Clock Making in the Black Forest

Reprinted from *The Jewelers' Circular and Horological Review,* November 1886.

The following report of Frank W. Ballou, United States Consul at Kehl, Germany, has just been published by the State Department:

There is scarcely a city in Germany or in Europe, perhaps outside the limits of this continent, where one cannot find clocks from the Black Forest. It is rarely the case that a branch of industry becomes so extended as the above mentioned, and the Black Forest clocks have become typical for the description of the idea conveying the comfort and snugness of a South German home.

Owing to the barrenness of the soil and the custom in the Black Forest region that farms belonging to a father's estate can only revert to the eldest son, the other children of the family, who were and are still, as a general thing, numerous, were obliged either to emigrate or to engage in mechanical labor of some kind, which was made easy and profitable owing to the magnificent forests furnishing the necessary wood.

As is shown by reliable data the manufacturing of wooden ware, such as turners' and coopers' articles, was carried on largely in the time of the Emperor Rodolphus of Hapsburg. Afterwards the making of tin spoons, brushes and other wares began. Towards the end of the seventeenth century farmers who could not maintain their families from the products of their farms began to engage in clock making. Poor cottagers without property, but with inventive genius, and dependent upon the labor of their hands, became the patriarchs of clock making. Their sons and their apprentices introduced this industry in the districts where it is to-day a flourishing business. The case and movement of these clocks were made with tools of the very plainest description, such as a pair of compasses, a little scroll saw, augers, and a knife. These wooden clocks proved to be a fortunate invention; they found a good sale and awakened the artistic talent of their inventors. The art of clock making was still the monopoly of the patriarchs, their sons, and grandsons, but the inventive genius that is inherent to the inhabitants of the Black Forest united the different experiences gathered in various workshops and made use of them, so that the local extent of this clock industry became largely increased.

In the middle of the last century clock making in the Black Forest was already carried on in all the localities where it now exists. The construction of such a wooden clock with heavy weights was very plain. It consisted of three wheels only, a vertical swing wheel put into motion, a balance resembling a yolk, to which were attached several leaden weights in order to regulate the movement of the clock. This construction was, however, abandoned in 1740. It was supplanted by the pendulum clock. At first the pendulum was placed before the dial, afterwards a long pendulum was arranged behind the movement. All these clocks had to be wound up every twenty-four hours. Some of them were made to strike every quarter of an hour; clocks with automatic figures, such as peasants, soldiers that sounded a signal at the end of every hour, etc.; also clocks that recorded the month and days as well as the hours.

About the year 1750 they adopted movements made of wire instead of wood; afterwards metalic wheels were introduced. Since the year 1750 they manufactured very neat little carved clocks with weights, which were called "Jockele-Uhren," from their inventor, Jacob Herbstreit. At the beginning of this century clock making had become quite extensive and brought large profits to manufacturers. From 1830 to 1850, however, this industry did not prosper, owing to the stubborn preservation of old shapes and the manufacturing of clocks of inferior quality. With a view of stopping this decline a technical school for clockmakers was founded at Furtwangen, the center of the clock industry, in 1850, under the direction of Mr. Gerwig, who afterwards became one of the builders of the St. Gothard Railroad. Its purpose was to educate persons in the making of clocks, and to have this industry keep up with the times and progress manifested in other countries, and also to introduce the manufacturer of watches.

The latter project had to be abandoned owing to foreign competition, but in other respects the influence of the school was soon felt, for since that time they make better and finer clocks, which answer more the requirements of artistic taste. After a twelve years' existence, when the task of the school was considered to be accomplished, it was dissolved; however, professional schools were founded in the principal localities of the Black Forest, in order to give the necessary technical knowledge to apprentices.

Prominent manufacturers also organize exhibitions showing the condition of clock making, and the progress made therein. Although modern, fine clocks are principally made, there are still establishments which produce the traditional old-fashioned clocks, such as they made 150 years ago, with the primitive wheels and the plain wooden dial. This is less due to the adherence of the Black Forest inhabitants to old tradition than to the fact that these clocks are still largely sought for on account of their durability. At one time the maker made everything that belonged to a wooden clock. But soon the increase of sales rendered a division of work necessary. No sooner did the clockmakers see that their products went off rapidly than they left to others the preparation of those parts which required more care than art. This was the first step towards that astonishing development of this industry, because it gave time and leisure to the artist to entirely apply his talent to new inventions and improvements.

