

# RGM

## WATCH COMPANY

### ENGINE - TURNING "GUILLOCHE"

The vocation of making and decorating fine watches involves many skills that require concentration and precision. Perhaps the most fascinating of the decorative arts is Engine Turning, a centuries-old craft that, today, involves the use of antique machines to engrave delicate patterns on metal watch components. Also known as guilloché, the fruits of this craft-very nearly a lost art--can be found adorning all manner of watch parts including cases, dials and movements.

Engine turning is the act of cutting geometric patterns in a rotating metal surface with a stationary cutting tool called a rose engine. A similar type of engraving can be done with a straight-line engine, which is used for such patterns as Geneva stripes.

The application of guilloché is a delicate process. The craftsman (guillocheur) must mount the piece to be decorated on his machine and ensure that all components are properly aligned. Then, the intricate pattern is carved into the metal line by line (or, in engine turning terms, thread by thread). The engraver must be careful not to carve too deeply, and careful to apply consistent force for each thread-though this process involves machinery, the artistry and technique of the guillocheur are of great importance.



This complex machine consists of many intricate parts including wheels, pulleys and rosettes, the heart of the engine. Many, many rosettes are available to the guillocheur-they represent his repertoire of patterns, of which more than one is often be used to decorate a single watch.

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These

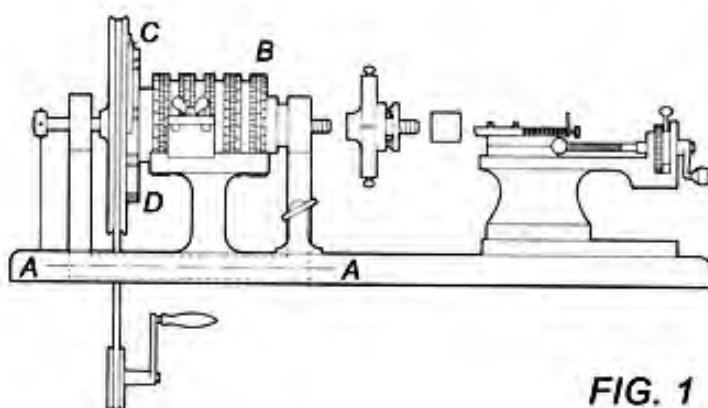
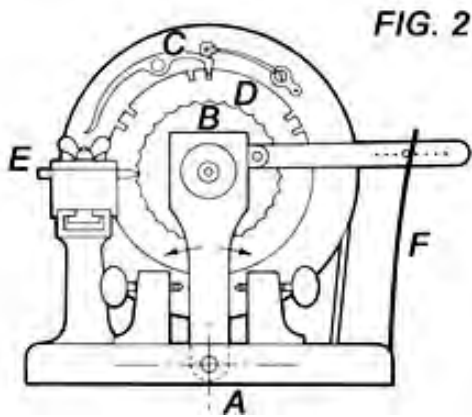


FIG. 1

classic machines, which were run by hand, are no longer produced. The last machines were manufactured around 1948-1949. Most of the machines used today to do this type of work were made between 1850 and 1948. Figure 1 shows a typical rose engine used for revolving work. The hand cranked, belt-driven headstock spindle revolves in the headstock frame, which is supported in the bed at two pivot points ( Figs 1 and 2 ) {A}. The rose barrel {B} is fitted loosely to the spindle and

locked by the pawl {C} attached to the spindle pulley and engaging the locking plate {D} of the rose barrel. The headstock frame is pushed towards the touch piece {E} by the spring {F} so that the selected rose or rosette rests upon the tip of the touch piece. As the spindle revolves, it rocks from side to side as the touch piece follows the shape of the rose as it turns. The cutting tool is held in a slide rest that is stationary and held by hand against the work as this takes place.



- [Video # 1](#)
- [Video # 2](#)
- [Video # 3](#)
- [Video # 4](#)

Rose engines for cutting guilloché have not been manufactured in over fifty years. Being an old and evolutionary art, there are earlier examples of guilloché on watches, including the famous dials and cases found adorning watches by A-L Breguet. Today, true guilloché is a luxury found mostly on high-grade timepieces. Because there are few available operating rose engines and fewer master guillocheurs practicing the art, such decoration is either not available or not within the budget of most firms who produce watches. It is an exclusive feature of fine watches.

