados have surely wondered (as I have) what the unusual movement hidden under the metallic skin actually looks like.

And even more: once you know what the movement containing a one-minute flying tourbillon outfitted with retractable protective shield and a platinum battle-axe-shaped rotor for the automatic winding looks like, wouldn't you find it amazing to be able to see through the top of the case to the movement to enjoy its mechanical beauty as you wear it?

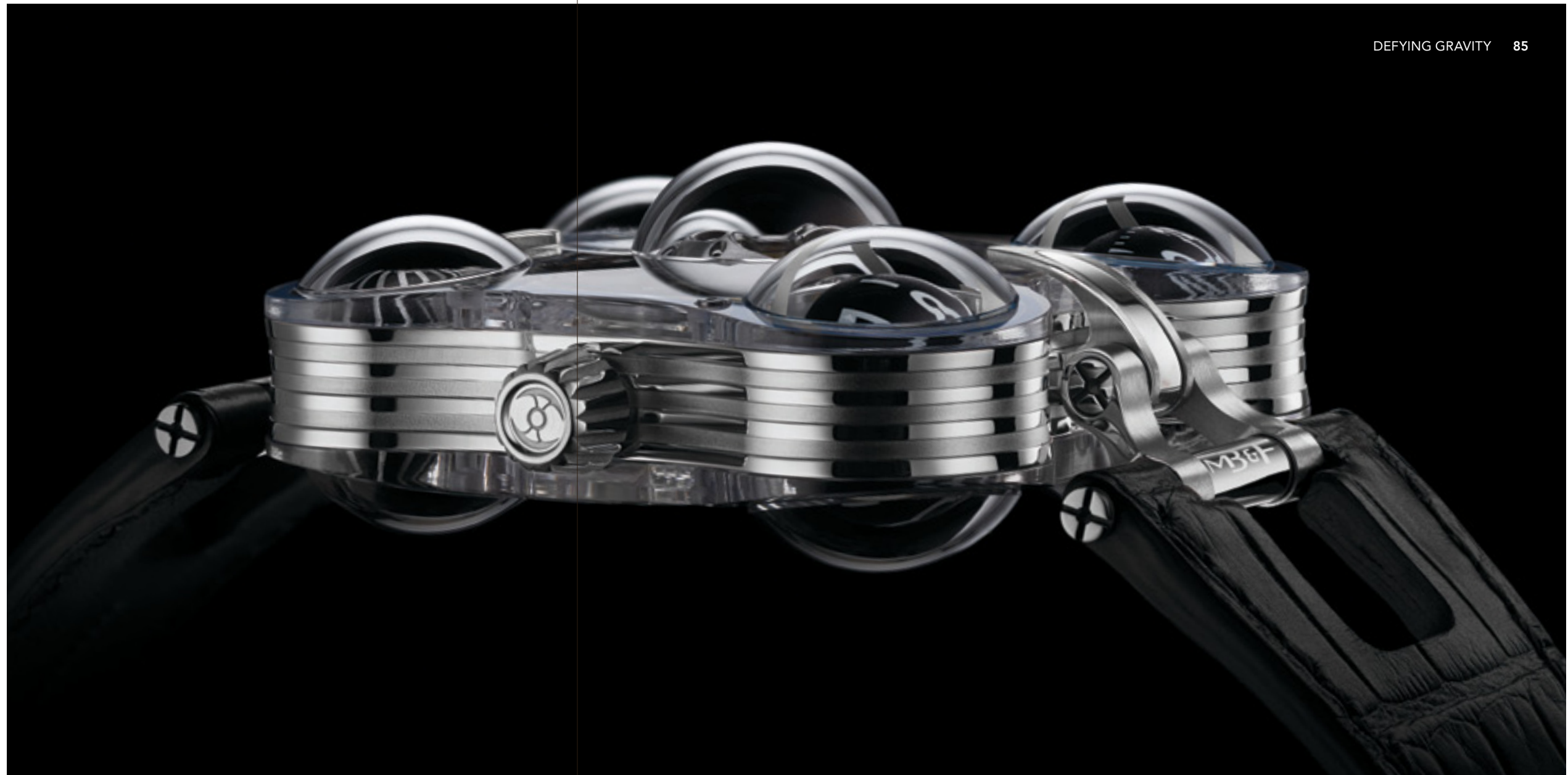
MB&F founder and the Space Pirate's spiritual father Maximilian Büsser certainly thought so. Which is why he chose the particularly difficult route of re-creating the biomorphic case in sapphire crystal, the world's second hardest naturally occurring material after diamond. Only diamonds are able to cut, grind and polish synthetic sapphire crystal in a painstaking process that can take weeks.





*“I always thought that the most beautiful part of HM6 was its movement, and that it was a shame not to show it.”*

Maximilian Büsser



#### A TECHNICAL TOUR DE FORCE

The two large plates of sapphire crystal required days to become the components you see on the finished watch. The plates are either side of a beautifully polished band of red gold or platinum; the striped design of the band is inspired by a late Art Deco style known as Streamline Moderne. The metal case band was skillfully finished to provide just the right amount of sparkling interplay between shiny mirror and matte polishes.

As was found on MB&F's HM2 SV, a thin strip of color outlines the case band, separating the metal from the sapphire crystal. This colorful stripe is actually the gasket that

ensures water resistance. The very visible bright blue color was added to enhance the beautiful design. Perhaps in a slightly ironic move meant to show just how rooted this timepiece is in traditional horology despite its contemporary shape, the balance beats under its dome at a slow, vintage-style frequency of 2.5 Hz.

“I always thought that the most beautiful part of HM6 was its movement, and that it was a shame not to show it,” says Büsser. “But it was only recently that the technology of machining sapphire crystal allowed us to create such a complex case.” Due to the difficulty of manufacturing this case, the HM6 SV is strictly

limited to ten pieces with a platinum case band and ten pieces outfitted with a red gold one.

But, really, any description of all the amazing technical elements in the world pales in comparison to simply viewing the tantalizing HM6 SV. The eye, overwhelmed by mechanical beauty, hardly knows where to look first. But however you appreciate this particular Machine, the biomorphic distraction is complete and once on the wrist, you are likely to find that HM6 SV will be quite difficult to remove. But, not to worry: this is neither an alien nor a body snatcher. It is indeed a wristwatch, a beautiful one. ■





# TAKING THE REAL AND MAKING IT ABSTRACT

Iceland as you've never seen it!

Written by Elizabeth Doerr  
Co-founder of *QuillAndPad.com*

The tiny nation of Iceland has become somewhat of a destination for photographers willing to tempt fate on its unstable, volcanic land to shoot some of the most unique and extraordinary geography in the world.

For more than one thousand years, the people of Iceland have braved the extremes of nature that their island country is known for. And now so has French photographer Emmanuel Coupe-Kalomiris, one of the many professional photographers who set his sights on photographing the land whose remoteness and untouched beauty fascinate him so: volcanoes, brilliant green mountains, hot geysers, unusual black sand beaches, and glacial blue lakes and rivers are just a few of its intriguing features.

After evaluating different vantage points, the 41-year-old Parisian photographer decided to take to the skies to shoot the unique topo-

Photography:  
Emmanuel Coupe-Kalomiris

For more information,  
please visit  
[emmanuelcoupe.com](http://emmanuelcoupe.com)

graphical geography of the glacial landscape. However, shooting from a helicopter presented a major challenge, though the studied photographer managed it beautifully. "I would see them from above, from satellite images," Coupe-Kalomiris said of the country's topographical features. "The shape looked chaotic and messy and yet hauntingly intriguing and beautiful and interesting. I wanted to stay within that."

Initially concerned that pre-formulated ideas of photographing this landscape would influence him too much – commonly prevalent images are of plunging fjords and lush valleys – the multi-award-winning photographer offers fetchingly eerie pictures that are extraordinary examples of how to take what's real and make it abstract. The trick, he explains, lies in purposefully avoiding any objects that would provide scale and concrete meaning to the context. ■



# OUT OF THIS WORLD

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# THE APOSTOLIC HM3

Written by Suzanne Wong  
Editor at Large of *Revolution*

There are very few people out there, I suspect, who can truly say that their lives have changed because of one specific watch.

I mean, yes, we hear this sentiment a lot, in the hormonally charged surroundings of new-generation watch collecting – “this watch brought light and grace to my existence,” or “I only really knew what love was when I saw the black polish on that tourbillon bridge,” or “I searched three and thirty years for the key to happiness and salvation, and then I found the Simplicity.”

Stuff like that, you know? For the most part I appreciate it – part of the fun and enjoyment you get out of a robust appreciation of watches is the license to indulge in the tongue-in-cheek, hyperbolic and slightly self-deprecating expression of your semi-divine passion. But let’s be real about this. No one’s life was actually changed in any of those examples of supposedly life-changing watch encounters.

When you are a perfectionist hound for authenticity, “being real” is something that your subconscious is continually giving you a hard time about. This is necessarily

a disadvantage as a consumer journalist in the luxury sector, when you frequently encounter watches that you don’t initially understand or see the point of. In such circumstances, being religious is much more useful than being real, as you somehow find it within yourself to thank the Lord for giving you so many opportunities to grow in wisdom, patience and understanding.

So let’s be real here. My life was changed by the MB&F Horological Machine N°3. Six years ago – coming on seven now, actually – I was a rather indifferent writer at a luxury lifestyle monthly publication. At the time, I’d just been assigned to cover the timepieces section of the magazine, and I knew precisely nothing about watches. The realisation that mechanical watches and quartz watches were different things came as a great leap forwards in my store of horological knowledge. I’m not even kidding.

In April 2010 I met the HM3, and that changed everything for me. Some people refer to the watch that first made them fall in love with these microcosms of ingenuity and creativity as their gateway drug, that first taste that engendered curiosity and then obsession.

For me, it was an experience akin to that of St Paul on the road to Damascus. I wouldn’t say exactly that there were thunderbolts and lightning (very, very frightening) surrounding me in the throes of this faux-hemian rhapsody, but it was as if there had been something insulating my senses against the vivid and insistent appeal of a mechanical watch before, and the HM3

HM3 Megawind  
Final Edition





From left to right and top to bottom  
HM3 Sidewinder, HM3 Starcruiser,  
HM3 Frog, JwlryMachine,  
HM3 Megawind, MoonMachine








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**It doesn't matter  
that she has gone through  
as many guises as she  
has, the gorgeous sym-  
metry and energy of  
her engine's fundamental  
structure make each  
encounter a fresh pleasure.**

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deftly cut through all that. The world of fine watches was a dark and planless riddle to me before the HM3 said let there be light.

Rather fitting that the instrument of this dramatic conversion should be the celestial traveller, the Horological Machine N°3 Starcruiser. Over the years, I've tried to analyse what it is about the HM3 that brought me to such an intractable state of adoration. There is no getting away from the fact that her appearance arrests one's attention. When we first met I was, relatively speaking, an infant in my understanding of watches. And you know what people are like at that stage. What kept me interested – what continues to keep me interested – is her enigmatic indication of the time.

Here's my response to everyone who gripes about how the HM3 tells time. Listen, the HM3 tells the time very well. However, she doesn't make it easy for you to actually read the time. Why should she? She's smart, she's beautiful, she's quirky and she knows her stuff. She's made an effort, and you should be prepared to make an effort too, if you want to spend any amount of time with her. If you're looking for a practical wrist companion, the HM3 is not for you. If you like a challenge, then okay let's talk.

There is that famous Shakespear-ean line about Cleopatra: "Age cannot wither her / Nor custom stale her infinite

variety". It doesn't matter that the Horological Machine N°3 was first created in 2009, a geological age ago in the context of independent modern watchmaking. It doesn't matter that she has gone through as many guises as she has – the various Frogs, the ReBel, the Megawind, the JwlryMachine, the MoonMachine – the gorgeous symmetry and energy of her engine's fundamental structure make each encounter a fresh pleasure.

It doesn't even matter that the HM3 has come to the end of her production, that the absolutely named Final Edition signals the last verse of this book. There is no form of worldly absolution that will give respite from the ardour ignited by the gospel of MB&F.

Six months after my first encounter with the HM3, I came knocking on the door of a magazine that proclaims the theses and commandments of the mechanical watch. I said to Wei Koh, co-founder of *Revolution* and my professional guide and mentor over the last six years, do you guys need a writer?

There are very few watches out there that can catalyse a change in one's career; a change in one's life. We dream and write about them because we aspire to the immortality that resides in such expressions of the untrammelled human spirit, expressions in which you may read the intent of the divine. Nabokov called it the domain of "aurochs and angels, the secret of durable pigments, prophetic sonnets, the refuge of art."

