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CHARLES BARBEZAT-BAILLOT: FOUNDER OF LE PHARE AND MACHINES DIXI

by William G. Kapp (CA)

Editor's Note: Mr. Kapp is a 51 year-old investor and economist who has an avid interest in watches. This is his first article for the BULLETIN.

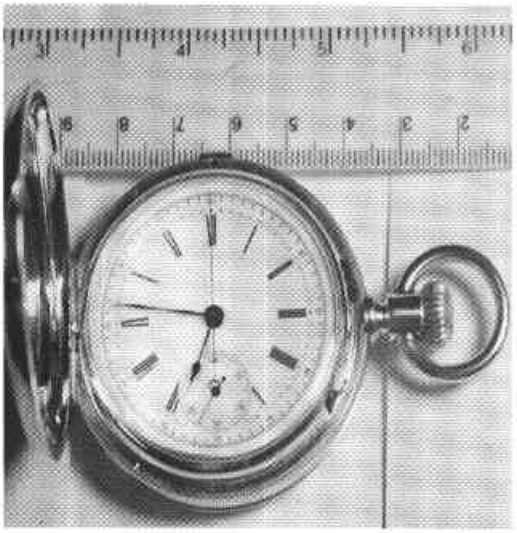
Charles Barbezat-Baillot was a watchmaker and entrepreneur extraordinaire, a man of vision now nearly forgotten. I hope to remind readers of him and his accomplishments.

About 10 years ago, my father saw an ad in the local paper offering to buy old jewelry at gold value. As the price of gold was nearing $800 an ounce, Dad answered the ad and was offered a thousand dollars for his grandfather's pocket watch (Figures 1A and 1B). He told me he wanted to sell the watch as he did not attach any sentimental value to it. This was the first I had heard of the watch, but I told Dad I would give him a thousand to keep it in the family. There was no inscription on the watch and Dad had no idea how his grandfather had come by it. His sister had had it cleaned recently and had given it to him. I put it away and didn't even think about it for eight years.

Two years ago I met NAWCC member John Maloney and in the course of conversation, I mentioned the watch. A few days later, John looked at the watch, told me it was a high grade Swiss chronograph. Though the movement was signed Barbezat Baillot, the maker was unknown to him. John let me browse through his back issues of the BULLETIN, and I began to get interested in watches. I started a small railroad watch collection, joined the NAWCC, and Los Padres #52 Chapter.

I went through all the old BULLETINs in the Los Padres Library and every book they had that dealt with European watches. I sent away to the National Headquarters Library for every book that looked promising, and even ordered books through our local library. Kathleen H. Pritchard's articles seemed most promising and I keep hoping she will publish more material. I realized that the period from 1880 to 1920 has not been profusely written about from the European standpoint. In reading the BULLETIN, I became aware of an emerging pattern in the development of our knowledge about American watches. An article will appear on some little known facet of watchmaking or industrial development; some astute reader will offer comments, corrections or speculations; other readers will contribute their observations and knowledge; and little by little a large body of information is revealed to the membership. With this in mind, I would like to share what I have learned about Barbezat-Baillot, hoping that the reader will understand that I make no pretensions to scholarship, have never disassembled a watch, much less make claim to watchmaking, and my French is spotty as I have neither read nor spoken it in the last 25 years. I am simply a collector of beauty with

Left, Figure 1A. Front view of unsigned dial of Grandpa's watch. The lever does not pull out but slides toward the 4 p.m. position, chronograph button at the 12 o'clock position. Right, Figure 1B. Rear view of high grade watch signed Barbezat Baillot.



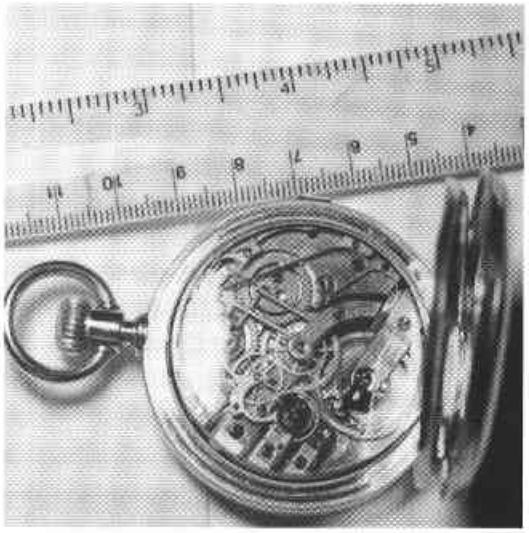


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Figure 2. Circa 1900 business card listing awards and using sales location in Geneva.

questionable taste and an avid reader of any subject that takes my interest.

