



The Birth of Soviet Watchmaking



1943

Сделано в СССР

Continuing the Hampden story

Updated Edition

Alan F. Garratt

Updated Edition Preface

The need for a updated edition so soon highlights the gaps in this fascinating story. Much new information has come to light; some given by readers, descendants and enthusiasts. Whilst it by no means fills in all the story, this second edition does take it forward another step. With further insights into many of the characters.

I also wanted to introduce a flavour of the social and political environment that was created in the rush to industrilization, to which the watch factories were not immune. It was an inevitable consequence of workers power but had repercussions in production and quality. We can see evidence of this in the articles by Gershenzon and from the accounts of the various “Udarnik” type movements. In the workers paradise new practices were encouraged, practices that revealed organisational shortcomings and managerial excuses. Even unavoidable errors, could have tragic consequences - as we shall see.

Finally, not all the American’s were allowed to return after their contracts expired, despite that being the accepted line in reports from Canton. This detailed account of Herman London involvement has been greatly facilitated by his family and opens up a whole new can-of-worms.

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Cover design based on an original 1931 propaganda poster

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Contents

Preface	1
Introduction	5
Foreword	7
1917 - 1930	13
The People	20
The Dueber - Hampden Purchase	27
The First State Watch Factory	36
Other Type -1 Factories	53
Artels	59
Diverse Type-1 Timepieces	64
Lip And The Post War Period	67
Fakes And Frankens	72
Amtorg	74
An American Worker In A Moscow Factory	76
American Watchmaker Trapped In The Ussr Since 1934	79
Russia An Awakening Horological Giant	81
Acknowledgements	84

Introduction



There may be many different reasons why you are reading this. Perhaps you came here from my story about the Hampden Watch Company prior to 1930, or perhaps you have an interest in old Russian watches. Whatever the reason you're welcome and I hope you find the story of interest.

The whole genre of Soviet horology is truly enormous and its origins are a crucial chapter in it. My story centres around these origins and about the contribution the staff, tools & designs of the Dueber-Hampden Watch Works of Canton, Ohio, USA, made and in turn the USSR's role in perpetuating Hampden's watchmaking heritage and legacy.

I started to investigate the fate of the Canton factory around 2006 and found scant information. What details there were often proved to be wrong and in many cases very misleading.

The subject of the USSR still produces stereotypical views in many westerners' minds and a defensive one in the old

Soviet countries. Neither of these standpoints are helpful when delving into past events.

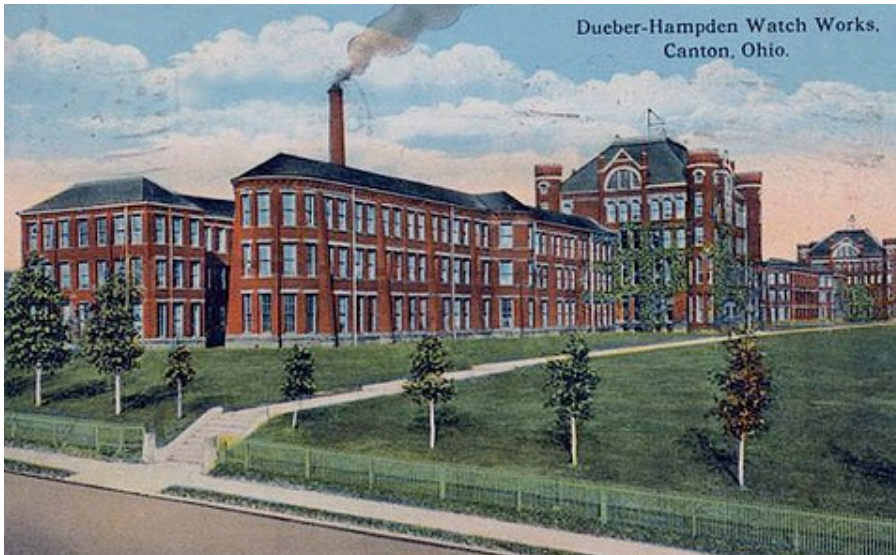
This story started out as a blog in 2008 and over the intervening years grew and developed as new information was unearthed. Much of the content is previously unpublished but I also draw on snippets of information gleaned from familiar sources. Where the latter is the case I have tried not to transpose the narrative simply to disguise it.

Unless and until definitive documentation surfaces from Russian sources the subject of early Soviet watch production will remain vague and subject to much speculation and opinion.

Significant world events happen in the decades this story spans - from the Great Depression, through Stalin's purges, on to WWII (Great Patriotic War) and the Cold War. The content does not set out to condone or condemn, it is simply a story about watches and people.