RGM is one of the watch companies that is working toward the promotion and growth of this art. It would be easier to create their dials, as many other notable firms do, by stamping them from a form based upon a guilloché pattern, but this does not conform to the philosophy of watchmaking at RGM. It is a point of honor at RGM that they design and assemble their watches entirely in-house...similarly they refuse to cut corners when it comes to other important elements, including the distinctive textured dials. For some time now, RGM has exclusively utilized authentic guilloché on watches such as the William Penn and Classic lines. Though the process of cutting a single dial can take an expert craftsman up to three hours, there is no substitute for the beauty and elegance of hand-cut guilloché.



RGM has been actively involved in keeping alive this old-world craft by working with guilloché masters on two continents. Though it is a craft mainly associated with traditional centers of fine watchmaking and jewelry (Switzerland & Germany) guilloché has also been practiced in the USA and this is yet another American watchmaking tradition that RGM seeks to keep alive. They continue to rely on the master engravers who have served them so well to date, but RGM is also producing guilloché in their Pennsylvania workshop. Some antique engraving machines made by the venerable Swiss firm of Lienhard have been a feature of the RGM premises since the company moved into their current building in Mount Joy. Though they are striking and elegant, these machines are not simply attractive relics-both Roland Murphy and his chief designer have been working hard on these engines honing their skills as guillocheurs. Examples of their work include rotors for automatic watches, patterns for dials, case backs and movements. A noteworthy off-shoot of this endeavor is the pure enjoyment of the process of learning and creating-the budding RGM guillocheurs are excited about this new facet of their business and the possibilities it suggests.



These possibilities, with respect to the creation of distinctive timepieces, seem limitless to the RGM team. Their dedication to pursuing the craft of guilloché in-house and their continued support of the master engravers they have previously relied upon means that you are likely to see many more stunning watches in the RGM product line. The options available for the creation of unique, custom watches are also staggering.

Clearly RGM is dedicated to providing the best watches they can-true connoisseurs have long appreciated this-and it is remarkable that RGM will now be creating guilloché in their Mount Joy atelier. In addition to being at the forefront of modern American watchmaking, they are also actively working to keep more obscure, traditional crafts alive. Perhaps no other watch company in the world can offer timepieces that have been designed, assembled and decorated with guilloché by the same hand.