My grandfather's watch is approximately 45 mm across the dial which has roman numerals for the hours and arabic numbers on the outside of the dial every five minutes; the seconds are divided into fifths. It is stem wind and lever set. It has an 18K Hunter case with two back covers and a glass over the movement. It has a flyback chronograph attachment and the name "Barbezat Baillot" inscribed upon the bridge along with the serial #19122, which is also stamped on the covers. A trademark on the case, a large "J" superimposed on a small "S," was used by Jeannot and Schiebler of New York until 1910.

My first clue to the identity of the maker came in reading *Technique and History of the Swiss Watch* by Eugene Jaquet and Alfred Chapuis. Charles Barbezat was born March 6, 1847, in Les Bayards (Neuchatel) and died at age 91 on January 24, 1938, in Les Brenets (Neuchatel). While references give his name as Barbezat-Baillod, the Baillod being the maiden name of his wife, he signed his ads and watches Barbezat-Baillot, so it is safe to assume that is what he wanted to be called. It is not known which schools he might have attended, but a 1988 Le Phare ad stated that he worked with the family firm. His first firm was Guye and Barbezat which he founded with Henri Guye (1839–1877). Although Guye died in 1877, Barbezat continued to work under that firm name. C. Barbezat won the gold medal in Gronique in 1880, the grand prize in Amsterdam in 1883, and one of only two Grand Diplomas of Honor awarded to Swiss firms at the Amsterdam exhibition in 1883. The other went to Patek Philippe Co. Shortly after receiving that honor, the company name was changed to Barbezat-Baillot. In 1888 the company name was changed to Le Phare. He set up shop in Le Locle, preferring the integrated method of production to the traditional craft method of organization. In 1889 he received the Gold Medal at Paris; in 1896, a Gold Medal at Geneva; in 1897, the *Hors Concours* at Brussels; in 1900, the Grand Prize at Paris; in 1905, the *Hors Concours* at Liege; and in 1906, the Grand Prize in Milan (Figure 2). His advertisements also claimed first prize at the observatory. He is credited with being the inventor of the silent governor, a device that hopefully some of our readers will be kind enough to expound upon in the future.

The shop, "Manufacture d'Horlogerie Barbezat-Baillot," was located at 35 Rue de la Cote, Le Locle. It still stands and is today the home of Dixi Defense Division (Figure 3).

LE PHARE

Judging from the preceding information, it is obvious that C. Barbezat was a watchmaker of exceptional skill, acclaimed by his contemporaries. Considering what is to follow, it is incredible to me that he has been nearly lost to history. I earlier mentioned that he preferred the integrated method of production. It is to be remembered that this innovation was not readily accepted by the Swiss and resisted by the craftsmen of the time. Other attempts were met by near riots and financial disaster which accounts in part for the ascendancy of the American watch during the period of 1880 to 1920.

Cooksey Shugart tells us that 60 percent of all repeaters produced in this period can be credited to Le Phare. To capture this large a share of the market proves how successful his integrated production was. A sales brochure for 1905 lists some of the products he offered, and his business cards and ads offer customers any combination of repeater, chronograph, counter or complication they desired. In 1905, in order to provide customers with any combination of complications they ordered, there were over 3,000 parts to deal with. It was by assuring parts and service that Barbezat was able to capture his market share. Le Phare was the first factory in the world to manufacture a complicated watch in its entirety under one roof using mechanized procedures. They could therefore charge a lower price for a good quality watch. Because of them, repeaters were no longer solely the property of the privileged. How they did it is another piece of horological history largely forgotten by the world. I would like to continue on with the history of Le Phare and return to this point later.

Operations proceded apace until 1915 with some fluctuations due to business cycles. But in 1915, because of economic necessity, Le Phare and its subsidiary, Dixi were taken over by the Zenith Company of M. Georges-Favre. By 1918 the new di-

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rector of Zenith, James Favre, began to slow down operations at Le Phare, and by 1922 Zenith divested itself of Le Phare and its subsidiary. Subsequently, in 1938 Le Phare moved to La Chaux-de-Fonds and its subsidiary, Dixi, remained in Le Locle. As late as 1970, Le Phare was the second largest producer of chronographs in Switzerland. In 1984 the company changed its name to Le Phare-Jean d'Eve. In 1905 the company employed 200 people; today the company's products are sold in 48 countries (Figure 4).