Foreword

The foreword comprises two unequal parts. Part one is a synopsis of the period before and after the Dueber-Hampden works closed in Canton Ohio. Briefly how the factory came into existence and the effects upon employment in the city when it closed just before the Great Depression set in. Part two sets out to paint a picture of the Moscow environment into which the Canton equipment was plunged. For this task I have enlisted the help of others whose understanding in historical and sociological terms is greater than mine.



Canton Ohio, USA.

By 1886 John C. Dueber, a German born naturalised American industrialist, had no opportunity to buy land to expand his thriving watch case business in Newport Kentucky. His search was especially urgent as he needed to accommodate the newly acquired Hampden company, which was located many miles east in Springfield, Massachusetts. Dueber had let it be known around the North Kentucky, South Ohio area that if a city or town could raise \$100,000 in 'gift money' he would move the combined Dueber and Hampden companies with some 1,500 to 2,000 employees. Which, with added family members, would mean a 7,500 to 10,000 increase in the population of the successful location.

When the city's leaders of Canton heard about John Dueber's offer they wasted no time in promoting their city.

Canton is the administration centre of Stark County in northeastern Ohio, approximately 60 miles south of Cleveland and 24 miles south of Akron. It was founded in 1805 on the

West and Middle Branches of the Nimishillen Creek. It was incorporated as a village in 1815, as a town in 1834 and as a city in 1854.

The prospect of the Dueber and Hampden companies arriving came at a providential time. In the 1880s, the city's largest employer, C. Aultman & Co., faced an uncertain future and had cut its workers' wages by 10%, claiming they were paid considerably more than competitors' employees. The firm also began closing down its factory from November to January each year, leaving workers unpaid for that period. Both actions placed a great hardship on the men, their families and the city of Canton, where there was little alternative employment. The situation was made worse by the death of Aultman in 1884, the leading financial and social figurehead in Canton.

A Board of Trade had recently been organised by Louis Shaefer and Charles Dougherty and they now set out to raise the \$100,000 needed to secure the Dueber and Hampden factories. In just three months the full amount was in place. Twenty prominent leaders had guaranteed \$5,000 each and the banks advanced the cash against their guarantees.

John C. Dueber was invited together with his eldest son, Joseph C. Dueber and a party of 40 associates and assistants, to a large meeting in Canton. The meeting was held at the Opera House in June 1886, with 1,500 attending. The Duebers were told that in addition to the gift of \$100,000 by the citizens of Canton, 20 acres of farm land would be donated on which to site the factory buildings. A congratulatory telegram was received from local Congressman William McKinley, later to become a personal friend of John Dueber and more importantly the 25th US President. The city council also agreed to a railroad spur running into the factory grounds from the Pennsylvania Railroad.

Work started on the new factories on October 14th, 1886. The plans called for two buildings for the two separate companies - the Hampden Watch Works to the south and the Dueber Watch Case Works to the north. The buildings had a combined frontage of 1,140 feet, almost twice as long as the large factory of their great rivals Waltham. The buildings were the last word in watch making architecture and were drawn up by Akron architects George W. Kramer and F. O. Weary. The park grounds surrounding the impressive buildings brought a new note of distinction and beauty to Canton's skyline and landscaping. The central parts of each building served as offices and rose to 142 feet in height, the equivalent of a 12 story skyscrapers. The turrets on the wings were 100 feet high and the steam-engine stack rose 150 feet. The most majestic landmark was the tower with the great clock, with its four faces, which kept time for the next 60 plus years.

Between 1886 and 1888, as John Dueber erected his factory, Canton busily built houses to provide homes for the hundreds of workers and their families, who were to migrate from Springfield and Newport.

The unexpected death of John Dueber in 1907 coincided with a downturn in the fortunes of the whole American watchmaking industry. Throughout the next eighteen years Albert Dueber, John's only surviving son, took charge of the now combined Dueber-Hampden company as it gradually wilted. This was not through any fault of his, just the inevitability of the decline that overtook the industry. The company changed ownership in 1925 and survived only two more years before bankruptcy overtook it.

As with most other American watchmaking factories, at that time, their equipment was from a past era and antiquated. It had been designed for 19th century pocket watches,

now rapidly being replaced by 20th century wrist watches. Already throughout America new enterprises were importing Swiss movements and casing them to supply the demands of the local market.

The chances of the liquidator selling the factory as a going concern were slim to none and indeed by 1930 none had been found and much of the stock had been bartered, used to pay wages, or sold off at rock bottom prices.