Owing to the increasing demand it became necessary to divide the various branches of the clock industry, but the latter retained nevertheless the character of a house industry, because the

workmen are not employed in factories, they are small farmers, having an acre or two of land with some cattle, and their spare time is devoted to making parts of clocks. This system will undoubtedly remain, owing to the peculiarities of the Black Forest and the character of its inhabitants. The division of labor for a Black Forest clock is as follows:

(1) The wood cutter, preparing the wood of beech trees for the case; (2) the case maker; (3) the maker of the plate (shield); (4) the painter; (5) the founder of the bell and wheels; (6) the chain maker; (7) the spring maker; (8) the carver; (9) the dial maker; (10) the decorator of the case, and (11) the maker of the primitive movement.

In the Black Forest there are 92 communities engaged in this industry, with 1,429 independent clockmakers, giving employment to 7,526 operatives. In 1796 these workshops turned out 75,000 clocks; in 1808, 200,000, and in 1880 the total production was 1,800,000 clocks. In the city of Furtwangen were manufactured over 400,000 of these.

The first clockmakers only made a few clocks for the surrounding farms. The favor these clocks met with determined some dealers in glassware and straw hats to take them among their articles. The net profit they realized was so considerable that it excited the envy of clockmakers, who upon that experience sent the clocks on their own account to the neighboring large cities in Brisgovia and Suabia. They gradually extended their trade, and divided the markets in the different provinces of Germany among each other; some of them even traveled to Asia and Africa. The Black Forest clocks are sent to all points of our globe.

Germany takes all kinds of clocks, from the finest regulators to the plainest wooden clock.

Austria buys only cheap articles, such as chain-work clocks. The high entrance duties are an impediment to the trade.

Switzerland has a predilection for trumpeter and cuckoo clocks for the use of strangers, and drag-spring clocks for the native population.

England takes trumpeter and cuckoo clocks and regulators. Some years ago there was a good demand for cheap clocks with weights, but this has materially decreased, owing to the sharp competition from American manufacturers.

France bought no clocks for several years immediately after the war. At present they buy many carved clocks, called "Schottuhren."

Belgium and Holland require wooden clocks with bronze frames.

Russia imports a large number of carved regulators, also light day clocks in polished cases, to be used on Russian farms.

Turkey desires mostly cuckoo clocks, with paintings.

Spain and Portugal buy bronze-framed, carved clocks, with weights.

The United States takes trumpeter and cuckoo clocks with painted dials; also many regulators and muscial clocks.

The exportation of the clocks to the United States is steady, and will aggregate $50,000 per year. During the summer months the Schwarzwald clock region is visited by many Americans, and nearly every visitor purchases one of these clocks. They are very attractive and appear to be cheap, but in many cases they are made to be sold only, and an attractive exterior may induce many to purchase an almost worthless article.

One cannot be too particular when purchasing one of these clocks, for when the cuckoo will not coo any more, and the trumpter will not blow another blast, then is their value as curiosities gone, and when, after a few months, they become valueless as timekeepers, then are they very poor stock indeed. I have heard so many complaints from people who have purchased these clocks in regard to their general poor quality, that I deem it my duty to make this fact public, and also to inform would-be purchasers that, if they wish to avoid disappointment, they should be very particular where and of whom they purchase, and in no case to purchase of irresponsible parties. A few inquiries will generally disclose the required facts.

INGLESIDE TERRACES SUNDIAL MAKES THE GUINNESS BOOK

by Colleen Clausen

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In October 1985, Robert Karis submitted measurements of the Ingleside Terraces to claim for the neighborhood the world's largest sundial. He never heard from the Guinness folks after the letter confirming receipt of his claim, but the Ingleside sundial is indeed the world's largest, according to the 1987 edition.

Karis, along with sons Dirk and Andrew, both Lowell students, measured the gnomon (column) of the dial and found it to be 28'4". He submitted the measurements to dispute the world's largest title given to a 25' gnomon in Richmond, Virginia. Though Karis' measurements differ from those listed in the manual of Ingleside Terraces, he is solidly convinced of his accuracy, since Andrew climbed to the top with a mechanic's tape measure. The measurements were double-checked, and a simple trigonometric calculation confirmed that the sine of the angle does indeed equal the height divided by the hypotenuse. "As the measurements agree to within 1 inch," he said, "I am sure that we are correct."

The sundial, located on Entrada Court, has a vertical height of 17' 1"; the diameter of the clock is 33' 10"; and the 28-foot-plus gnomon is at an angle of 37° to the ground. The stone marker at the sundial's base lists the dedication date as October 10, 1913, the same year that the Panama Canal linked to the Atlantic and Pacific.

Prior to 1985, the *Guinness Book of World Records* had not listed sundials. When Karis saw the Virginia entry in the 1985 edition, he recalled that neighbors had often told him the Ingleside sundial was the largest in the world. He decided to check it out. No one knows if Guinness verified his measurements, and there was no award for his efforts. But thanks to his interest and perseverance, the 73-year-old giant sundial is now properly recognized.