This is where the MB&F Horological Machine N°3 lives. It is a realm of profound joys and soaring beauty, exuberant genius, a parallel world without end. ■





# DJERBAHOOD STREET ART PROJECT

Written by Ian Skellern  
Technical Editor of *QuillAndPad.com*

Photography: The artist/Picture  
by Aline Deschamps for Djerbahood  
Project/Itinerrance Gallery/2014

For more information, please visit  
[mbandf.com/parallel-world](http://mbandf.com/parallel-world)

2014

BRUSK  
STREETART

Credit to Brusk

Legend has it that the Tunisian island of Djerba – which has been called the Island of Dreams – was where Homer's hero Odysseus was stranded with the Lotus Eaters on his voyage through the Mediterranean. The island is perhaps better known in modern times for its beautiful beaches, but since 2014 many visitors have arrived for another reason entirely: art. Specifically street art, aka legally-sprayed graffiti.

Mehdi Ben Cheikh, founder of the Galerie Itinerrance art gallery in Paris, created the street art project called *Djerbahood* as an open-air museum in the Djerba village of Erriadh, one of the oldest villages in Tunisia and home to the world's second oldest Jewish synagogue.

Ben Cheikh told the *New York Times*, "Muslims, Christians, and Jews have lived here in peace for the last 2,000 years or so. I'm not here to aggravate anyone, but to consolidate this aspect, which I find beautiful, and together with the natural beauty of the village, provide the artists with a unique canvas."

Around 150 artists from more than 30 countries travelled to Erriadh to create 250 murals in the picturesque village, turning it into one of the world's largest modern street art exhibitions. Artists participating in the opening of the event included Roa, C215, Faith47, Know Hope, Herbert Baglione and eL Seed; however, there will be many more as *Djerbahood* is planned as an ongoing, long-term project.

"It's true that some inhabitants weren't too happy about the artwork at first," 33-year old local Anis Tannich told the *New York Times*. "Because it's something they had never seen before, but most are now overjoyed. I've lived here all my life and for the first time people from all over the world are coming to our village. It's something we can be proud of."

*Djerbahood* fuses traditional Tunisian architecture with colourful contemporary art, an act that benefits the cultural and economic development of the island as well as beautifies it. Homer would likely have approved. ■

Credit to Seth

Credit to Seth

Credit to Roa

Credit to Elseed



# SOUND: THE FINAL FRONTIER

These are the voyages of  
the MusicMachines.  
Their continuing mission:  
to explore strange  
new designs, to seek out  
new music and new  
melodies, to boldly go where  
no one has gone before.

Written by David Chokron  
Watch geek and journalist

A long time ago, in a galaxy far, far away, music broke the deafening silence of space. There may be no oxygen in the cold, intergalactic void but that hasn't stopped MB&F and Reuge from doing their thing: crafting music boxes that look like spaceships. Not just any spaceships. As the world is still shaking from the release of a new arc in the *Star Wars* saga, we fans of all ages are reminded how deep the Tie-Fighter and the X-Wing resonate into a geeky and playful mind. With the new episode of the newly revived *Star Trek* franchise, we cannot deny that the mere sight of the USS Enterprise gives us goose bumps. So the MusicMachines are neither gimmicks or a fad. They are a thing of our heart, of our past, and they possess a lasting presence.

## TUNES

"In space, no one can hear you scream", wrote James Cameron as a tagline for *Alien*. Scream? Maybe not. But they will hear you sing! The eclectic choice of melodies played by the MusicMachines are a tell. They inform





**Previous page**  
MusicMachine 3 Chrome  
Limited edition of 33

**Left page**  
MusicMachine 3 Black  
Limited edition of 33

**Right page**  
MusicMachine 3 White  
Limited edition of 33

you on the zeitgeist of the 2010s. They are a time when new classics are recognized. The most popular melodies of music boxes are classical and feature works by Mozart or Tchaikovsky. The MusicMachines pay their dues to the original soundtracks of sci-fi flicks that are now the stuff of legends: the obvious *Star Wars* and *Star Trek* share a place with *The Persuaders* or *The Godfather*. Surprise, surprise, they also feature Ryuchi Sakamoto's main-theme song for the film *Fury*. Each MusicMachine boasts two cylinders, which contain the musical information the music box requires. Alongside a movie tune, they play a legendary piece of rock'n roll, taken from the repertoire of The Clash, Led Zeppelin or Pink Floyd.

#### TUNING

The alliance between MB&F and Reuge was born under demanding stars. After all, as Yoda himself put it "Do, or do not. There is no try". So just attempting to make a MusicMachine wouldn't have cut it. It needed to be the best both

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There may be no oxygen in the cold, intergalactic void but that hasn't stopped MB&F and Reuge from doing their thing: crafting music boxes that look like spaceships.

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marques could do. The former is in charge of imagination. Some call it creation, but it is a much more enjoyable and instinctive task. If it's not fun devising it, it's probably not worth MB&F designing it. The latter is in charge of making it all work. That's just everyone's luck because Reuge has been in the music box business for 150 years. So they can play music out of just any object, any material, any concept. That's how flexible and crafty they are. Yet, such a special project required special technology. MusicMachine 2 features a special resonance board, a natural composite sound amplifier. It takes its properties from sheets of a rare kind of spruce trees timbered in the Swiss watchmaking valley of Joux, layered with a honeycomb structure of Kevlar. Who's to say that is not exactly what the USS Enterprise is made of? ■

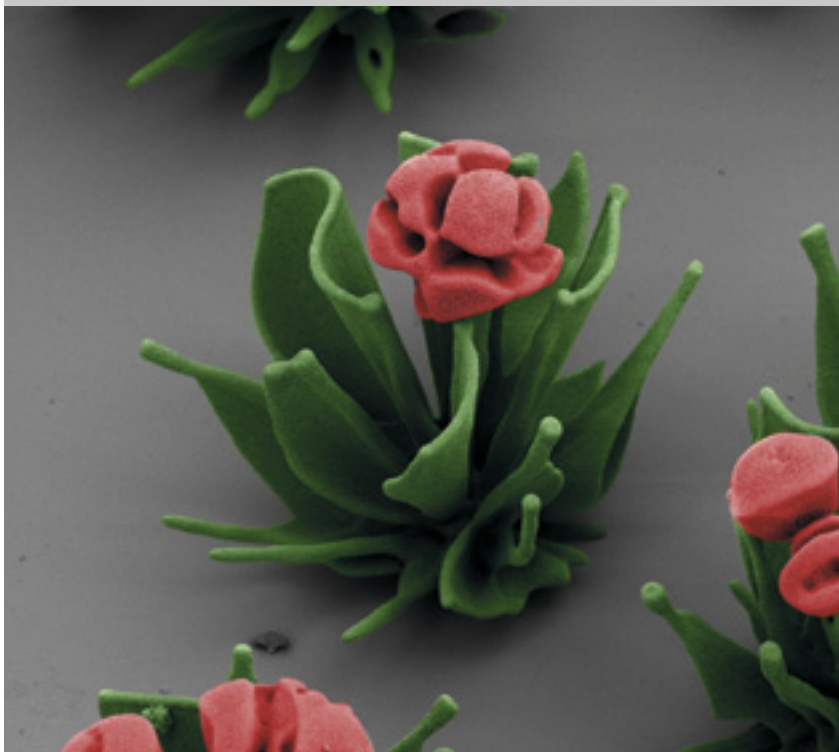
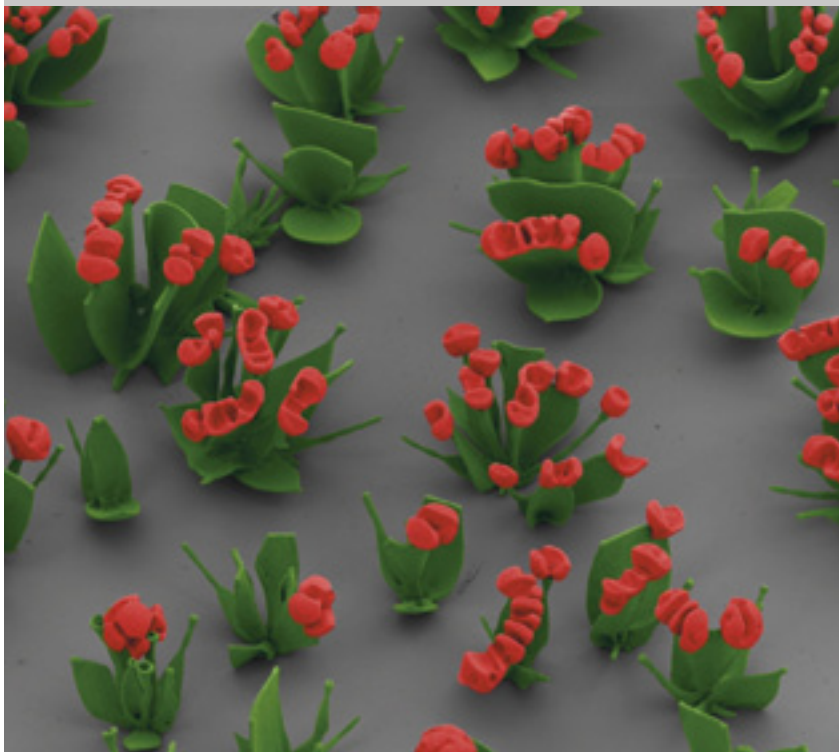




# MICROSCOPIC BEAUTY IN BLOOM

Written by Ian Skellern  
Technical Editor  
of *QuillAndPad.com*

Photography: Wim Noorduin  
For more information, please visit  
[mbandf.com/parallel-world](http://mbandf.com/parallel-world)



The diameter of a human hair is a smaller measurement than most minds are capable of understanding. So it is incredibly difficult to fathom that the flower sculptures pictured on this page are as miniscule as a hair. And what's even more inexplicable is that these bouquets blooming on the surface of a glass slide have emerged from a beaker of fluid containing nanocrystals.

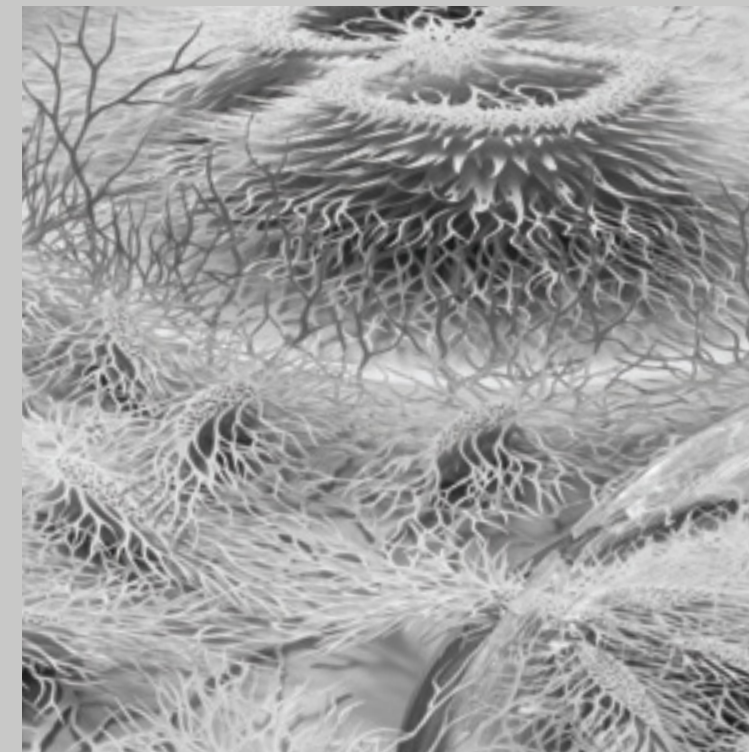
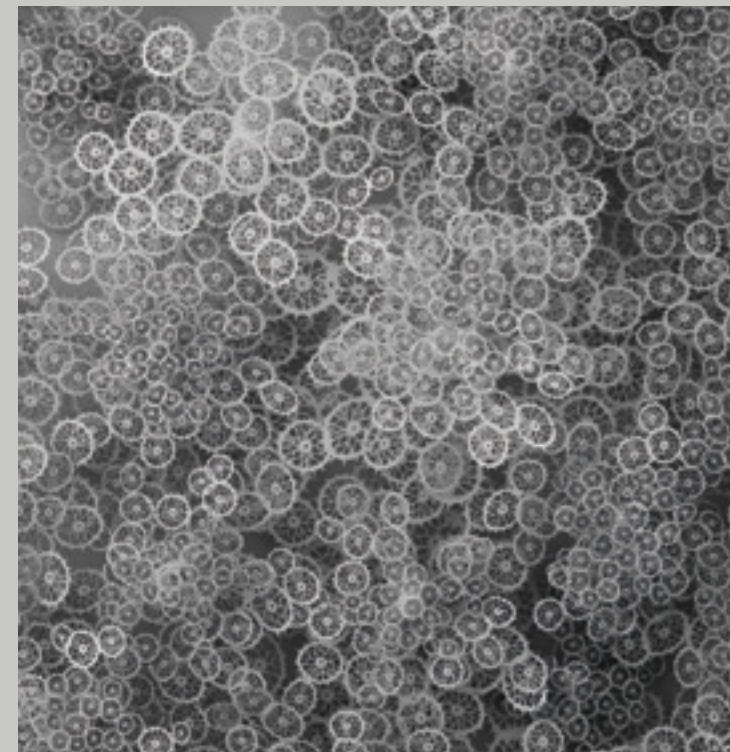
"For at least 200 years, people have been intrigued by how complex shapes could have evolved in nature," says Wim Noorduin, a postdoctoral fellow at the Harvard School of Engineering and Applied Sciences (SEAS). By manipulating chemical gradients in a beaker of fluid, he gained control over the growth behaviour of crystals to create precisely tailored structures.