The impact on the Canton workforce was devastating. Although by 1927 the Hoover company had eclipsed Dueber-Hampden as the prime employer in Canton it could not absorb a work force which was numbered in the thousands. With the other American watchmaking concerns in similar positions the transfer of labor was also not a viable solution.

Other prominent Canton employers were Diebold, Inc., a firm that principally manufactures security devices, and Timken the bearings manufacturer. The advent of the interest from the Soviet Unions US buying agents, Amtorg, must have arrived like divine intervention for the liquidator, if not the former workforce. Who other than such a novice outfit would want to start up an industry based on antiquated equipment which produced, what was in effect an obsolete product.

The sale did prolong the employment of 23 former factory foremen and shop managers for one year, at a pay rate unequalled during their time at the Dueber-Hampden factory. These 23 watchmakers would spend that time in Moscow, Russia, and experience a little of the revolution still being played out in the Soviet 'utopia'. Little survives that recalls how these fortunate few were thought of by those not so lucky, or indeed how long this piece of good fortune stood them in good stead, for they returned to the US with the depression in full swing.

By the 1920's Canton had, on the one hand, produced a President of the United States and was shipping manufactured goods around the world. Whilst on the other hand it was said to be so corrupt, with bootleg operations, red-light districts, gambling, dirty cops and other vice, that it was known as "Little Chicago."

In 'Murder of a Journalist: The True Story of the Death of Donald Ring Mellett', author Thomas Crowl tells how Mellett, an Indiana-born editor tried to clean up the town and whose crusade led to his subsequent assassination. In July 1926, he was shot to death at his home.

Mellett, who worked at the Columbus Ledger and Akron Press before becoming editor of the Canton Daily News in 1925, wrote editorials exposing the police chief as crooked and helping organized crime. Reports of his death, and the circumstances surrounding it, brought the nation's attention to Canton.

Following the Dueber-Hampden sale there was a fascination with the prospect of the 23 Canton watchmakers going to Russia. The population was not yet gripped by the paranoia of "reds-under-the-beds" that would manifest itself in the Cold War period. The USSR was a place either portrayed as a workers' utopia, or totally alien to 'The American Way' depending on your viewpoint.

We cannot be sure what preparation the Canton watchmakers made to ready themselves for life in Moscow. Their existence there would be pampered and sheltered

from the rigours of a regular Moscow life. The watchmakers apartments came with 'servants' who had authority to jump the food lines and circumvent delays for other day-to-day essentials.

Nevertheless, they would miss those quintessential American things the "Roaring Twenties" had heralded. It was a pre-depression decade that witnessed unprecedented economic growth and prosperity in the United States. Consumer culture flourished, with ever greater numbers of Americans purchasing automobiles, electrical appliances, and other widely available consumer products. Technological innovations like the telephone, talkies and radio irrevocably altered the social lives of all Americans and were out of the reach of their counterparts in the Soviet Union.

Moscow, USSR.

Moscow is named after the river that runs through it, the Moskva. It began as a medieval city and developed into what was known as the Grand Duchy of Moscow, an administrative region ruled by a prince. The grand duchy preceded the formation of Russia as a nation. It replaced Kiev as the most powerful territory in the area during a time when cities were under constant threat of attack and invasion.

Though Moscow is the capital city of Russia today, it wasn't always so. From 1712 to 1918, St. Petersburg acted as the capital of Russia. Peter the Great had moved the capital in his efforts to westernise the Russian Empire. The Bolshevik Revolution prompted the capital's move back to Moscow.

Following a revolution designed to set the population free of servitude, Stalin's control over the USSR meant that freedom was once again lost. His administration developed a "personality cult" around him. Artists painted pictures glorifying him and he dominated many pictures. It was not unusual for Stalin to be in a white suit so that he stood out from the crowd. He gained the nickname "Uncle Joe" an attempt to develop an image of a kind, homely man who was the 'father' of all Russians.

During the period of only twelve years (1928-1940), about 30 percent of the labour force moved from agricultural to non-agricultural occupations coinciding with a rapid growth in manufacturing production. The pace of change was astonishing. In 1925 the capital was still primarily a textile centre, "Calico Moscow". From the end of 1928, despite the lack of raw materials, the emphasis began to shift away from textiles to the metal, electrical and other "heavy industries". New factories were built in the city, including the electrical giant "Elektrozavod" and the "Shaikopodshipnik" bearing works. In the course of these transformations, thousands of new workers were added to the Moscow population, including peasants straight from rural villages. New skills had to be taught at all levels, from shop floor to technical specialists. This was never more true than at the "First State Watch Factory".