MACHINES DIXI

In 1902 the House of Barbezat Baillot hired William Albert Perrenoud to work under the direction of his cousin, Alfred Perrenoud-Jacot. It was Barbezat-Baillot's intention to create a department for developing horological machines. By 1905 this department of 29 employees had developed many prototypes and had brought Le Phare to the forefront of the industry (Figures 5A and 5B). This department was named Machines "Dixi." Subsequently it was discovered that a company in Bienne had registered this mark in 1904 and Le Phare purchased all rights to this trademark in 1915. The significance of this little machine shop is to be realized by reading *Technique and History of the Swiss Watch* by Jaquet and Chapuis, pages 210 and 211 and plate 171.

"In 1910 a well known mechanic of the firm of C. Barbezat-Baillod of Le Locle, M. Perrenoud-Jacot, introduced a new machine for pointing and measuring; this was the prototype of the pointing machines and jig borers which are today in general use, not only in the watch industry but also in 'mechanical engineering. . . .' [Figures 6A and 6B]

"It is curious to note that, before 1910 there was no machine which could perform this simple operation with the necessary degree of precision. . . . The firm of C. Barbezat Baillod which specialized in the manufacture of automatic machines, very wisely attached more importance than was usually given at that time to the shapes and dimensions of the frame and accessories of these machines. . . . In watch making, the pointing machine led to the process which consists of rectifying simultaneously all the holes on the bridges and the plate. This was a great step on the way to interchangeability. . . ."

It is interesting to note that here Barbezat is remembered for his pointing machine and one would not

Figure 3. Le Locle original home of Le Phare and presently occupied by Dixi, 35 Rue De La Cote. Note the spelling of Baillot.