Noorduin and his colleagues dissolve barium chloride (a salt) and sodium silicate (conventional glass) into a beaker of water. Carbon dioxide from air naturally dissolves in the water, setting off a reaction that precipitates barium carbonate crystals. It also lowers the acidity of the solution immediately surrounding the crystals, which triggers a reaction with the dissolved glass.

"You can really collaborate with the self-assembly process," Noorduin explains. "The precipitation happens spontaneously, but if you want to change something then you can just manipulate the conditions of the reaction and sculpt the forms while they're growing."

Of course, this research goes beyond making tiny, greyscale flowers (colour is added to the images to reinforce the notion that the structures could be brilliant blossoms); Harvard uses the findings as a modelling system to develop our understanding of the emergence of form, curvature, and complex hierarchical architectures. ■

# ROGAN BROWN'S BIZARRE BACTERIA-INSPIRED PAPER SCULPTURES



Anglo-Irish artist Rogan Brown uses scissors, blades, and high-precision lasers to create richly textured, multi-layered paper sculptures inspired by patterns occurring in nature. Brown's art installations are incredibly time consuming: *Outbreak*, a project inspired by the microbiome of bacteria living in and on our bodies, took months of research with microbiologists and then another four months of cutting and layering the elaborate paper sculptures.

"I am inspired in part by the tradition of scientific drawing and model making, and particularly the work of artist-scientists such as Ernst Haeckel. But although my approach involves careful observa-

tion and detailed 'scientific' preparatory drawings, these are always superseded by the work of the imagination; everything has to be refracted through the prism of the imagination, estranged and in some way transformed," Brown explains.

For *Outbreak*, Brown's aim was to create a piece of art that looked into our fears of the microbiological world, and it certainly looks like an explosion of bacteria out of a petri dish. Coincidentally, but by no means fortuitously, during the London exhibition of *Outbreak* in 2014, the Ebola outbreak was dominating world news in a serious wake-up call as to what can happen when the wrong bugs rule.

While Brown's work sometimes looks as though it has been directly copied from nature, just like the scientific drawings and sketches that inspire him, the truth is that nothing he creates is biologically accurate: everything been transformed through the filter of his imagination. Well, we'll be happy appreciating Brown's microscopic subjects so long as they remain on paper! ■

Photography:  
Courtesy of the artist



# WHEN MACHINES WERE BEAUTIFUL

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**THE TALE OF THE  
LEGACY MACHINE N°1**

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ESSENTIALLY, THAT'S ALL YOU NEED!

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**NIXIE MACHINE**





Written by Meehna Goldsmith  
Watch enthusiast and journalist

Most people purchase watches from large companies that rely on historical milestones and technical innovation to define the story of their brand and watches. That's not to say all that isn't important. However, this (same) information is easily accessible in publications and online. The watches may have a face, but they don't really have a "face".

Certainly the MB&F (Max Büsser and Friends) LM1 is a masterpiece of

# THE TALE OF THE LM1





*“It taught us a lesson, to keep our minds open at all times and always allow ourselves to consider getting out of whatever comfort zone we are in.”*

Maximilian Büsser



aesthetic beauty and technical innovation with its breathtaking suspended balance wheel taking center stage and driving a dual time complication, each dial capable of being set to the minute.

However, the LM1 is much more than a composition of its parts described as a “machine that happens to tell time”, as Max Büsser, the founder and Creative Director of MB&F, calls his timepieces.

More fascinating and emotionally gripping is the story behind the story, the individuals creating a watch. Büsser recognizes this and is completely transparent about the players making each part of the watch. Just go to his website and learn about all the creatives involved.

But I’m here to reveal the machinations that went on behind the curtain in realizing the LM1, Büsser’s first round watch. Rec-

ognized for his unusual geometric watches, Büsser presented the “friends” with a design for a round watch to be brought to life under a new Legacy category.

All hell broke loose with the team bucking like enraged broncos against this egregious idea. When Büsser unveiled the project, “Eric Giroud, the designer of the Machines, stormed out of the design meeting saying he did not see the point to this,” Büsser relays. “Serge Kriknoff, our CTO and my partner in the company, very respectfully told me he had not joined MB&F to create ‘round watches’. The team resisted breaking out of the mold of the established Horological Machines.”

Büsser was able to hang in there and convince the “friends” to at least attempt the concept. “Many years later, we all look back at that time and just smile,” Büsser says. “It

taught us a lesson, to keep our minds open at all times and always allow ourselves to consider getting out of whatever comfort zone we are in.”

Whenever creating an artistic piece, the creator later sees areas where there could be improvement. Büsser admits, “You can see that on most of my Machines I have created variations a few years after the original comes out.” The LM1 is an anomaly. Büsser states that it’s as close to perfect as he could’ve wished – with now a release of a polished bezel instead of one with a satin-finish. As a teaser, Büsser discloses that it will be the base for another “performance art” piece, but then goes mum on the details.

In the modern age, computers have taken over as the design tools for watches. In fact, many of them can’t even draw. Büsser’s watch designs might be futur-

istic and based on his childhood love of science fiction, but he conceives the Horological Machines the old fashioned way, with a pencil and paper. And how did he learn? “From the age of 4 to 18, I sketched thousands of car drawings,” he says. “Being a car designer was supposed to be my calling but luckily never happened.” Lucky for us too.

When the majority of brands stay tight-lipped and hide the people behind the work, watches can be cold objects void of life. Büsser infuses his Horological Machines with humanity and this makes them even more beautiful. They have a true and vital face.

200 hundred years from now Büsser says that when people see the LM1, “I just would like their heart to beat faster.” I’d say he’s already achieved that now. ■



For more information,  
please visit [brauer.fr](http://brauer.fr)  
or [madgallery.net](http://madgallery.net)

# +BRAUER'S ARMY OF UNIQUE ROBOT SCULPTURES

When is an old spanner not an old spanner? When is a car battery charger not a car battery charger? When is the lens off the back of a caravan no longer the lens off the back of a caravan? The respective answers: when they become the arms of a robot, its angular body or its beating, electronic heart – assuming, of course, you have the magical mind of ‘upcycling’ genius Bruno Lefevre-Brauer.

Known professionally as simply ‘+Brauer’, the Paris-based graphic artist and designer is living, working proof that one man’s junk is another man’s treasure – because he takes the things that many people might consider worthy only of the scrap heap and gives them fresh purpose as the vital parts which bring to life his ever-growing army of unique robot sculptures.

Back in the 1990s, +Brauer began collecting the sort of flashing, winking, walking, clock-work robot toys that first emerged from Japan more than 60 years ago and soon saw the artistic potential in such stiff-limbed, tinplate warriors. Robots, decided +Brauer, might not have souls – but there was no reason why they shouldn’t have personalities. Nor was there any reason why he shouldn’t be the one to bring them to life.

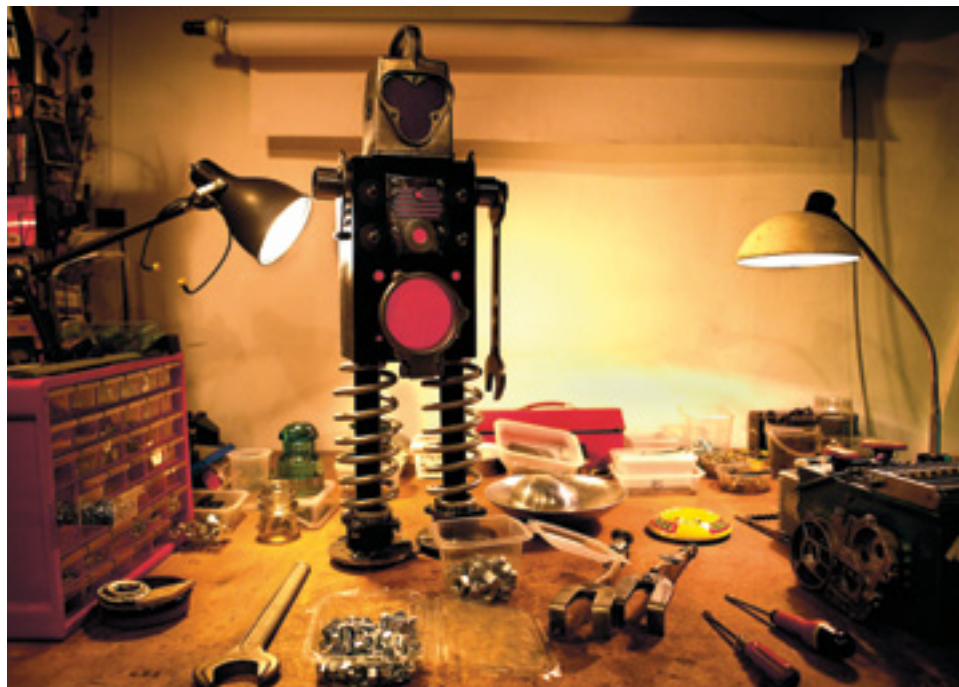
As a result, he began trawling abandoned workshops and garages, rooting through junk shops and flea markets and encouraging friends to look at what they would once have called ‘rubbish’ with a rather more discerning eye.

Gradually, the artist built-up a store of strange, unwanted objects which, to most people, might have seemed entirely incompatible. In +Brauer’s fertile mind, however, every insulator he salvaged, every length of wire he rescued, every glass lens he saved from being broken and every nut, bolt, screw or washer he kept from being melted down had the potential to go

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Written by Simon De Burton  
Freelance journalist and author





Wast-E

towards an object that would be very much more than the sum of its parts.

+Brauer begins to create a robot when he recognises the makings of a form in a particular combination of bits from his burgeoning store of found items. Next, he takes a blank sheet of paper and sketches possible designs before taking the parts themselves and laying them out loosely on the floor.

Sometimes, what he finds before him remains nothing more than a random assemblage of metal boxes,

springs, gauges and lights. More often, however, he will see the beginnings of a brand new robot. And, at that stage, he begins to carefully cut, grind, saw, weld, screw and rivet the parts together – and, gradually, his latest creation emerges, often brightly lit from within thanks to the incorporation of electronic circuitry and ingeniously-placed lamps.

But while his work is meticulous, +Brauer's robots



Konstantin



Commodor

are not the pristine, gleaming products of a brave new world. Rather, they wear with pride the chips, scuffs, dents and cracks that their component parts accumulated in their former lives – and are all the more appealing for it.

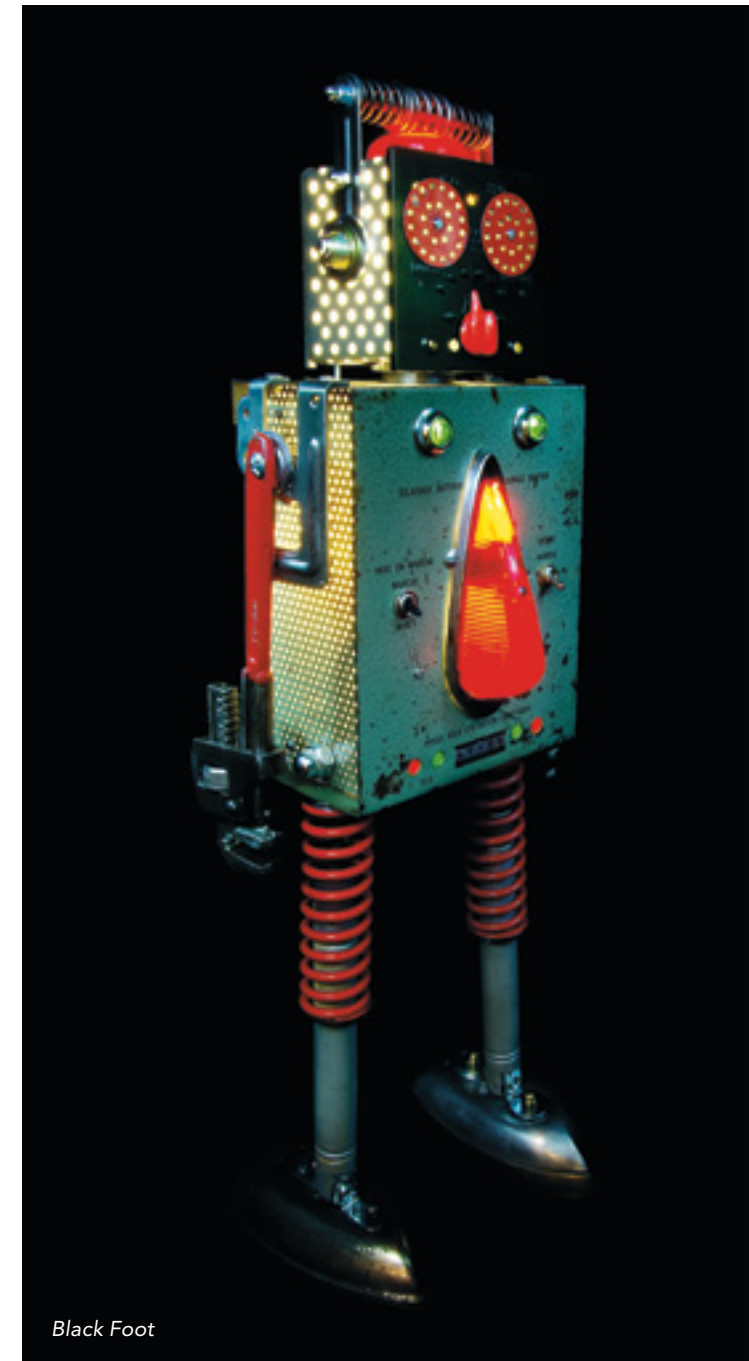
Should you wish to meet such creations in person, they are on show at MB&F's M.A.D.Galleries in a selling exhibition of +Brauer's work entitled 'Viva La Robolucion'. Some have already found new homes, but others are still hoping to be adopted.