For a short time under Lenin, women had enjoyed a much freer status in that life for them was a lot more liberal when compared to the 'old days'. Among other things, divorce was made a lot more easy under Lenin. Stalin changed all this. He put the emphasis on the family. There was a reason for this. Many children had been born outside marriage and Moscow by 1930 was awash with a very high number of homeless children who had no family and as such were a stain on the perfect communist society that Stalin was trying to create.

Living standards had generally risen despite the obvious problems with food production and shortages elsewhere. Some people did very well out of the system especially party officials and skilled factory workers. Health care was greatly expanded. In the past, the poorer people of Russia could not have expected qualified medical help in times of illness. Now that that facility was available demand for it was extremely high. The number of doctors rose greatly but there is evidence that they were so scared of doing wrong, that they made appointments for operations which people did not require!

Housing remained a great problem for Stalin. In Moscow, only 6% of households had more than one room. Those apartments that were put up quickly, were shoddy by western standards. It was not unusual for apartment complexes to be built without electric sockets despite electricity being available – building firms were simply not used to such things.

The Soviet Union would evolve from a modest pre-revolutionary importer and assembler of watches to becoming the producer of a wide variety of fine and technically sophisticated timepieces, second only to the Swiss. In the beginning, the spread of clocks and watches produced a great change in the rhythm of life for many living in the Soviet territories. 1917 was, for them, also a revolution in time.

It is important to distinguish between the Soviet Union (USSR) and Russia, because some Soviet factories were outside modern day Russia. Post Soviet watches (after 1992) say “Made in Russia” (Сделано в России) - “Made in Belarus” (Сделано в Беларуси) on the dial. Ones made prior to 1992 said “Made in USSR” (Сделано в СССР). In the case of watches made for the military they would say “By order of the Ministry of Defence” (ЗАКАЗ МО СССР).

In Imperial Russia, prior to the 1917 October revolution, watches were assembled from finished parts, mainly imported from Switzerland. It was more profitable to assemble watches because of certain tax barriers which precluded completed watch imports. However, some local workshops produced wall clocks and alarm clocks.

The foremost Russian watchmaker was Paul Buhre, his pre-revolutionary watches exist in some numbers. Buhre’s retail shop was taken over by Tochmehk after the revolution. Heinrich Kann (Heinrich Kahn pre-1917), sometimes spelt ‘Cannes’, had a successful and highly regarded business in St.,Petersburg. He produced many presentation pieces for the Imperial Army. Kann would embrace the Soviet ideals and continue to play a role in watchmaking.



The Kremlin in Red Square and other Moscow buildings. “Motherhood of October”

The Swiss watchmaker Heinrich Moser had established himself in St.Petersburg in 1826 and his company H. Moser, Co., flourished because his watches were of a very high quality.

The Imperial era was infamously ended on the 16th July 1918 by the pistol of Yakov Yurovsky. There is evidence Yurovsky had been a watchmaker. After the revolution he worked for the State Trust of Precision Mechanics, who oversaw the establishment of the Soviet watchmaking industry, but no evidence of his direct involvement in that specific work. Later, in 1930, he became the Director of the Polytechnic Museum which today holds archives of the old watch industry.

1917 - 1930

Gostrest Tochmekh

After the upheaval of the revolution and civil war, the remains of the Kahn, Buhre and Moser watch businesses together with the remnants of other watch enterprises and workshops, came under the umbrella of various bodies. Importantly, it eventually became the responsibility of the “State Trust of Precision Mechanics” Гострест Тоцмех (English; Gostrest Tochmekh). Gostrest Tochmekh was the consortium that dealt with precise mechanics and the name is a shortened version of Gosudarstvennyy Trest Tochnoy Mekhaniki. According to the Russian State Archive of the Economy, RGAE, it was established in 1920, during the civil war period, as Glavtochmekh (Chief Administration) and became Gostrest Tochmekh in 1922 after the civil war under the direction of Andrei Mikhaylovich Bodrov.

Slava history records that at the start of Stalins 1st Five Year Plan, in 1928, Tochmekh absorbed the troubled Moscow Electro Mechanical Plant (MÉMZ) which was housed in a renovated stone building at Tverskoy Zastavy, Moscow. Initially the factory employed around 125 production workers, who were mainly engaged in the custom manufacture of telegraphic equipment, radios, projectors, as well as repairing the electromechanical timers used to control Moscow’s trams. In November 1930 it became the 2nd State Watch Factory 2ГЧЗ or in English 2GCHZ (later 2nd Moscow Watch Factory, 2MCHZ - then Slava - Слава meaning Glory), to distinguish it from the newly created 1st State Watch Factory 1ГЧЗ or in English 1GCHZ.