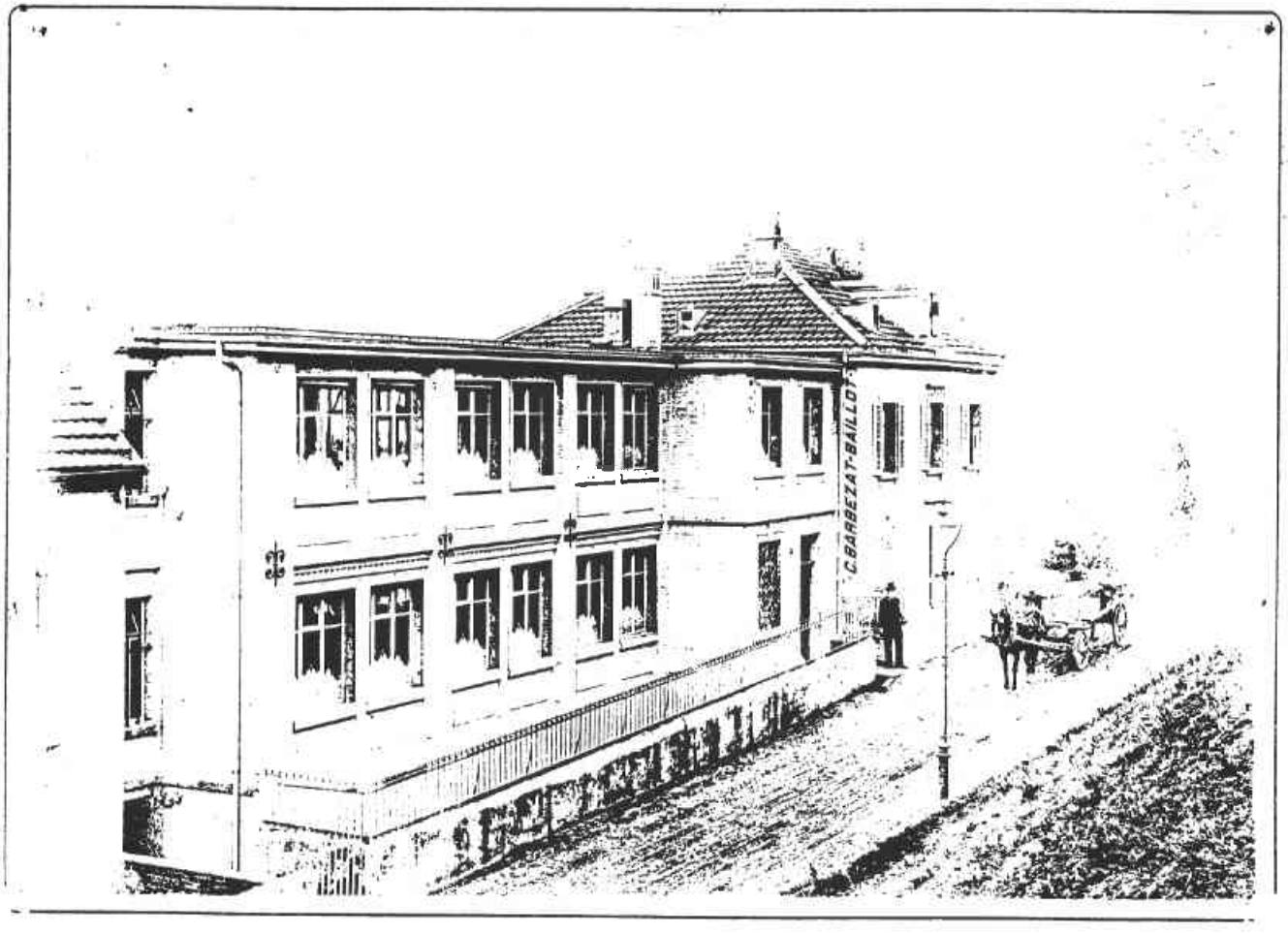

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Figure 4. The centenial ad from Le Phare featuring a photo of Charles Ami Barbezat and wristwatches of the last five decades.

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Figure 5. A 1906 photo of Dixi employees. Standing second row from the top on the far right is Alfred Barbezat. Standing third row from the top, second from the left is William Perrenoud, a chief engineer of the factory. (Identifications provided by R.W. Perrenoud, son of William Perrenoud.)

realize that in fact his was primarily a watch factory. In point of fact, the machine was in operation as early as 1906, and it wasn't until 1910 that Dixi decided to market the machine. As part of the marketing effort, they submitted the machine to the *Society for the Encouragement of the (Swiss) National Industry* in Paris and in July 1912, M. Marre issued a report concluding,

"You see Sirs, by the description of this machine and the indications of its usage, what service it is able to give in the interchangeable fabrications of watchmaking. . . . In consequence your Committee of Economic Arts proposes to thank again M. Barbezat-Baillot for their very interesting communication."

In more recent times, the Fédération Suisse Horlogère has done some research and belatedly acknowledged M. Barbezat Baillot.

"Before 1900 Le Phare constructed a series of calibers and repetitions. The parts of each series were interchangeable. . . . One remembers the vogue of defeatism that traversed our industry between 1918 and 1922. One complained perhaps more at home than abroad about the bad quality of our bracelet watches. . . . But the fabrications of watches is very complex, the adaption to new ways is not instantaneous. . . . When one proposes a machine, of a method of work which deviates revolutionarily some years later, it is necessary to speak here of two men, disappeared today. The audacity to propose to the watchmakers a machine of 3000 or more francs to replace tools that had given good service . . . it was not deemed useful or necessary. . . . C. Barbezat and his chief technician, Alfred Perrenoud-Jacot, without encouragement, pushed only by their vision, plenty of optimism and the spirit of enterprise by the first, plenty of experience and tenacity by the second, . . . created the pointing machine. To our knowledge no one has acclaimed the accomplishments of these two men to the moment of their disappearance. It is fair that one remembers here their role."

Le Phare (Dixi) was nearly 20 years ahead of their time. Customers for their machines were scarce; the workers were not happy with the new methods. The machine shop did not prosper, but the watch factory, as stated earlier, captured an amazing market share. In later years workers would come to see that while some craftsmen would be displaced, new crafts were being founded. Needless