None will make your breakfast, tidy your house or walk your dog, but they will certainly make you smile every day.

Even when you're feeling a bit rubbish... ▀



Leon



Black Foot



Robots, decided +Brauer, might not have souls – but there was no reason why they shouldn't have personalities.



Preolor



Ernest



Written by Ian Skellern  
Technical Editor  
of QuillAndPad.com

# LM101 AND LM101 FROST

# ESSENTIALLY, THAT'S ALL YOU NEED !

The dictionary defines the word "essential" as, "That which is absolutely necessary". MB&F has taken that definition, transposed it into a horological context, tweaked it with their own magic mojo, and then distilled centuries of watchmaking down to what the boutique brand considers to be the epitome of what is essential in a superlative wristwatch.

But that's not quite accurate. I should have written, "The epitome of what is essential in a superlative



*traditional* wristwatch.” The result is Legacy Machine 101, aka LM101.

At first glance – and with very selective vision – LM101 might well be considered a modern take on a traditional wristwatch pared down to the barest of bare essentials: it’s manually wound with displays for just hours and minutes – seconds would be superfluous – and power reserve.

And talking about essential, LM101 doesn’t even have a dial! The displays are shown on two relatively discreet – though still very legible – pristine white, nicely domed subdials, unblemished by any visible attachment.

If you look closely, those subdials actually appear to float above the movement. So it’s impossible to exaggerate the visual impact of the balance – probably the most critical and precision-engineered set of watch components in the movement – floating so much higher than the subdials.

While MB&F’s Legacy Machine collection is inspired by high-quality watchmaking of centuries past, it takes very little to imagine those twin gracefully curved arches as two fingers lifted in defiance of traditional design. The ethereal arches, which must rank among the most beautiful and elegantly shaped horological components ever created, are machined from a solid block of steel for maximum rigidity.

#### ESSENTIAL VS. USEFUL

A great watch really doesn’t have to have much at all: it just has to tell the time accurately, legibly, and reliably; be distinctively good-looking; and be comfortable to wear. Quibblers might point out that LM101 has a 45-hour power reserve indicator, which isn’t really essential. However, if a watch stops running because its owner didn’t know it was low on power, then it isn’t running reliably – which is essential.

Nitpickers might also point out that a large balance floating above the dial also lacks essentiality, but distinctively good-looking is an essential characteristic of a superlative watch... and a large 14mm, gravity-defying balance wheel certainly delivers that! More than five hours of hand-polishing go into turning each of those bridges into the scintillating curves they are.

As captivating as LM101’s dial side is, appreciating the movement through the display back



is almost as rewarding (if not more so). As your gaze transitions from front to back, note just how slim the case band is thanks to the lofty height of that domed crystal, which continues, bezel-free, right down to the case. The movement is MB&F’s first fully in-house developed calibre and looking at the superb result, it will not be the last.

The influence of independent watchmaker *par excellence* Kari Voutilainen, who ensured that MB&F’s technical movement design was aesthetically compatible with the traditional style he had developed for earlier Legacy Machines, is evident in the flowing lines of the bridges, with traditional large spaces between each of them. Absolutely impeccable hand-finishing goes without saying (but I will anyway).

#### LM101 FROST

Legacy Machines pay homage to a golden age of watchmaking by highlighting interesting mechanisms, indications, techniques, and hand-executed fine finishing.

LM101 Frost takes all of that and adds one of the most spectacular finishes of them all: “frosting”. Reportedly developed by Abraham-Louis Breguet more than two centuries ago, the more commonly seen modern method of frosting involves simply sandblasting the plates to be treated. Viewed up close, however, sandblasting results in slightly rounded dimples in the metal, with the lack of sharp edges making reflections dull.

The top movement plate of LM101 Frost, on the other hand – and it is the top of the movement plate that is frosted; the only true dials here are the white subdials – is hand-frosted using a wire brush. This technique is labour-intensive and requires extreme skill; and it is incredibly difficult to ensure an even effect, especially on such a large surface as the main movement plate. Which all goes to show why the sandblasting method is so popular.

But, while hand-frosting in the traditional manner with a wire brush may be a long and arduous process, the benefit is that the tiny dimples in the metal’s surface have sharp edges that playfully catch and reflect light – think of the sharp-edged facets of a diamond – just as sharp-edged frost crystals catch early winter sunlight. A visual destination in itself, the subdued frosted finish accentuates even more the mirror-polished arches, shiny balance wheel, and snow-white subdials.

LM101 Frost will make winters that much more enjoyable. ■



Nothing levitates or spins on or near Frank Buchwald's Nixie Machine as it beckons in the Geneva MB&F M.A.D. Gallery, but something about its glowing red rib cage sends observers backward in time.

It might be that the Machine's six luminous 90mm high Nixie tubes evoke a distinctly analog vibe – despite their technically digital displays. Or perhaps the pre-LCD numerals force back an old memory – or an old movie – long forgotten.

An observer should in fact be forgiven for recalling the Cold War, because that's exactly when these tubes were made. German artist Buchwald and collaborator Alberto Schileo discovered a cache of well-preserved Z568M Nixie tubes manufactured by a Soviet company called RFT in East Germany during the 1960s. Each tube is filled with neon gas and features an array of numerical-shaped filaments – one behind the other – that

individually glow when triggered. Through the 1950s and 1960s, and into the 1970s in the Soviet Bloc, Nixie tubes could be seen in a wide variety of electronic counting devices, from early computers to, yes, clocks.

Buchwald has also made a clock, but an astonishingly sculptural one. He has aligned six tubes atop four black metal legs and angular supports that measure in total almost a meter long and half a meter high. Within this base he's wired the tubes to display the time in 12-hour and 24-hour formats, all customizable to perform a variety of fading or flip-over effects that can make the red numerals appear to run through number after number, much like a slot machine. All of it, by the way, monitors real time via a very modern GPS system.

It's no wonder that visitors to the M.A.D. Gallery stared whenever Buchwald's Nixie Machine blinked and flashed. ▀

# NIXIE MACHINE



Nixie Machine by Frank Buchwald is a jaw-dropping, sculptural clock featuring six beautifully glowing Nixie tubes from the 1960s.

Written by Michael Thompson  
Editor of *WristWatch*



# BACK TO CHILDHOOD

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**ALAN BLACKWELL**

ROBOTS NEED LOVE TOO

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**OMNIDIRECTIONAL**

**ELEVATOR NOW A REALITY**

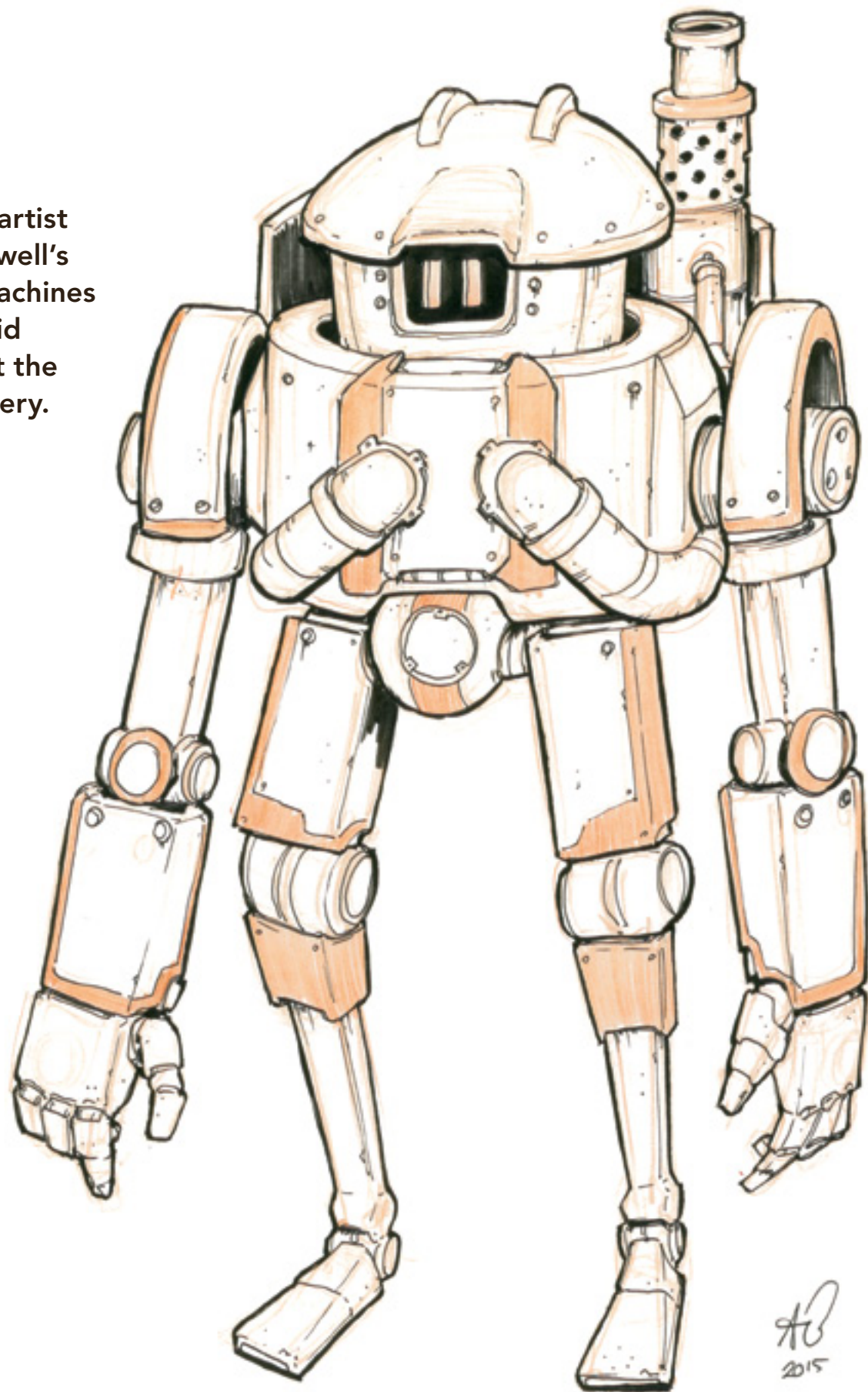
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**MELCHIOR, SHERMAN,  
AND BALTHAZAR**