Gostrest Tochmekh would eventually be dissolved at the beginning of the 2nd Five Year Plan in 1933, three years after 1 and 2GCHZ were established.

Tsentrochasy 1923: The first attempt to set up watch making

As early as March 1923 the Soviet trade mission in Berlin, reported that the People’s Commissar of Foreign Trade, Leonid Krasin, had been made, by representatives of five minor Swiss watch companies, a proposal to form a mixed company “for import into Russia of pocket watches and wristwatches”. However, the Supreme Economic Council “cut the project in the bud”. It said that all those firms were producers of low-quality watches and, since the war, had accumulated large reserves of watches of “worthless quality” which they intend to sell in Russia because of the lack of demand for them in other countries.

At the same time Soviet representatives in Berlin were in talks with major Swiss watchmakers, including Moser, Nardin, Doxa, Tissot, Omega, Longines and Zenith. Moscow even sanctioned the formation of joint stock company ‘Tsentrochasy’ with these companies.

Under the terms of the preliminary agreement, the Soviet Union received 49% of the shares, whilst the remaining were divided proportionately between the Swiss firms. It was assumed that in exchange for the right to import watches (up to 400 thousand units per year). These firms would help establish Soviet production of alarms, high quality clocks, wall and desktop clocks. A factory was to be built and equipped, the workers

would be trained for three years and by the fourth year production would reach full capacity.

Then in Lausanne Switzerland, in May 1923, a Russian exile assassinated the Soviet ambassador to Italy. A Swiss court acquitted the assassin causing relations between the countries to become hopelessly corrupted. In June the Central Executive Committee and the People's Commissars issued a joint resolution to boycott Swiss companies. The Soviet representatives in Berlin specifically asked Moscow whether the boycott applied to the Tsentrochasah negotiations. They responded that further negotiations should be conducted only with German watch companies. But nothing came of these latter negotiations

The Stalin era begins

Lenin died of a stroke on January 21, 1924. His participation in, and influence on, these events are negligible. Upon his death, Joseph Stalin was officially hailed as his successor as the leader of the ruling Communist Party and of the Soviet Union itself. By April of the same year he replaced Lenin's 'New Economic Policy' with his highly centralised 'Command Economy' which heralded in both industrialisation and collectivisation resulting in the Soviet Union moving quickly from a predominantly agrarian society into an industrial power. In horological terms this was opportune as within two years the warehouses had been depleted of all the imported watchmaking stock. Tochmekh relied upon this stock to feed the ever increasing demand for timepieces, of all sorts.

To supply their network of co-operative workshops (Artels Артэлы), Tochmekh had had to import whatever components they could acquire on the international market, finishing the timepieces with internally manufactured parts and "Гострест Точмех" signed dials. This chaotic, unsystematic production continued into the early 1930's and was supplemented throughout the 1920's by timepieces imported, in some quantities, from Switzerland and Germany. The country's industrialisation, development of transport, raising of the cultural level within the population, together with the needs of the Red Army and Navy all increased the demand for watches.

In 1926, Heinrich Kann, the prominent pre-revolutionary specialist watchmaker, wrote in his book, A Brief History of Watchmaking. *"It's time to shake things up and we understand that and we can get in the way of serious competition from abroad in watchmaking. However, we must not ignore the fact that at present time the production equipment abroad stands at a height that would have required significant efforts in order to catch up in this respect abroad. We are late in the industry and strong late, but it is not hopeless, because on our side the advantage, is the vastness of the internal market.*

The current consumption of our watches and all kinds of movements is negligible compared to the immediate future, since we only embark on a path of intensive development of our material culture. Our people can not be denied in the innate abilities and talents needed for planting and development of such a fine production, like clockwork.

Our craftsmen are not enough good watchmakers, it should only support them in terms of providing them with modern means of production and the necessary materials. State Trust Precision Mechanics should be, first and foremost, serve the watchmakers and meet their immediate needs, supplying them watch supplies, without which it is

impossible repair hours. Currently, it is the most essential task."

So on the 30th of December 1927 the Labor and Defence Council published a decree that charged the Supreme Council of the Peoples Economy to establish watch and clock factories from scratch (see page 17).

The factories were to be in line with those in Switzerland and the USA and with this in mind Bodrov planned to send engineers abroad to report on foreign production. In March 1928 the then Chief Engineer of the Moscow Electromechanical Plant (MEMZ) Mikhail Fedorovich Izmalkov was sent into Germany to study the production of wall and alarm clocks. After returning from the trip, Izmalkov proposed a plan for accelerating Soviet watch manufacture by acquiring turn-key plants; machines, patterns and tools.