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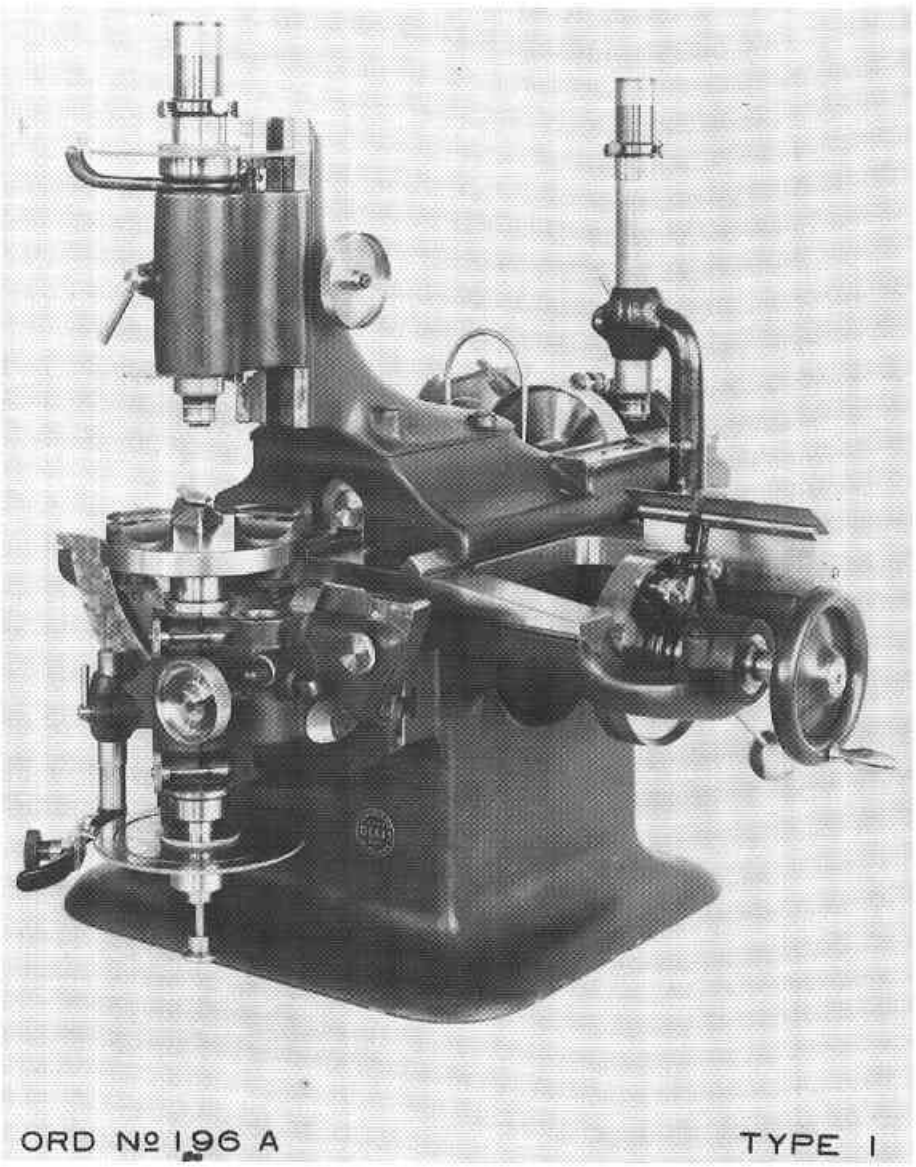

Figure 6A.

to say, the watch industry itself, adapting to the new production methods and tools, was revived in the 20's and 30's in Switzerland. I refer of course to market share, as the worldwide depression of the 1930's cut total world production, but only the Swiss were positioned to survive into the 50's and 60's.

The Machine Dixi was not a commercial success, and in 1922, Georges Perrenoud, of no relation to the two cousins associated with the early Dixi, associated himself with Le Phare. He was a mechanical engineer and entrepreneur of some long standing, having assumed a leading role in his father's business in 1902 at the age of 17. By 1927 he was in a position to negotiate with Le Phare for control of the Dixi subsidiary, and on December 27 of that year formed Dixi S.A. He purchased all rights, equipment, real estate, designs and clients for 220,000 francs. Initially he controlled 37.5% of the stock and by 1933 had acquired the rest. He guided the company through the depression and until his death in 1952 was its sole owner and president. It was he who made it successful and nourished it from its struggling infancy and he is regarded today as the founder of the company. In 1959, Paul Castella became the sole owner and president and is the present guiding force behind the company. Unlike American companies, Dixi has never paid a dividend; all profits have gone to continued research and development and expansion.

By 1979, Dixi was composed of seven divisions, employing over 800 people and occupying 50,000 square meters of factory. Actually the Groupe Dixi-Mecanique is formed of the following societies: Dixi S.A., Dixim S.A., Cylindre S.A., Manufacture Des Montres Paul Buhre S.A. (somewhat ironically Paul Buhre was absorbed during the depression by Barbezat-Bole, a company founded by the younger brother of C. Barbezat. The name Buhre survived as it was more famous), Robert Cart S.A., Henry Moser and Co. S.A., Jean Perret S.A., Luxor S.A., Montres Zodiac S.A., Societe Cooperative D'Habitation Chez Nous, Tungstens Carbide S.A., Dixi GMBH/Pforzheim, and Dixi Assoc., England.