THE RISE OF THE MACHINES

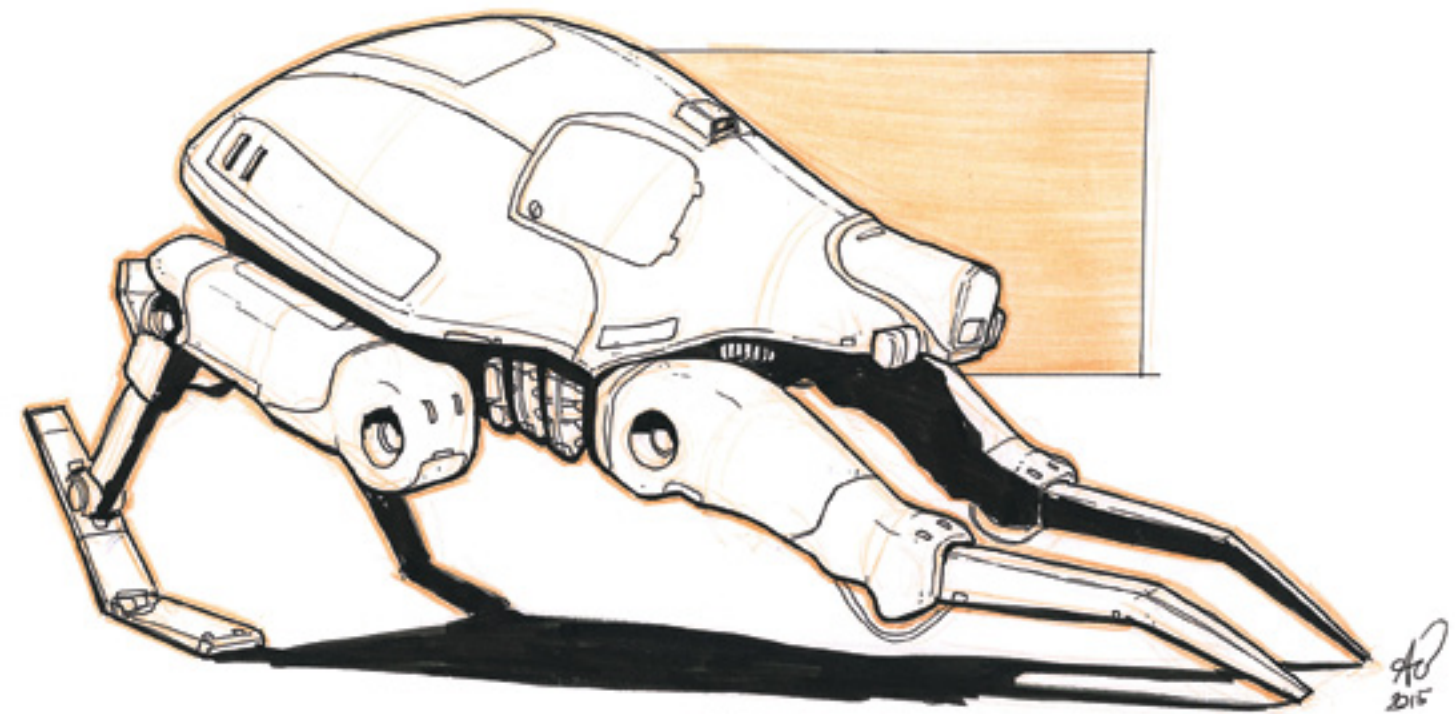


Australian artist Alan Blackwell's Walking Machines certainly did find love at the M.A.D.Gallery.



Written by Terence Lim  
Editor of *Style: & Style: Men*  
*Timepieces*

# ROBOTS NEED LOVE TOO



Alan Blackwell is a science fiction enthusiast. He loves it so much that he incorporates it into his work. The Australian is a freelance concept artist, who creates and develops ideas, props, characters and environments for video games. So in his free time, he doodles and sketches his ideas down.

In early 2015, Blackwell set himself a challenge: To sketch one robot – his pet subject – a day, and post it on Instagram. The challenge lasted about 90 days; it garnered him a substantial following. (One of them was, of course, Maximilian Büsser, who invited him to exhibit at M.A.D.Gallery.)

Many of Blackwell's robot sketches are created with no prior objective. Calling it a

"zero clue" mentality, the 35-year-old enjoys sitting down to discover what new shapes he can explore. Scroll through his Instagram feed or the Walking Machines prints, and you'll notice that each sketch is similar but different – something that Blackwell adheres to.

"I try my best to create shapes that aren't too similar to shapes I've drawn before. Of course, there will always be trends that appear from drawing to drawing but I want to make sure that each piece is somehow unique," he says. Here, Blackwell opens up his personal sci-fi world to Parallel Worlds. So sit tight, belt up, and have a safe journey.





For more information,  
please visit [alanb-art.com](http://alanb-art.com)  
or [madgallery.net](http://madgallery.net)

## INTERVIEW WITH ALAN BLACKWELL

**Tell us more about your experience with sci-fi when you were young.**

I loved *Star Wars* growing up. I know, [it's] very very cliché. But I cannot deny that its influence made me fall in love with sci-fi. Then there were TV shows like *Transformers* and *Robotech*, which fueled the passion as well. When I went to the library, I would be looking at the covers of the sci-fi novels as this was really the only avenue to find that kind of art. I loved the space ships on those covers.

**When was that defining moment that told you that sci-fi was in your blood?**

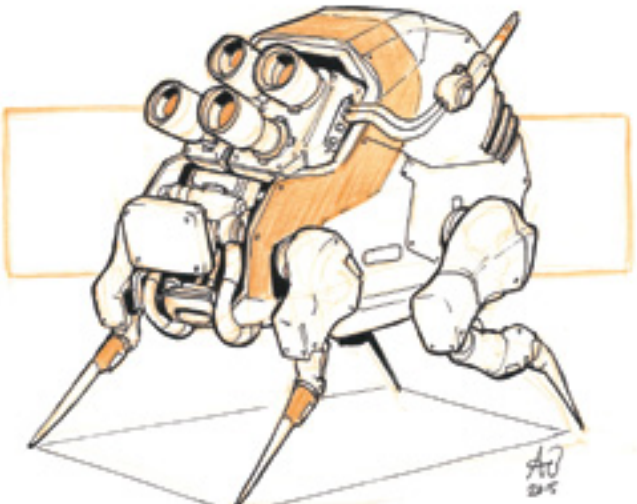
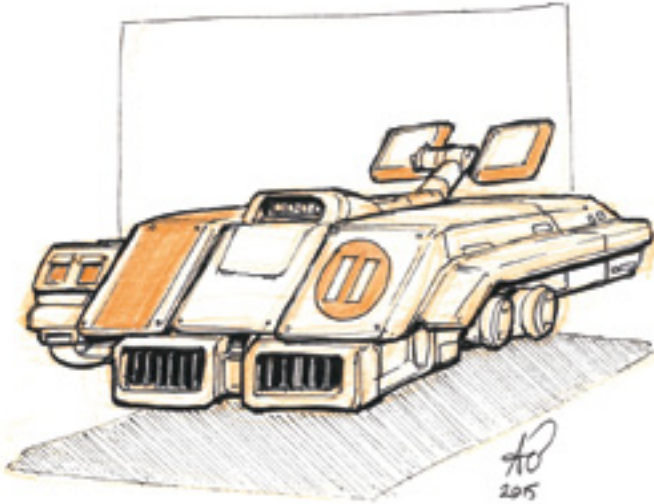
Around 1999, a video game called *Homeworld* was released. It was one of the earliest 3D games that I'd played, and it blew me away. Here were these amazing space ships set among some of the most beautiful space backdrops I'd seen. I fell in love with this game and played many hours. Upon finishing the game, however, in the credit roll, these sketches start to appear. And I don't think I'd seen these types of sketches before. These were all the concept art that went behind the production of *Homeworld*. I was in awe, and knew I needed to learn how to do that. That was one of the real reasons I'd started concept art.

**Why did you choose to draw robots?**

I think I've always loved robots. I had *Transformers* toys growing up and so robots seemed to be always around. But I think I only seriously started drawing robots around 2008. For some reason, when I started to practise more and really focused on getting good, robots seemed to be what came out of my pen.

**Tell us more about the first robot you ever created.**

I'm not sure it was my first robot I ever created, but it's certainly one of the first that had some kind of personality to it. I'd basically drawn this giant robot which was destroying a city and there were people running away... The robot was called Frank, and he was wearing a hat and tie and the whole thing was made to look like a movie poster. It's not a great illustration by any means but it's something that has stuck out for me.



**Your robots are described as exuding a laidback feel. How would you define "laidback" versus "uptight/tense"?**

I think that comes down to a couple of different points. Often a lot of robots that are created and drawn these days have some kind of military feel to them. They can be cute or brightly coloured but they are still bristling with weapons. My robots don't tend to have a clear killing intent. Another point is the shapes I tend to use are a little less hard-edged and are softer in nature. They can still be geometric but for the most part, you wouldn't puncture yourself if you accidentally brushed past one of them.

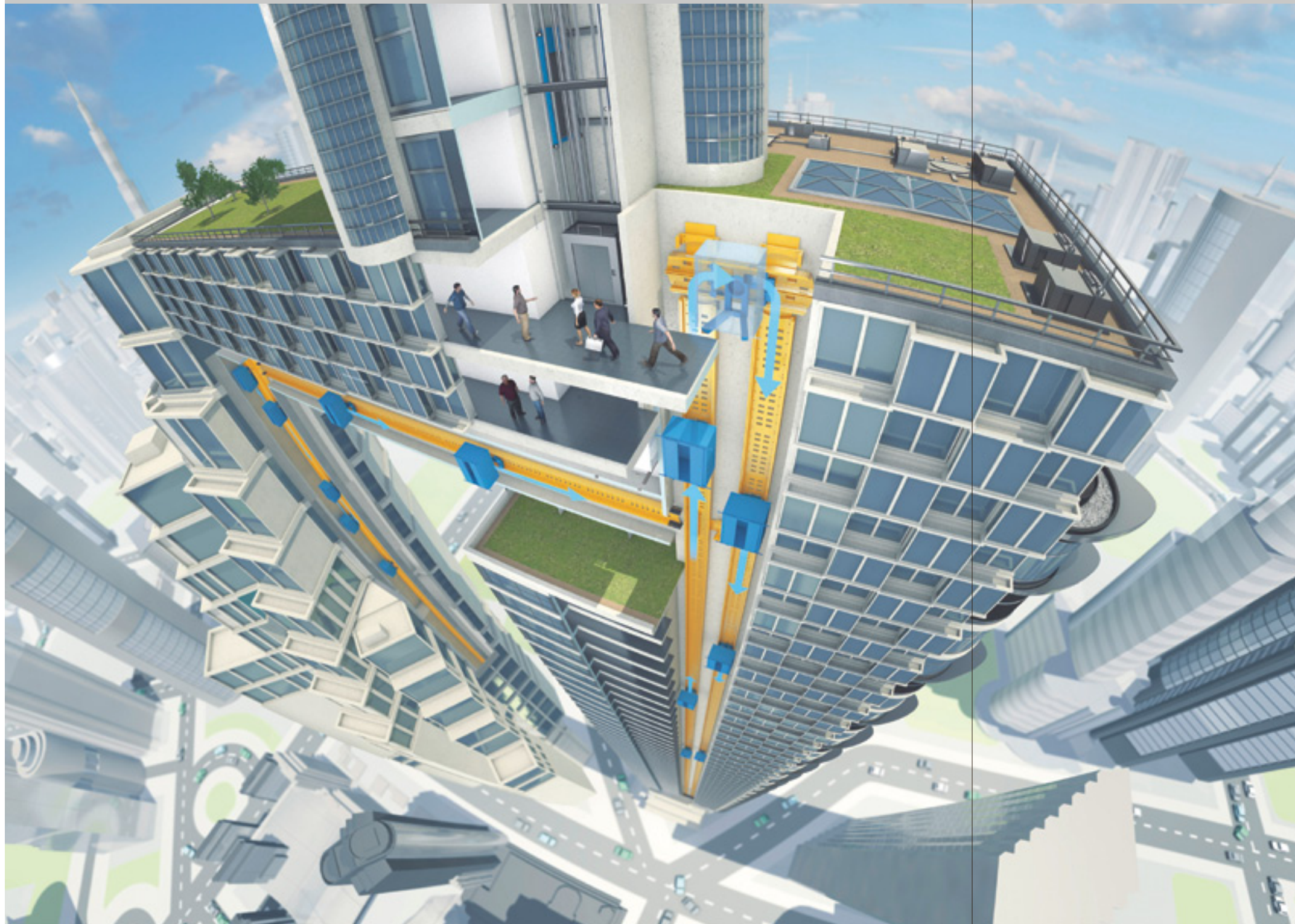
**If you were one of your robot creations, what will it look like?**

If I were one of my creations, I'd probably be a biped – of some sort. I'd probably have lots of arms for different purposes, and a random assortment of pouches to store whatever I am carrying around. I'd probably be able to transform myself into a spaceship, too. ■



## NEW YORKERS GRATEFUL

Written by Ian Skellern  
Technical Editor  
of *QuillAndPad.com*



## OMNIDIRECTIONAL ELEVATOR NOW A REALITY

Did you know that each year all office workers in New York cumulatively spend more than 16 years waiting for elevators and nearly six years inside them?

ThyssenKrupp calculated these statistics, and the reason that the German conglomerate has gone to the trouble of figuring them out is to underscore the lethargic motion of current elevator technology – thereby simultaneously highlighting the potential time-saving effects of MULTI's speed and efficiency.

MULTI is the omnidirectional lift that ThyssenKrupp has unveiled plans for. Still in development, it features "rope-free" technology that, if realised, will revolutionise the elevator as we know it. And ThyssenKrupp envisages having a prototype MULTI elevator functioning at its new test tower in Rottweil, Germany by the end of 2016.