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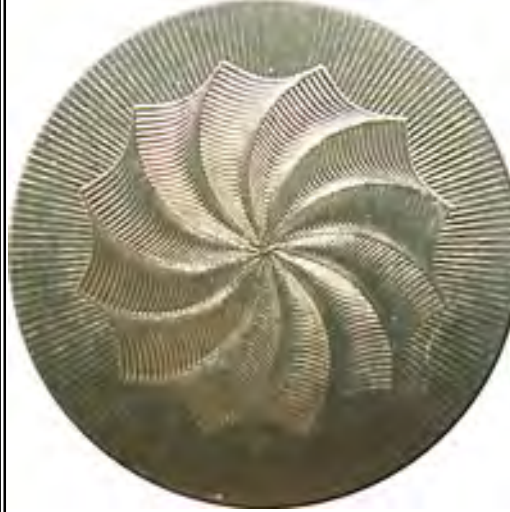
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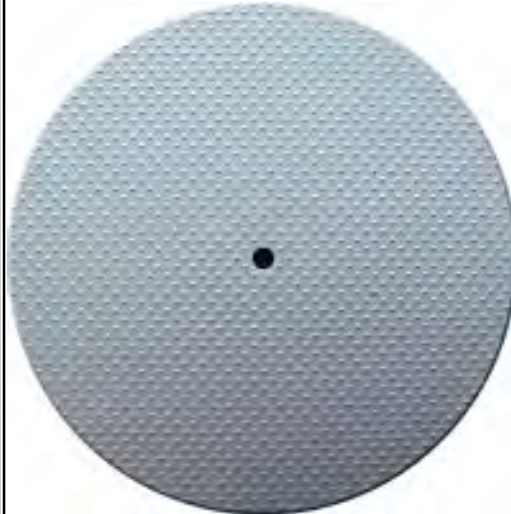
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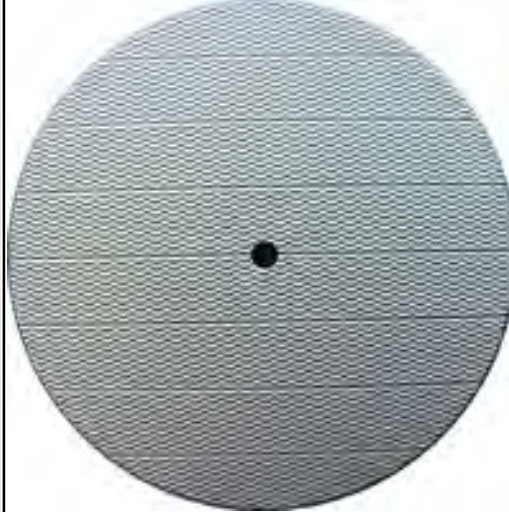
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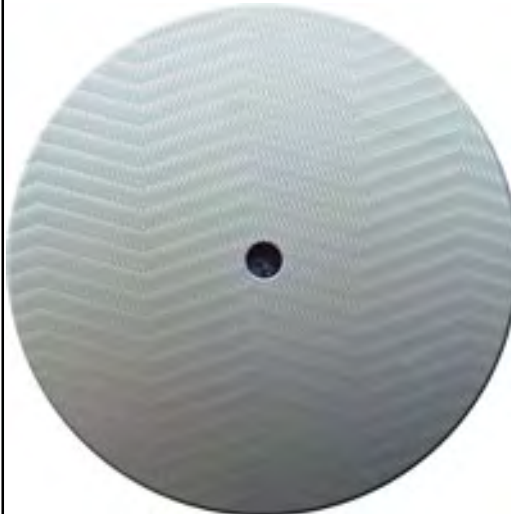
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[Back to Main Page](#)



## RGM Creating History

*Historically speaking, watchmaking as known today evolved in small workshops in the Swiss mountain region of the Vallee de Joux. Lancaster, Pennsylvania, famous for its Amish community, also has a rich watchmaking heritage that owes much to the famed Hamilton Watch Company, long America's foremost producer of fine personal timepieces. Since the decline of American watchmaking after World War II, there has not been a significant product made here that can rival the reputation of the Swiss watch. That is, until RGM.*

*RGM produces timeless classics reminiscent of the old Swiss watchmaking tradition. Just as legendary Swiss watchmakers personally sold their complicated movements and expertise to fascinated watch connoisseurs, Roland Murphy, RGM's American-born founder, is marketing his exclusive collection of custom-designed, mechanical timepieces with high-quality complications in the same fashion. Unlike many modern watch brands, the name behind these masterpieces is alive, well, and willing to personally educate and inform consumers about his creations.*

*Cherished by passionate watch collectors, RGM watches are crafted in extremely small series of 18k yellow or rose gold, platinum, and stainless steel. They feature hand-finished cases and such elements as engine-turned (guilloche) dials and blued-steel hands. In every case they are of the highest quality in their price range. Most components are Swiss made although some models feature American and Swiss made components. Every limited-edition watch is individually numbered and signed.*

*RGM is not a conventional luxury watch brand. Some of our watches feature exceptional complicated movement such as a Minute Repeating Perpetual Calendar, a Tourbillon, an Automatic Chronograph with Moonphase and a rose gold Skeleton Chronograph - just a few of RGM's highlights. RGM's reputation rests on its technical prowess and aesthetic beauty rather than a famous name.*

*"You're not likely to see the person next to you on a airplane wearing an RGM," Mr. Murphy says. "It is an exclusive timepiece for special collectors."*

