

Painting watch hands: nothing is bland in this jeweller's trade.

HAVE YOU EVER LOOKED CLOSELY AT THE REGULAR DANCE OF YOUR WATCH'S HANDS? THOSE LITTLE "STICKS" INDICATE THE TIME WITHOUT EVER TOUCHING EACH OTHER.

THEY HAVE ALWAYS BEEN A DIFFICULT NUT TO CRACK, FROM MAKING THEM TO PUTTING THEM IN PLACE, BECAUSE ALTHOUGH OF INFINITESIMAL WEIGHT, THEY NEVERTHELESS AFFECT THE REGULAR OPERATION OF THE MOVEMENT. IT IS NOT ENOUGH TO PUT THEM IN AND DECLARE THE JOB DONE; THE HANDS HAVE TO BE ADJUSTED FOR TIME TO BE MEASURED WITH PRECISION.

# Time

The hands that tell the time



## HISTORY

The first clocks began to appear in the 16th century. At the time, they bore a single hand, showing the hours. In 1691, the minutes hand made its first appearance. In these years, the hands were made wholly by hand. A single pair of hands required two days' work...

The hands were given names describing their form or were named by the maker.

Naming all the types of hands is simply impossible because watchmakers often modify and rebaptise them. However, there are some hands that we might dub 'classic', such as the baton, skeleton baton, leaf, dauphine (or Geneva hands), Breguet antique, Breguet corps droit, Breguet Empire....



## MANUFACTURERS OF HANDS

At the beginning of the 19th century, there were about 60 makers of hands for watches, but today, thanks in part to the modernisation of the equipment, there are about half a dozen in Switzerland, located in the main watchmaking zones, along the arc of the Jura, in Geneva (Fiedler), at la Chaux-de-Fonds (Universo), Fleurier (Waeber), Granges (Estima) and Bienne (Aiguilla).

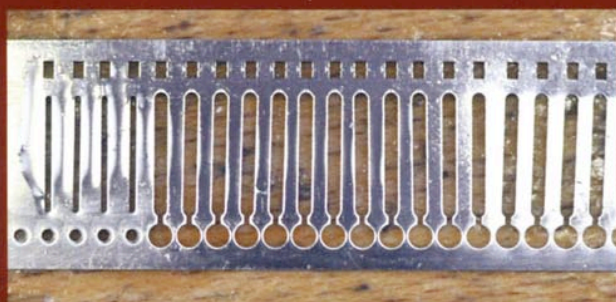
In order to ensure their unique know-how survives, together with the quality of their production, the manufacturers have formed an association called the Groupement des fabricants suisses d'aiguilles pour l'horlogerie (GFSAH, or Group of Swiss Manufacturers of Watch Hands).

Swiss Watch Makers has had the privilege of meeting one of these manufacturers to explain something of this exciting skill.



1 - A jumble of watch hands looking like a work of art.

2 & 3 - The raw material will become an indicator of passing time.



A band after the watch hands have been cut.

## A MEETING WITH ISABELLE CHILLIER, DIRECTOR OF FIEDLER IN GENEVA

This independent, family-owned business is one of the oldest manufacturers of watch hands, dating from 1848, and is today headed by the fourth generation. Respectful of the watchmaking trades, but also responsive to technical and technological advances, the Fiedler firm provides perfection and precision while integrating new processes. The secret lies in a know-how that has been passed down from generation to generation, especially as regards the celebrated "hand-finishing" that leads to an unequalled quality able to satisfy clients' every expectation. Here, the materials used are gold, brass, bronze and Pfinodal (a copper alloy). The last often provides an alternative to gold for use in hands for chronographs or hands that are reset. Steel is not used at Fiedler, as their products are destined for top-of-the-range watches.

A manufacturer of watch hands entails a wealth of crafts and industrial know-how required for the whole production process. It is a blend of technical requirements with extreme precision (with a tolerance of one micron), needed so that the hands may be fitted correctly, and of a quality and aesthetic work for a result meeting the watchmaker's requirements. There is no training for this original trade: the only way that exists to learn is to gain experience with a professional in order to acquire the necessary knowledge.

Some watch hands can require up to 40 operations, from production to the finishing touches. Here are some fundamental steps in the production of a classic baton hand.

First of all, the bands of metal (gold, brass...) are milled, then the hands are cut from the band by a stamping press. Several cuts are needed if the hands are skeletonised. Only 10% of the band is used. The scraps of gold are recovered and sent back to the supplier to be recast.

Then comes the finishing stage: the uppermost side of the hand is abraded and polished. If the piece is a gold hours or minutes hand, it moves on to the next stage. But if of brass, it is electroplated to be given the required colour.

If, on the other hand, this watch hand is for the seconds of for counters, it is clinched (the bore is clinched semi-manually to slot it into the pivot). If of gold, it is sent directly for insertion. Otherwise, the hand continues its progress for finishing either with a coat of paint and/or with a coat of luminescent material applied by hand to the back of the hand. The pieces are then all controlled (100% quality control at Fiedler). Then they are slipped one by one into pockets set into cards (ten pairs of watch hands per card), using tweezers. This is a detailed task undertaken by hand naturally, and which cannot be done by machine. A final control of the watch hands on the hand is then effected. During this final control, the largest number of rejections are for aesthetic reasons. And at last, the watch hands are ready to be sent to customers.

As you can see, the watch hand is an integral part of the watch, except for a few exceptions (digital displays, using rollers or a chain...). Particular care is taken with it because it points at the time and hence those who offer it. So it is worth paying homage to them by taking a closer look; they often very complicated and marvellous to look at.