Think Willy Wonka's great glass lift. "This isn't just an ordinary up-and-down lift!" Wonka proudly declared in Roald Dahl's classic children's book. "This lift can go sideways and longways and slantways and any other way you can think of!"

In contrast to the basic design principle behind elevators used today in which one cabin can go only up or down in one shaft on one cable at a time, ThyssenKrupp's MULTI employs magnetic levitation technology called Maglev as well as linear motors so that multiple elevators could operate in the same shaft without any ropes or cables – even moving sideways.

Smaller and self-powered by a single motor, the MULTI cabins employing a multi-level break system for up, down and side-to-side movement wouldn't need such large elevator shafts like the ones presently in use. These multiple elevator cabins could therefore run in a loop, like a vertical version of an underground train network.

The cabins would travel at a speed of approximately five metres per second, and ThyssenKrupp says that access to an elevator would be possible every 15 to 30 seconds, with a transfer stop every 50 metres, thereby significantly reducing wait times for elevators.

New Yorkers will be thankful! ▀

Illustration: Thyssen Krupp  
For more information, please visit  
[thyssenkrupp-elevator.com](http://thyssenkrupp-elevator.com)





Written by Ian Skellern  
Technical Editor  
of *QuillAndPad.com*

## MELCHIOR, SHERMAN, AND BALTHAZAR



## THE RISE OF THE MACHINES



Robots in various forms have both fascinated and terrified man for millennia, but only in science fiction stories. Then around 100 years ago, our technology and manufacturing techniques developed to the stage where humanoid robots seemed an imminent reality; and we are still in that stage. For the last 100 years, we have been patiently waiting for these long-promised, hard-working, non-complaining robots to lift the burden of drudgery from our everyday lives.

MB&F founder Maximilian Büsser has many excellent qualities, but patience isn't one of them. Tired of waiting for others to take his TV and cartoon robot friends and make them real, he decided to make his own. It was called Melchior and it launched in 2015. It was followed in the following year by Sherman and Balthazar.

His full metal armour and high-calibre weaponry made one thing crystal clear: you can relax because Melchior has your back.

Right page  
Melchior 'Only Watch' Edition  
Stainless steel and brass

Melchior 'Dark and light' Edition  
Stainless steel and brass,  
black PVD-treated components

As MB&F is a truly a twenty-first-century luxury brand in every sense, why do two of the futuristically inclined robots bear old-world names? I'll let Büsser himself explain, "For generation after generation, the first boy born in every Büsser family had always been called Melchior or Balthazar [who, with Caspar, were the three wise *maji* of biblical legend]. In naming me Maximilian, my parents broke that tradition; this is my way of ensuring that it is not forgotten."

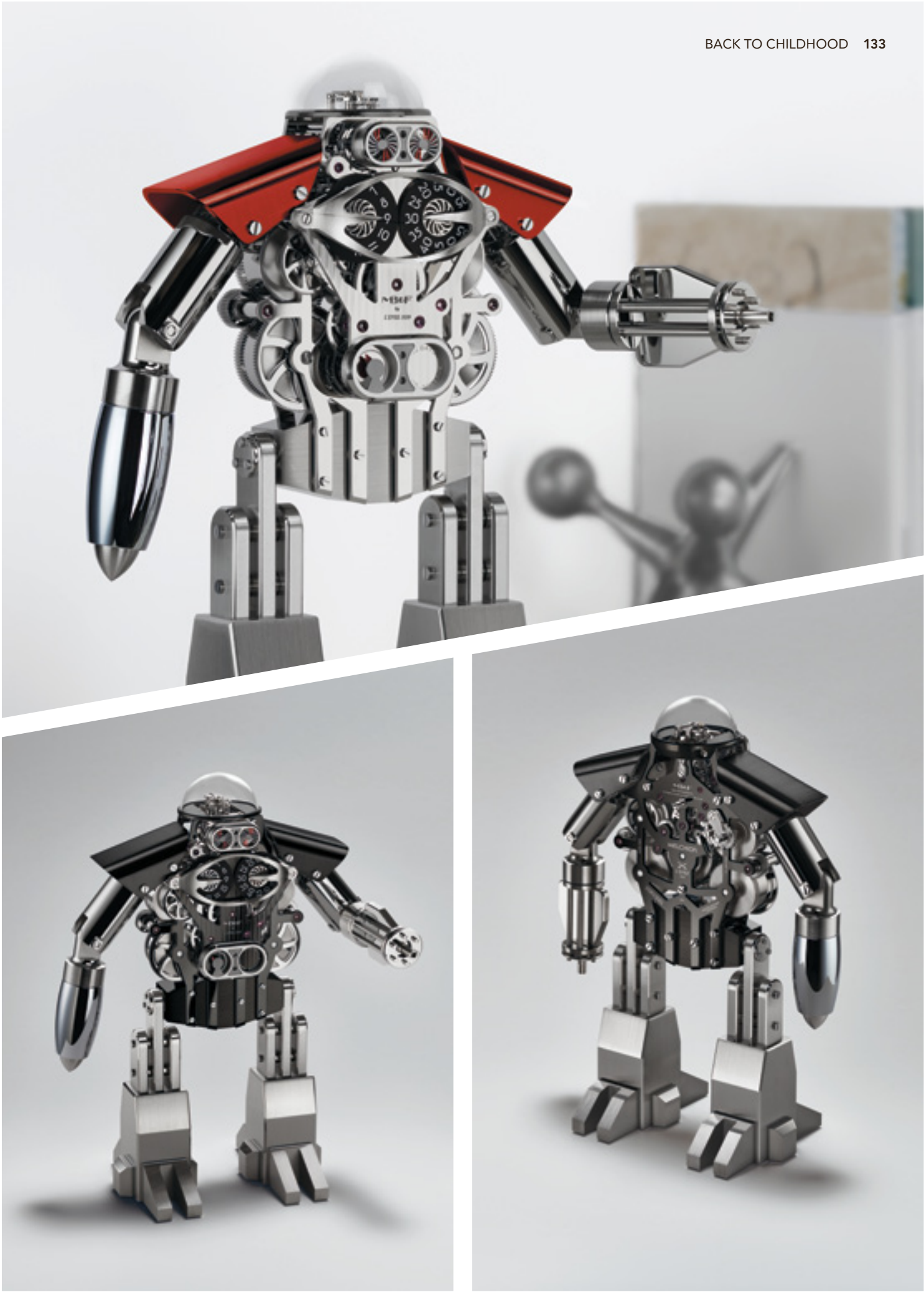
Melchior, Sherman, and Balthazar each has its own very distinctive look, feel, and shape; they all do very different things; and they even have very distinctive personalities. But they all have one thing in common: they all tell the time.

MELCHIOR

MB&F celebrated its tenth anniversary in 2015 under the umbrella theme, "A creative adult is a child who survived." MB&F developed the Melchior concept with designer Xin Wang, then took it to L'Epée 1839, the only specialist for high-end clock manufacture in Switzerland. Melchior is not just a cool robot buddy, he is also a complex 480-component table clock with an incredible 40-day power reserve.

Melchior personified (robotitised?) the anniversary theme, looking very much like the TV and film robots that fuelled many childhood imaginations. At over 30 centimetres (one foot) tall, Melchior surprised and delighted in equal measure. And his full metal armour and high-calibre weaponry made one thing crystal clear: you can relax because Melchior has your back.

Melchior is a warrior impressively armed with a rocket launcher built into his right forearm and Gatling gun built into the left; his shoulders rotate and his elbows articulate. In one of many surprises, the left forearm has a magnetic attachment at the elbow socket that enables it to be easily removed and then play double duty as the key for both winding the mainspring and setting the time. Because there is no mistaking it: Melchior is not simply a robot with a clock stuck on; Melchior is a clock. His abdomen, heart, lungs, brains, skeleton, and even eyes are all part of the beautifully hand-finished, high-precision clockwork.







And it's well worthwhile taking a closer look at Melchior's beautifully polished and hand-finished clockwork because that is taking a closer look at Melchior himself. Jumping hours, sweeping minutes, double retrograde seconds, and a 40-day power reserve indicator. That's a pretty impressive list, even on paper, of functional elements that bring Melchior to life. A double 20-second retrograde is one thing, but display them as bright red eyes that slowly, but constantly, scan the room and the effect is mesmerising.

Melchior has an interesting "slow" jumping hour indication, with the hour remaining static for 55 minutes before it gradually jumps to the next hour over the course of five minutes to make the "jump" more organic. More like a few long steps than a jump. The power reserve indicator is placed in a subdial on the abdomen – closer to his vitals – tracking the incredible 35 days power (when fully wound) stored in no less than five mainspring barrels.

And then there is perhaps the most eye-catching of all of Melchior's features: his brain. This is the regulator of the clock, its isochronally oscillating balance responsible for no less than the clock's accuracy and precision. And it's fully on animated display under a high sapphire crystal dome.

Melchior has the time to keep you safe.

## SHERMAN

If Melchior is the reassuringly strong buddy, Sherman is the playful joker of MB&F's robotic family. Sherman simply tells the time with hours and minutes. That's it. That surely gives Sherman the gold medal as the MB&F Machine having the fewest horological indications – a record that it is likely to hold for quite some time.

Sherman has no complex horological complications like Melchior and Balthazar, nor does he have articulated limbs – although he does have rubber caterpillar tracks for mobility, flexible arms, and hands that can support a pen or his winding key. However, before you dismiss the little guy to go drooling over the latest uber-complication, note that Sherman does have one very special feature: the ability to make people smile. And while that's a most desirable feature for anything and even anyone, it's an exceptionally powerful quality for a little robot. There is no denying it, Sherman is incredibly cute and I imagine sometimes mischievous, but he gets away with it because everybody loves Sherman.

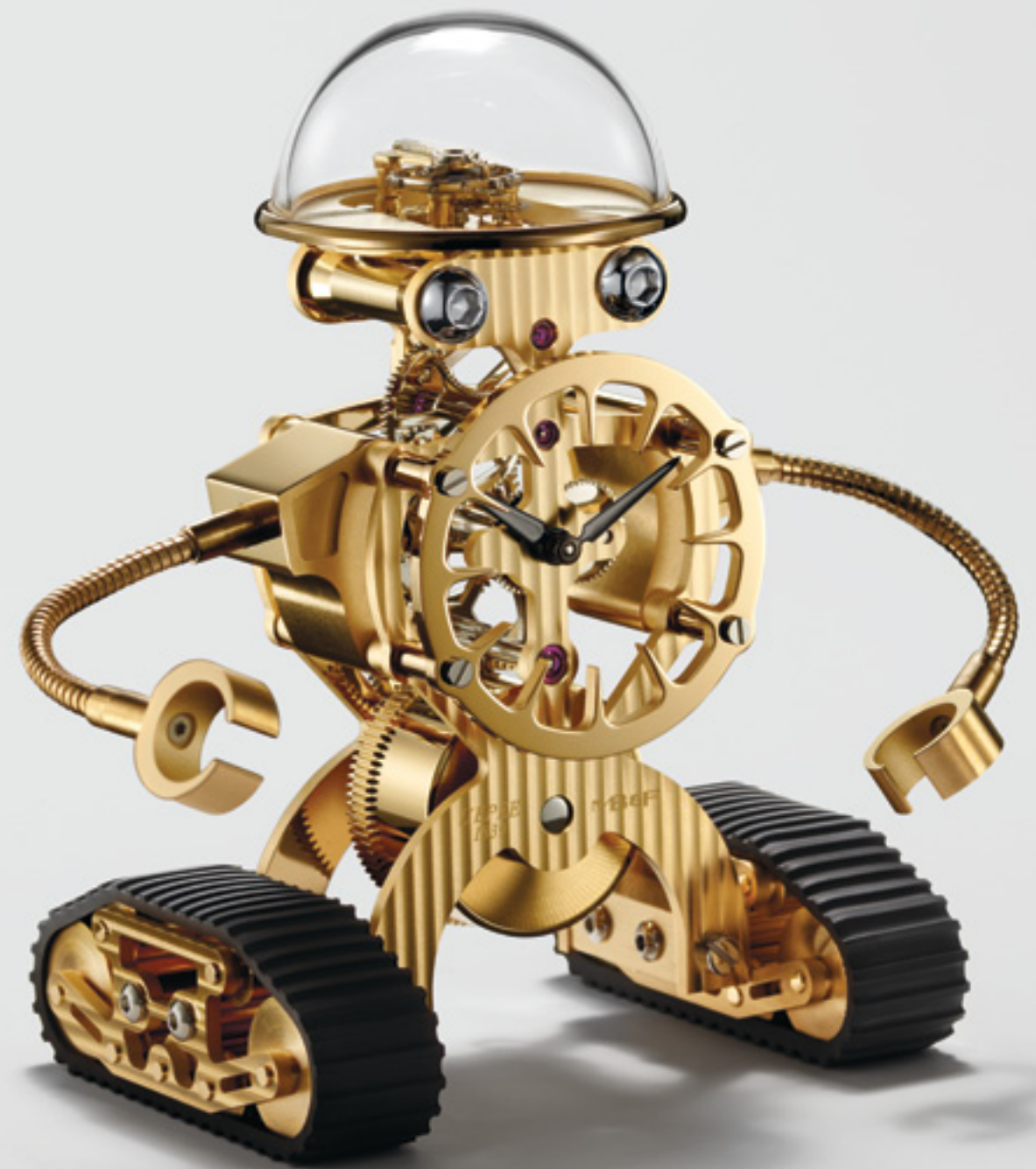
The name Sherman, inspired by the robot clock's tracked undercarriage, was derived from

the American M4 Sherman tank used in World War II. While the name of MB&F's Sherman may have originated in war, he is most definitely a robot for spreading peace and love.