*Mr. Murphy himself has a distinguished background. He is a 1986 graduate of the famous WOSTEP program in Switzerland, having previously studied watchmaking at Bowman school in Lancaster, PA. His dream was to create his own high-quality complicated watches. That dream began in the late 1980s when Mr.*



*Murphy was working in product development for a large Swiss watch company. He grew disillusioned with big watch corporations churning out mediocre watches.*

*Tired of compromises, he ventured out on a solo quest to produce his own high quality mechanical watch collection in the spirit of the finest practitioners of the craft. Mr. Murphy's decision is the watch collector's reward. The company christened with his initials, RGM, introduced its first watch in 1993 to rave reviews. Today it is among the most respected watch brands among serious watch connoisseurs.*

*"I make watches I like, and I hope other people like them," Mr. Murphy says. "Because RGM is small, each watch has its own special appeal--not just a commodity pumped out of a factory that changes ownership every five years. I may not have a 150-year history with a famous name, but I have the highest quality watches in each price range compared to others." And certainly the most respectable line of fine watches made in America over the last three decades.*

*An RGM watch can be had starting at about \$1,750, although the majority of the collection ranges from \$4,500 to \$26,000. Major watch complications, like its Minute Repeater Perpetual Calendar or Tourbillon, are the crown jewels of the collection exceeding \$80,000 to over \$100,000. Even still, RGM is considered a bargain. The quality of the \$1,700 RGM watch matches that of many other brands' watches costing many times as much.*



*Custom-built watches are also a specialty of RGM. Not many brands exist today that will make a single watch or even a small series on the demand of a customer. This is the realm of the hands-on watchmaker and is what helps set RGM apart from other small watchmaking firms. Your one-of-a-kind RGM might have a custom-built case of precious metal or simply use an existing case from the RGM line. You may choose to have Mr. Murphy custom-design a complication, or use a fine vintage movement, or specially decorate a movement of current manufacture. You may select from variations of existing dial designs or work with RGM's chief designer to create a personalized dial unlike any in the world. At large corporations, it's nearly impossible to access someone who knows everything about their watches. At RGM, Mr. Murphy is just a phone call away, adding a unique personal touch in today's impersonal business world.*

*"RGM watches are designed, finished, manufactured and sold through me, a watchmaker, or one of my representatives, not through a corporate sales machine," Mr. Murphy says. In fact, you will often find Mr. Murphy himself hosting product demonstrations at his highly-regarded retail outlets or representing his company at watch-collector conventions.*

*Did you know that many popular "Swiss watches" are not entirely Swiss made? Loopholes allow many brands to carry the "Swiss Made" moniker simply because their watches are assembled in Switzerland, despite the fact many of the parts are made in Asia. Although RGM's components are Swiss, German- or American-made, RGM no longer applies an artificial Swiss-made stamp on its dial because it's not necessary. The quality, which exceeds that of most Swiss watch brands, speaks for itself.*

*Recent additions to the RGM line include a Master Chronograph that uses as hand-decorated, vintage Valjoux 23 movement with column-wheel control of the timing functions. This venerable machine is decorated with perlage added by Mr. Murphy himself. Another special piece is a rose gold dress watch adorned on the dial with an image of the USS Constellation. The year 2004 marks the 150th anniversary of the launching of America's last all-sail warship and RGM has chosen to help celebrate this milestone with a limited edition of 25 watches. RGM also includes in it's catalog two series of watches utilizing stainless steel cases. These watches, the Classic and Pilot's Series, offer the same fine RGM attention to detail, but at prices more accessible to modest collectors. The Pilot's Series includes fine Swiss automatic and hand-wound clibers with easily readable military-style dials. Some are cased in elegant, thin cases and some in robust, oversized cases as is the current fashion. The Classic Series includes more formal and dressy watches in steel or gold. The focal point of these watches is the singular design of the guilloche dial. As lovely as these dials are in photographs, they cannot prepare one for the effect of seeing them in person.*



*Keep an eye on RGM. We are writing a new chapter of watchmaking--not just from an American perspective--and, without setting out to do so, are forcing the makers of fine watches worldwide to take notice.*

written by Keith Flamer (2000) and C. Bradley Jacobs (2003)

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