But on March 20, 1928 the Trust of Precision Mechanics receives the outline of an alternative proposal from watchmaker V. O. (Wolf) Pruss. Unlike Izmalkova, Pruss proposes to deploy the construction of Soviet based assembly workshops, followed by the gradual purchase of state-of-the-art Swiss and German watchmaking equipment. All to be financed from the profit from the sale of watches, assembled from imported components. He argued that the construction and furnishing of complete plant and equipment would require several years to complete, whilst the timepiece hungry country (especially in the People's Commissariat of Railways, Narkomat) waits.



Andrei Bodrov - Wolf Pruss - Alexander Breytburdt - Professor Zavadsky



Wolf Pruss teaching street boys in the MONO watchmaking school.



Imported Swiss watch with Tochkmech dial pre-1930.



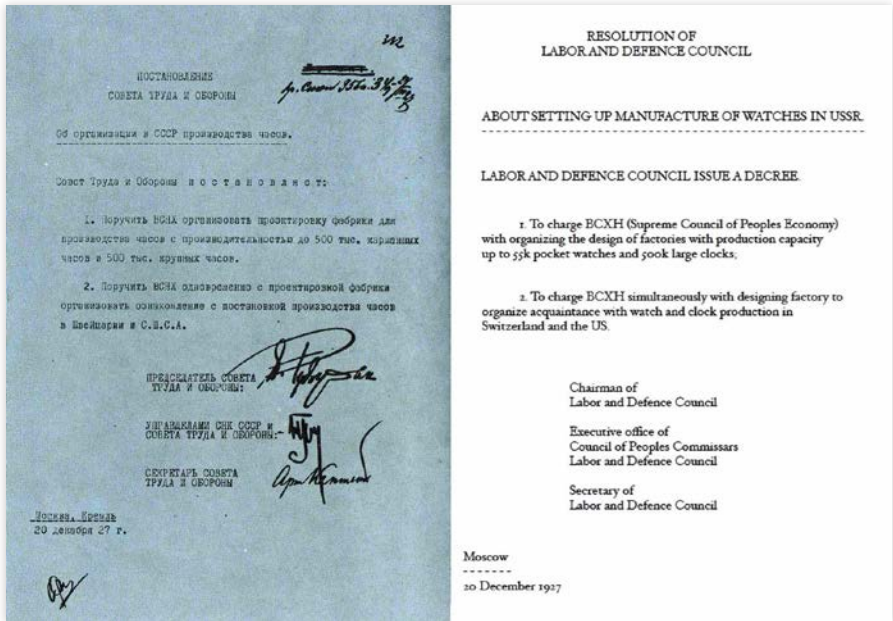
Moscow Electro Mechanical Plant (MĖMZ), Tverskoy Zastavy, Moscow.



Paul Buhre's shop before the revolution.



Now the Tochkmech store after the revolution.



1927 Council of Labour and Defence directive. English courtesy Alexey Kobtsev.

Pruss noted that “in 2 to 3 years we will be in full swing with complete production of watches”. He proposed to “properly organise” the school of watchmaking for Tochmekh, as he believed the existing school was completely inadequate for the preparation of skilled watchmakers. He went on “if we immediately get down to business, by August of the same year, our products will be ready for the consumer”. Pruss also presented workshops scheme to build 500 watches per day using 98 workers.

No doubt there was a need to make preparations in time for the start of Stalin’s First Five Year Plan. In April 1928 the management of Tochmekh adopted Izmailkov’s approach and by October 1928 had set up an 11 man commission to look into purchasing the necessary equipment from Europe or America. Bodrov and Sarkine from the Trust, together with Professor Zavadsky, Wolf Pruss, Alexander Breytbur, Percy Dreyer, Chief Mechanic of MEMZ I.V. Surin(ov) and four others made up the commission.

The commission planned to visit Germany, Austria, France, Czechoslovakia and Switzerland. The Swiss refused to let the commission enter the country, which may have been the result of a breakdown in earlier negotiations after the Tsentrochasy episode.

However, at this time none of the European watch companies would agree to collaborate with the USSR. The Soviets believed this was because the Europeans, especially Germany, had large stocks of unsold watches and wanted to have unrestricted access to the Soviet market. Overall this failure was not such a great disappointment because such collaboration did not sit well ideologically, it did not fulfil the Soviet ideal of a self-sufficient industry.

The commission was then sent into America where they visited around 21 precision

УТВЕРЖДАЮ
 25.06.1929
 1929 г. 14 VI 1928 г.

1. Утвердить предложение комиссии по устройству производства по номенклатуре, предложенной в отчёте.