Sherman is built around a highly modified L'Epée inline eight-day full *manufacture* movement, so he only requires winding once a week

or so. And while it's the playful little robot image that tends to dominate, it's worth reminding ourselves that, as well as being a happiness generator, Sherman is an exceptionally high-quality clock, comprising 148 high-precision components, all finished to the highest degree with Geneva waves, anglage, polishing,

sandblasting, circular and vertical graining, and satin finishing. It is also worth mentioning that hand-finishing clock movement components to a high level is a lot more difficult than wristwatch components due to the larger components having exponentially more surface area.

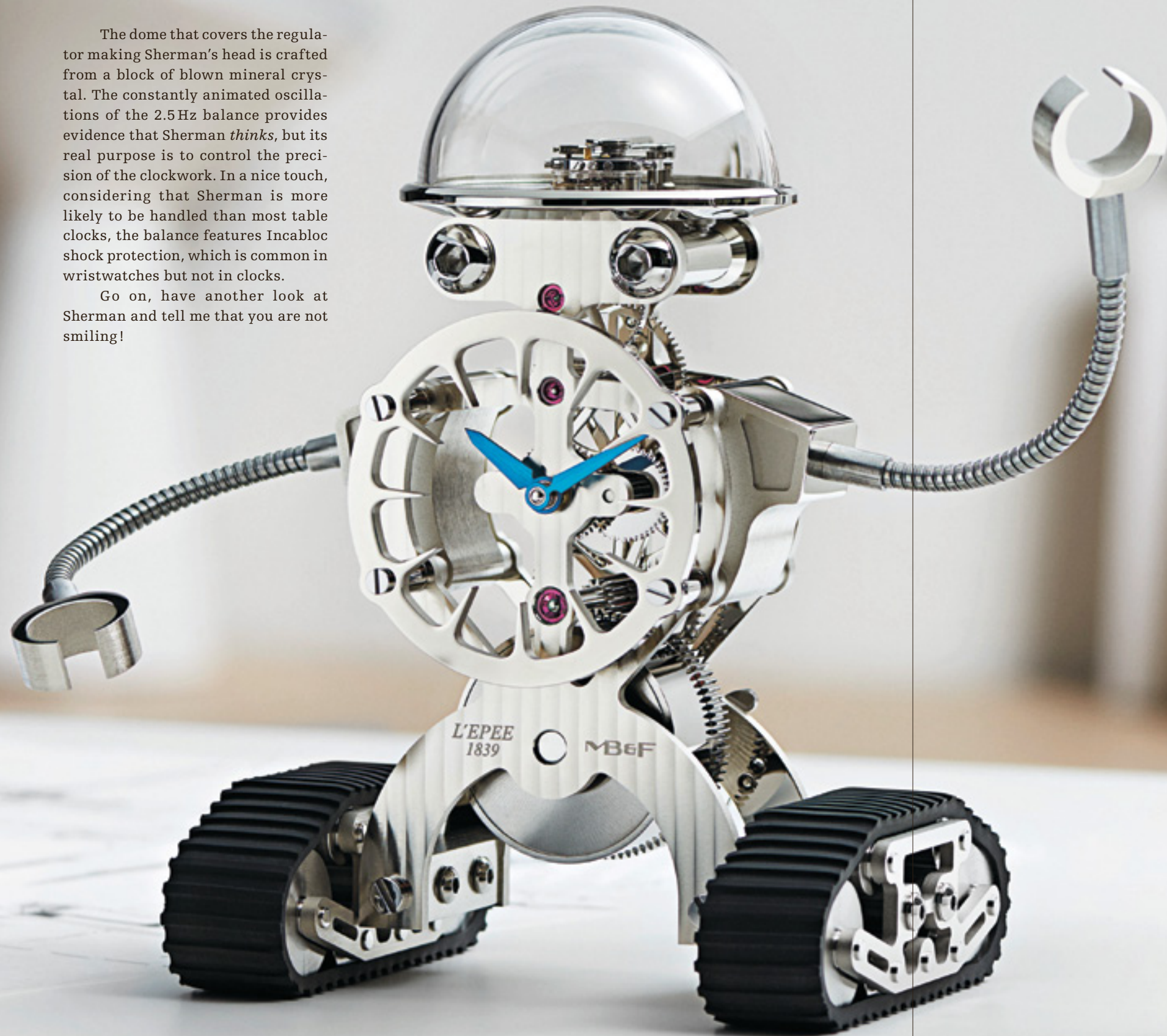


Sherman Gold  
Gold-plated



The dome that covers the regulator making Sherman's head is crafted from a block of blown mineral crystal. The constantly animated oscillations of the 2.5 Hz balance provides evidence that Sherman *thinks*, but its real purpose is to control the precision of the clockwork. In a nice touch, considering that Sherman is more likely to be handled than most table clocks, the balance features Incabloc shock protection, which is common in wristwatches but not in clocks.

Go on, have another look at Sherman and tell me that you are not smiling!



Sherman Palladium  
Palladium-plated

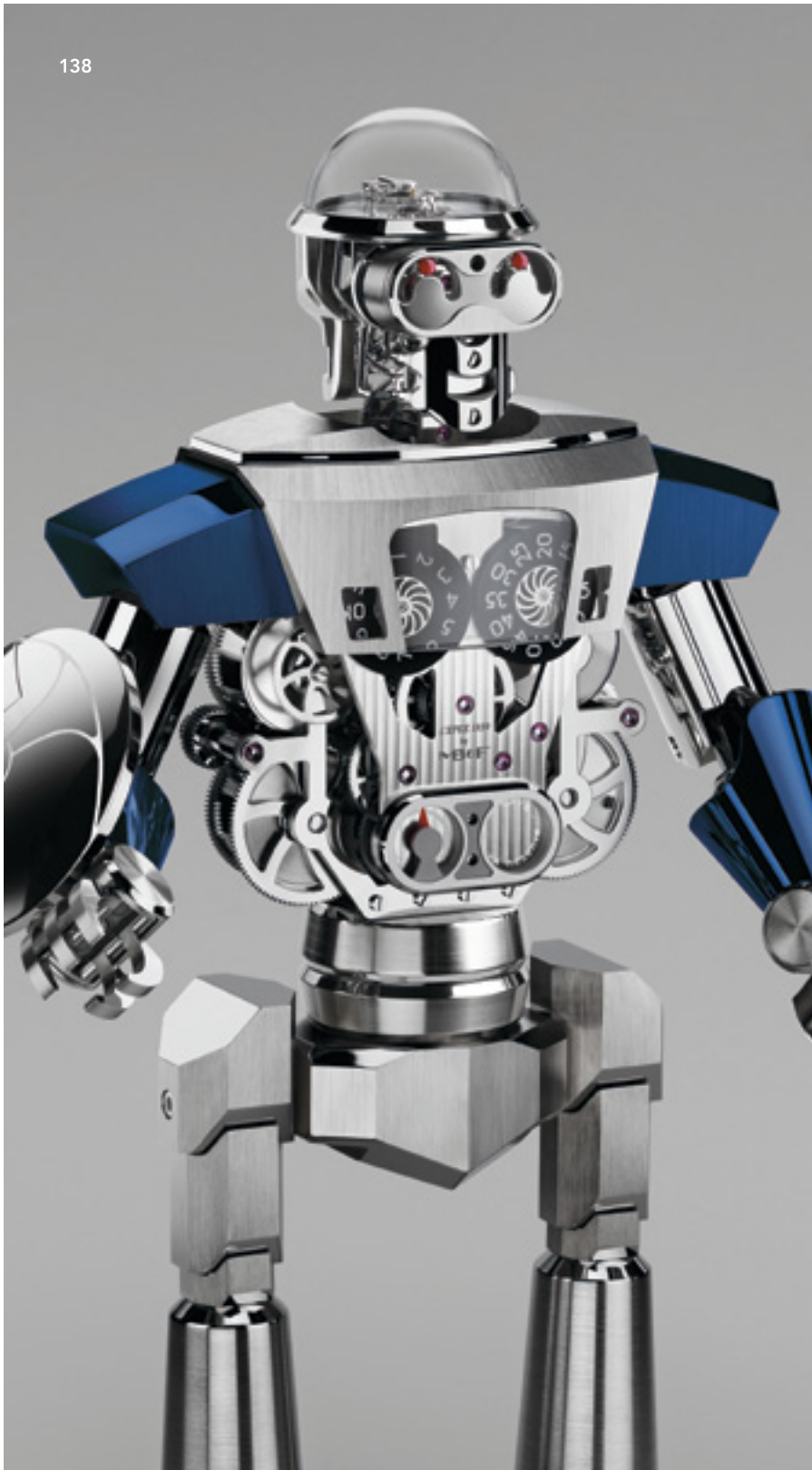
## L'EPÉE 1839

It's worth taking a closer look at the history of L'Epée 1839, which has taken all of MB&F's robotic horology concepts and designs to date and transformed them into sensational humanoid desk clocks. Founded in 1839 by Auguste L'Epée in Besançon, France, L'Epée initially made music boxes and watch components with a L'Epée hallmark signifying that all components were made entirely by hand. By the mid-nineteenth century, L'Epée was a leading manufacturer of escapements and regulators for alarm and table clocks as well as musical timepieces. The company had numerous patents on its then cutting-edge technology and won numerous gold medals at international fairs.

A L'Epée clock became the gift of choice for the French government to offer to VIP guests, and when the Concorde supersonic aircraft entered commercial service in 1976, L'Epée wall clocks furnished the cabins. L'Epée, now based in Delémont in the Swiss Jura mountains, specialises in high-end clocks, often featuring complications, all of which were designed and manufactured in-house. Ultra-long power reserves have become a signature of L'Epée, as the 35-day power reserves of Melchior and Balthazar testify.







## BALTHAZAR

If Melchior is the reassuringly large best buddy and Sherman is the joker, then Balthazar certainly takes on the role of Sherman's big brother... with the emphasis on BIG! If you were to accidentally walk into, let alone kick, Balthazar on the floor – not something I would recommend – you would hurt yourself. And it would be unlikely that the silver monolith would even move. Balthazar weighs in at over eight kilograms (18 pounds); however, on the plus side, he stands nearly 40 centimetres (16 inches) tall so you are unlikely to miss seeing him.

Whereas Sherman encourages you to smile, Balthazar encourages you to behave. And that's when he is in a good mood. You do not want to make Balthazar angry. While generally smiling, Balthazar has a darker side; he is two-faced, quite literally two-faced. He rotates quite tactily around the waist/hips, and you can feel the notch between each precision bearing as Balthazar turns, as well as a distinct click when the waist and hips are aligned.