Since 1979, Dixi has acquired Zenith (another irony, as from 1915 to 1922, Zenith had control of the original Dixi) and has in 1991 finished a remodeling of the Dixi 2 factory, allowing for finished machines of over 20 feet and weighing 55 tons. This plant will be over 70,000 cubic meters. Today, Machine Dixi employees are proud of the fact that machine tools are not subject to the same volatility and vagaries of fashion as the watch industry.

Interestingly enough, though C. Barbezat had established the watch factory and the machine factory, (Le Phare and Machine Dixi) he is acknowledged only as the founder of the watch factory today. Perhaps this is testimony to his own personal skill and reputation as a watchmaker. In this country, if one had given birth to two such successful companies, he would be remembered as an Edison, Ford, Rockefeller, Mellon or Carnegie. Perhaps the Swiss with their understatement and anonymity would not desire it so.

Charles Barbezat-Baillot deserves to be remembered as a maker of high quality watches, particularly those to which he affixed his signature, and

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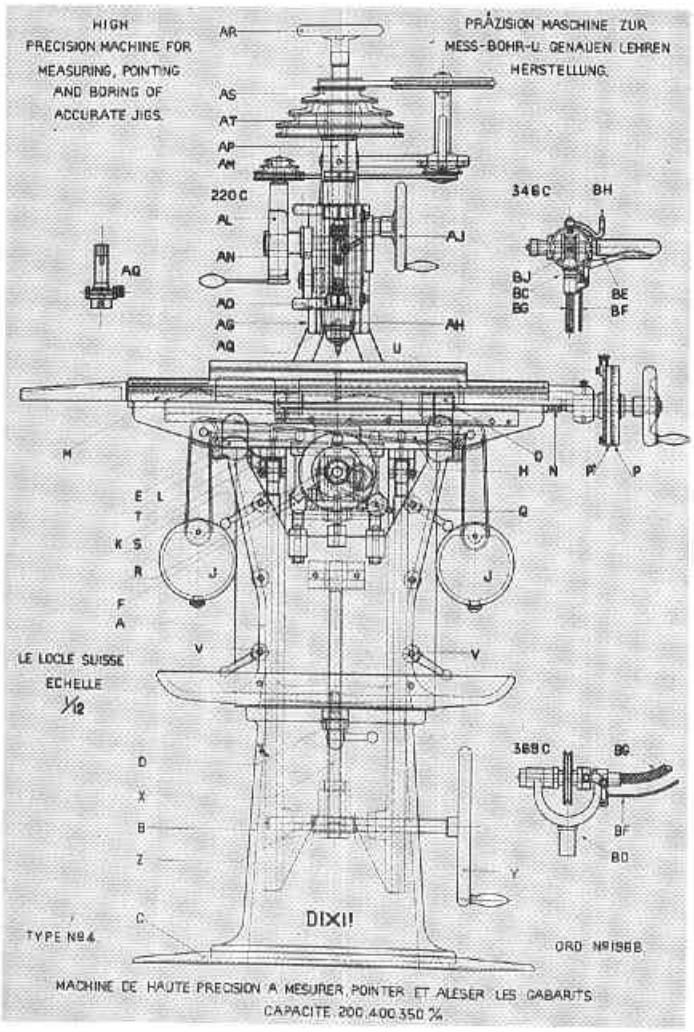

Figure 6B. The illustrated diagramatic of Ord No. 196 B type No. 4.

Figure 7. Circa 1916 advertisement linking Barbezat, Le Phare and Dixi.

as the founder of Le Phare the maker of good quality complicated watches. But Le Phare, while a pretty good watch, was one of many good watches of its time. It is his pointing and measuring machine that was truly revolutionary. It is the founding of Dixi that should assure his fame and his place in history (Figure 7).

Acknowledgments

Well, I've gotten a thousand dollars of fun out of researching great grandpa's watch and I hope my efforts are of some value to other members.

I would like to thank the Museum of Le Locle for their assistance, the Service Department of Zenith International S.A., Le Locle, the editorial reviewer at NAWCC whose ideas and suggestions I have freely incorporated into this text, and my particular thanks and appreciation to Dixi S.A. Le Locle and their commercial designer and art director, Georges Yannopoulos.

Editor's Note: The author has provided the editorial office with an early flyer describing movements available from Le Phare. Much of Le Phare's production is either unsigned or sold under other brand names. If any member would like a copy of this flyer to use in identifying their own watches, please send $.52 postage to The Editor, NAWCC, Inc., 514 Poplar St., Columbia, PA 17512.

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