2. Считать необходимым произвести дальнейшие исследования, необходимые для того, чтобы выявить и установить возможности в части точности изготовления, т.е. в части возможности расширения производства, как для существующих, так и для новых предприятий.

3. Для производства карманных часов следует рассмотреть возможность организации производства в форме кооперации с иностранными фирмами, производящими карманные часы, и в частности, в форме участия в организации нового предприятия.

4. Считать необходимым наряду с рассмотрением возможности организации производства в форме кооперации с иностранными фирмами, рассмотреть возможность производства часов в форме кооперации с иностранными фирмами.

5. Считать необходимым поручить Главному институту и специалистам завода и институту, производящим карманные часы, и в частности, в форме участия в организации нового предприятия.

Список членов комиссии по устройству производства по номенклатуре, предложенной в отчёте.

Имя	Звание	Место работы	Место назначения	Заметки
Бодров	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Саркис	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Заводский	Профессор	Ленинградский институт	Ленинградский институт	
Фрусс	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Брейтбург	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Дрейер	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Полькарпов	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Суринов	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Микайлов	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	
Масилев	Инженер	Трест "Точное механическое производство"	Трест "Точное механическое производство"	

Государственный завод "Точное механическое производство"

1929 г. 14 VI 1928 г.

СЕРТИФИКАТ

В отчёте 1928 г. по устройству производства по номенклатуре, предложенной в отчёте, комиссия по устройству производства по номенклатуре, предложенной в отчёте, рассмотрела и утвердила предложение по устройству производства по номенклатуре, предложенной в отчёте, и поручила исполнителю, в частности, в форме участия в организации нового предприятия.

За работу в комиссии рассмотрел: Председатель комиссии тов. Бодров, члены комиссии тов. Саркис, тов. Заводский, тов. Фрусс, тов. Брейтбург, тов. Дрейер, тов. Полькарпов, тов. Суринов, тов. Микайлов, тов. Масилев.

Секретарь комиссии тов. Заводский.

1929 г. 14 VI 1928 г.

Имя: Заводский, Фрусс, Брейтбург, Дрейер, Полькарпов, Суринов, Микайлов, Масилев.

Extract from the protocol #35 of Collegium of Glavmetall VSNKh (Main Metal Administration) of 14 VI 1928.

Agenda: Watch production (report of comrade Usachev)

Decided:

1. Approve industrial assignment on watchmaking production for the nomenclature of the itemised list suggested in the report.
2. Consider it necessary to concentrate manufacture of alarm clocks, electric clocks, wall clocks and regulators with the Trust of Precision Mechanics, either through expansion of the Trust's existing enterprises, or through the construction of a new factory.
3. For pocket watches, consider it necessary to construct a specialised factory on the basis of securing the cooperation of foreign companies.
4. Consider it necessary to send a specialist Commission abroad for familiarisation with the organisation of watch manufacturing. The composition of the Commission to be drafted by the Trust of Precision Mechanics.
5. Consider it necessary for the Glavotvesskont (Concessions Administration) to approach foreign pocket watch manufacturing companies with a detailed assignment about possible forms of their participation in the organisation of watch manufacturing.

List of Commission participants - Their assignments - Their places of work and the countries designated for travel.

BODROV	Trust
SARKINE	Trust
Prof. ZAVADSKY	Leningrad Institute
FRUSS	
BREYTBURT	
DREYER	
POLYKARPOV	
SURINOV	
MIKAILOV	
MASILEV	

Techmekh, to Comrade Ugarov. 13 V 1929

AFFIDAVIT

In October 1928 a commission for familiarisation and study of watch manufacturing abroad and for purchases of watch making equipment, on assignment from VSNKh, left for Germany, France, Switzerland and America.

The commission consists of the Director of the Trust of Precision Mechanics comrade Bodrov, Technical Director of the Trust comrade Sarkine, comrade consultants Prof. Zavodsky and Pruss.

From Europe to America, proceeded comrades Bodrov and Sarkine, whilst the others returned to the USSR. Comrades Bodrov and Sarkine, under the guidance of comrade Mezhlauk purchased the equipment of two watch making factories. To oversee the transfer of the equipment comrade Mezhlauk ordered comrade engineers Breyturburt and Dreyer of the Trust to travel to America ASAP. The transfer shall continue, as per the contract, until January 1st 1930. The commission of the Trust is currently enroute back to the USSR.

Vice manager of the Trust comrade Akimov

Three commission documents: Top, decree to set up the commission. Centre, list of participants. Below, report on the outcome.