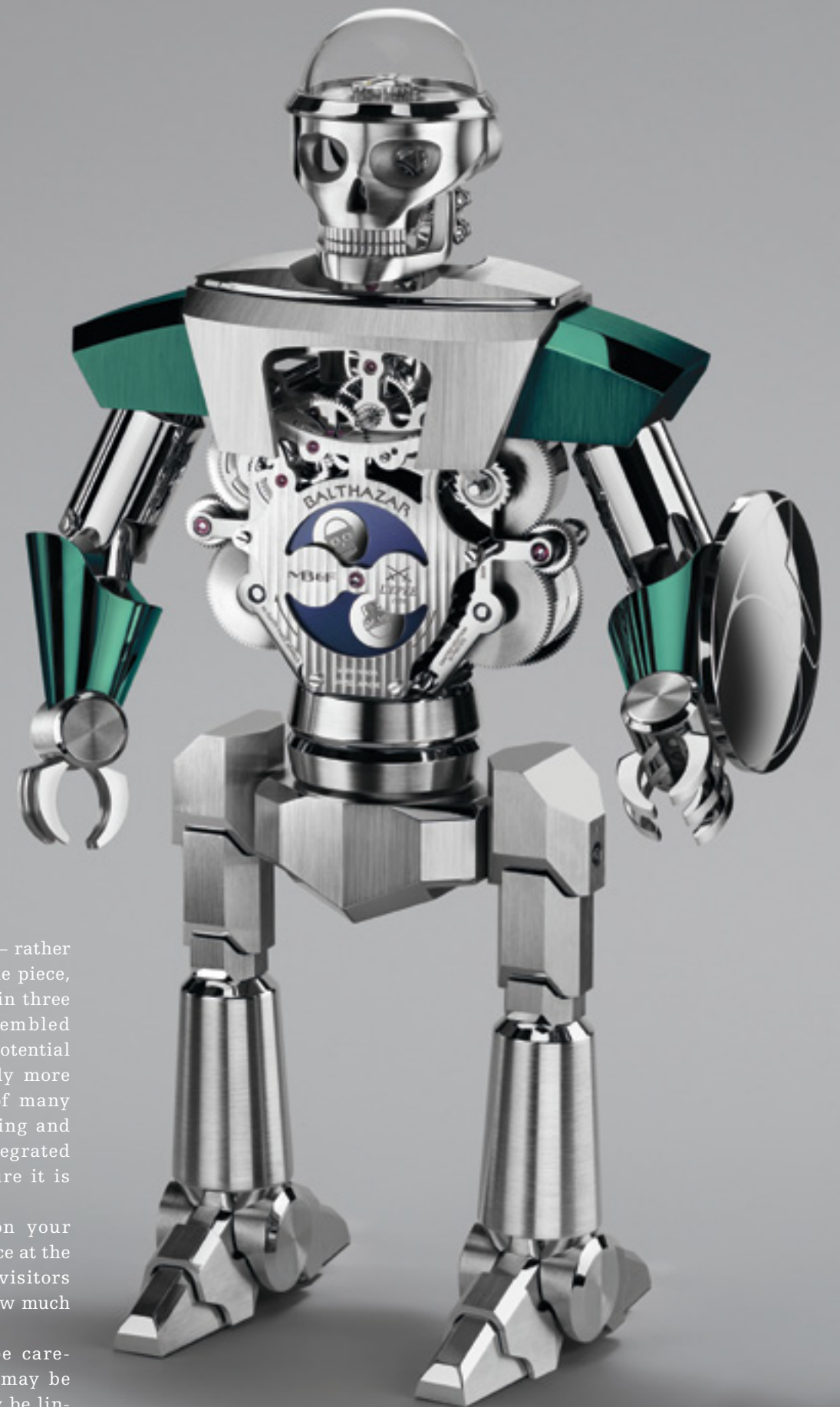
And rotated, Balthazar's cheery disposition is replaced by something much more sinister and threatening, with bright red Terminator-type eyes appearing quite suddenly (and startlingly) when viewed straight on.

Balthazar shares Melchior's l'Epée 1839 clockwork, however the gear train to the regulator (brain) had to be extended significantly due to Balthazar's much larger size. The clockwork gargantuan has a "slow" jumping hour complication advancing from five minutes before the hour and minutes displayed by two large disks on Balthazar's chest (good side). A smaller disk indicates how much remains of a possible 35 days of power. Completing the horological complications, Balthazar's eyes (good side) are not only in constant motion, they indicate the seconds in a 20-second retrograde motion controlled by a special cam... and the effect is as mesmerizing as you might imagine.

Balthazar's skull side (bad side) has a moon phase indication on the chest, which you can set by hand, with quite a well-engineered tactile feeling and the aforementioned Terminator eyes set deep into their sockets. Take a good look at the teeth: while it would have been quicker and easier to manufacture them as a block, each has been milled, polished, and set independently because that is what exceptional quality demands.

Even though Balthazar's legs are not articulated – to minimise

Balthazar Blue/Green  
Palladium-plated brass,  
stainless steel and glass  
Blue/Green breast  
and shoulder pads



any risk of falling over – rather than being milled in one piece, they have been crafted in three pieces each and assembled because the telescopic potential of the limbs is visually more credible. And in one of many nice touches, the winding and time setting key is integrated into the shield to ensure it is always at hand.

With Balthazar on your office desk, a quick glance at the robot's face will alert visitors to your mood as well how much time they may have.

So be good and be careful because Balthazar may be watching, Melchior may be lining up a rumble, and Sherman is always looking for some fun! ▀



# TEN YEARS OF MB&F

Written by Ian Skellern  
Technical Editor of *QuillAndPad.com*

MB&F launched back in 2005 with boundless enthusiasm and inordinate creativity; however, there was also relatively little money, and initially no watches either as Maximilian Büsser's movement supplier for Horological Machine N°1 had changed both ownership and priorities. But that, along with countless more trials, tribulations and yes, quite a few triumphs as well, have now become part of company lore. It has not been a smooth ride by any description, but MB&F can look back on its first decade with pride – for changing conceptions about what a luxury brand can be.

The tagline for MB&F's tenth anniversary was, "A creative adult is a child who survived", and here is what child survivor Büsser has managed to create over the last decade or so. There have been nine Horological Machines (HMs) to date, each a three-dimensional kinetic sculpture redefining the boundaries of the wristwatch: MB&F creates Machines that tell the time, not Machines to tell the time.

Legacy Machines (LM) on the other hand are MB&F's take on more traditionally-inspired watches, each model highlighting a specific complication, finish, or mechanism from the past; what MB&F might have created if it had been around a 100 years ago. The boutique brand now develops many of its movements in-house and LM Perpetual for example featured an entirely new and much improved perpetual calendar complication.

MB&F has also developed a collection of Performance Art pieces where other creators offer their own take on a specific Machine. And not to forget the clocks and Music Machines that resemble (or actually are) robots, spaceships, and even a large spider.

The first ten years even included three business-threatening financial crises. And yet, despite serious setbacks, MB&F still managed to create a succession of award-winning time-pieces plus open an international chain of playgrounds of mechanical art appropriately called M.A.D.Galleries (Geneva, Taipei, Dubai to date), in which to display them.

And then there are the awards, too many to mention but including the Grand Prix d'Horlogerie de Genève (GPHG) prize for Best Concept Watch in 2010 for HM4 Thunderbolt, both the GPHG Public and Best Men's Watch awards in 2012 for LM1, Best calendar Watch in 2016 for LM Perpetual, and a 2015 Red Dot: Best of the Best award for HM6 Space Pirate.

All of this was thanks to the vibrant community of passionate Friends, which includes MB&F's retailers, suppliers, collectors, and fans. The Friends concept, an integral part of MB&F since its very conception, is likely to ensure that the next ten years promises an even wilder ride than the last.





Written by Martin Green  
Freelance journalist and editor  
of *Timetation magazine*

# THE MB&F M.A.D. GALLERY

## Three Vibrant Cities, One Vibrant Venue

With the launch of the first M.A.D.Gallery, Maximilian Büsser extended his concept of MB&F into other artistic areas and created the perfect environment to display his Horological Machines. Here, the brand's "friends" are not watchmakers, but artistic visionaries in other fields that all have one thing in common: they create objects with a technical flair that makes an emotional impact. The galleries have collections on display that range from the sculpted motorbikes of Auto Fabrica to "optical variations" by Damien Bénéteau – and a whole lot more in between.

The ever-changing collection of items on display always gives visitors something to look forward to. When you visit a M.A.D.Gallery you never know what you may see, but you do know that it is going to be a wild treat!

This recipe for success first went live in Geneva's old town. There, in the heart of Swiss watchmaking tradition and around the corner from MB&F's head office, the first M.A.D.Gallery opened in 2011 on Rue Verdaine. Its popularity exceeded Büsser's most optimistic projections, and a second M.A.D.Gallery opened in 2014 in Taipei, the buzzing capital of Taiwan. There, too, the combination of mechanical technology and art was easily and casually embraced, making the gallery a hotspot of this vibrant city.

The successful recipe was repeated in January 2016, when Dubai welcomed the first M.A.D.Gallery of the Middle East. Its location on Alserkal Avenue puts it in the artistic heart of this futuristic desert city, right where it beats the fastest.

With a well-curated collection of objects, or Mechanical Art Devices as MB&F calls them, Büsser has also given new life to the retail concept of a brick-and-mortar location. By making it a place of discovery, surprises, and casual encounters with items known and unknown, the M.A.D.Gallery has not only become an inviting place to go to, but also one to revisit time and time again. And that continued interest of the public is exactly what made the M.A.D.Galleries such a success in the first place: it is the fuel that powers the ever-changing display of Mechanical Art Devices.



M.A.D.Gallery Dubai

Photography: Pierre-André Clergue



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Angus Davies is a self-confessed watch fanatic. His interest in watches has been a preoccupying obsession throughout his adulthood, with him often succumbing to the temptations of ‘just one more watch’. He has his own watch website, *Escapement*, which was founded in 2011 and he regularly contributes to magazines in his native England, as well as Switzerland and the US. Angus regularly travels to Switzerland to visit watch manufacturers and freely admits he has a keen interest in movement finishing and the work of independent brands.

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Born in Michigan, Elizabeth Doerr has dedicated most of her waking hours to mechanical watches since 1991. Despite having co-founded online magazine *QuillAndPad.com* in 2014, Elizabeth continues to regularly contribute to numerous high-quality publications all over the world, including *Forbes.com*, reaching millions of readers every year. Elizabeth is the author of 2010’s *12 Faces of Time*, described as a “love letter” to independent watchmaking by the *International Herald Tribune*.

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Although hardly ever on time, Meehna is fascinated by the mechanics and aesthetics of *haute horlogerie*. She loves how modern watchmaking is now daring to incorporate new materials and progressive ideas into the mix. However, she swoons for traditional and impeccable finishing.

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Victoria Gomelsky is editor in chief of JCK, a 145-year-old jewellery trade publication based in New York City. Her freelance work has appeared in the *International New York Times*, *WSJ Magazine*, and *The Hollywood Reporter*. She earned her MFA in nonfiction writing from Columbia University in 2002. She divides her time between New York City and Los Angeles.

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Martin Green is a Dutch national with familial ties to the USA. His love of fine watchmaking began after buying himself a Swiss wrist-watch to celebrate his 18th birthday. Martin is the editor-in-chief of *Watchisthis?!*, executive editor of *Timetation Magazine*, represents AOS watches, and is a contributor to *Quill & Pad*, and *Haute Time*. Martin, who has also written for *Monochrome*, *Christie’s Longitude*, *Troisanneaux*, and *Revolution*, also constitutes one-half of the luxury consultancy GreenKopp. A true gentleman, he has also developed his eclectic knowledge beyond beautiful timepieces and into other luxury areas.

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Sandra has channeled a lifelong passion for design and fine craftsmanship into writing about watches, jewellery, yachts, cars, architecture and objets d’art. With work published widely in Europe and North America, she has also produced three books about luxury goods, edited yearbooks for Rolls-Royce Motor Cars, and has advised owners of niche-luxury businesses on brand expression and strategy. Formerly Editor-in-Chief of *Revolution* (Middle East), since late 2015 she has overseen the relaunch of *Alam Assaat wal*

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Besides his wife and kids, Terence has two other loves: sports and watches. The former gets his adrenaline pumping – 80 per cent of the time, he is at the court, pool or on the roads but never at the office – while the latter piques his interest and enthusiasm – the who, what, why and how of watch-making never fails to fascinate him.

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Tom Mulraney is the Founder of *Luxury Content Creators Inc.*, a London-based digital media agency specialising in the creation of content for luxury brands. He also serves as the UK Editor for popular on-line watch magazine *Monochrome-Watches.com*. Although passionate about all things horological he is particularly fascinated by independent watchmakers, often travelling the globe for the chance to spend some “hands-on” time with their breathtaking creations.

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Barbara Palumbo writes the popular and humorous female-friendly watch blog titled *WhatsOnHerWrist.com* and is the Watch Editor for industry publication, *The Jewelry Book*. With a 20+ year background in wholesale and retail watch and jewelry sales, manufacturing, and marketing, she has written for a variety of publications over her two decades in the jewelry industry. Palumbo states that her strong suit is her ability to tell a written story in her own voice and without hesitation. She currently resides in Atlanta with her husband and two small children.

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Wong Kee Soon is the managing editor of Hong Kong-based *Manifesto* magazine. His offbeat observation of modern timekeeping is a result of being a good listener to folks who own Atmos clocks in their bathrooms and those who talk up the street cred of G-Shock watches. He believes that the most spot-on showboating wristwatch is a mix of handsomeness, humour, and a heap of hype – also the minimum criteria for a perfect Tinder profile.

**Suzanne Wong**  
Editor at Large of *Revolution*

Suzanne didn’t exactly fall into horology by chance (she was shoved), but after six years she’s decided she quite likes it here and can no longer remember what it’s like to know nothing about watches. She works with an amazing team on the world’s most intellectually and visually stimulating watch title. Her particular interests lie in reading watches as cultural and sociological artefacts, anchored at the crossroads of art and science. Suzanne has a curious phobia of referring to herself in the third person, but also believes in overcoming irrational fears through willpower.



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