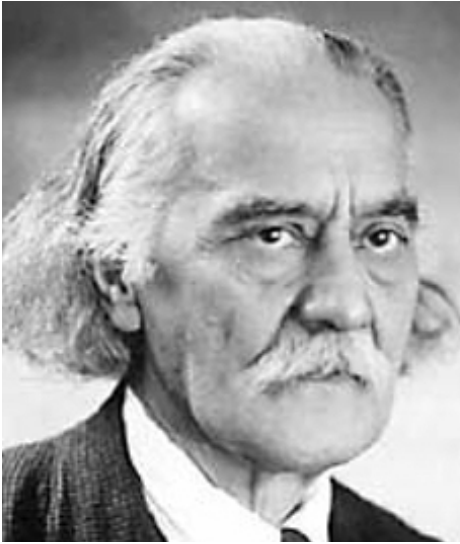
engineering plants, including 8 watch factories. At the beginning of 1929 at a meeting with the Amtorg Trading Corp., which had located the factories and planned the US visit, Andrey Bodrov reported that "the manufacture of watches in America was at a considerably higher level than Europe. In contrast to the half-amateur European method of the production, America was almost fully automated". Bodrov proposed to purchase America equipment for the production of watches. He recognised the equipment was old and is recorded as saying, "Staff are inexperienced, and could do a lot of damage, with new machines. They will learn better on old, ones and they will need to be gradually replaced by new ones. It is better to have something, than to have nothing. We are not rich enough to immediately go to new expensive suits while hiking and threadbare". However, he was concerned in case Moscow would say they

had "purchased junk". Certainly if compared with the latest Swiss, German, or French, equipment it was outdated. Wolf Pruss, again, argued strongly that the new enterprise should be started using only the most modern equipment. He himself had worked in the best Swiss factories and was probably the most advanced native Soviet watchmaker at that time. Pruss was not a Bolshevik, simply a man with a social conscience who wanted to help his countrymen learn to make fine watches.



Three more examples of Tochmekh watches from the internet.

The People



Prof. Norbert B. Zavadsky

June 1862 - October 1943

Zavadsky was the Director of the Leningrad College of Fine Mechanics and a founder in educating precision instrument technicians. He was also the Head of Research & Production of optical-mechanical laboratory devices. The author of over 40 scientific works and inventions.



Alexander S. Breytbert

1901 - 1938

A graduate engineer who would help supervise the breakdown of the Hampden factory in Canton. He later became the Chief Engineer at the First State Watch Factory and wrote books on the watchmaking process. During 1936 to 37 he served as the Chief Engineer of Factory 192 the Moscow Experimental Plant "Radiopribor" (later tasked with Rocket and Space Instrumentation) responsible for the production of remote-controlled boats, tanks, etc. The Director of the 192 Factory was none other than his old comrade A. M. Bodrov. For the last year of his short life Breytbert held senior positions in the Ministry of the Defense Industry. Breytbert was shot as a spy after a show trial during Stalin's purges. He was rehabilitated in April 1956.



Andrey Mikhailovich Bodrov

According to Romanov & Murzim, Bodrov was born in Tul, Venevsky district in 1896. By the time his political and working career begins his family had moved to the St.Petersburg area.

The formation of political consciousness in Andrei Bodrov was greatly influenced by his family. His father and uncle were associated with the Irregular Circle of the Nevskaya Zastava, an early Bolshevik revolutionary movement inspired by Lenin. In 1910, Andrei Mikhailovich became an apprentice at the Tilemans factory where he joined the trade union of metalworkers. Two years

later he was working in the model workshop at the Putilov factory (in February 1917 strikes at the factory contributed to setting in motion the chain of events which led to the February Revolution). At the same time Andrei Mikhailovich became a member of the first Narva Cultural and Educational Society (Narva being the region on the Russian Estonian boarder near the town of the same name), and in 1914 became its chairman. He remained in this position until the outbreak of World War I, when it was closed by the Tsarist authorities.

In 1915, Bodrov joined the RSDLP (The Russian Social Democratic Labour Party) and fought for the restoration of the defeated Bolshevik organisation in the Narva area. He managed to unite another 50 party members but was unable to join up with the Petrograd Bolshevik Committee, or the leaders of the other regional organisations. When the connection with the Petrograd Committee was finally made, the whole district organisation went over to the Bolsheviks. In 1915 Bodrov went to Smolensk and then to Tula. He returned to Petrograd on February 7, 1917 just before the revolution. He was elected a deputy in the Petrograd Soviet and soon became a member of the Petrograd Committee.

The February revolution was in fact the first of two revolutions in Russia in 1917. It was centred on Petrograd, then the Russian capital. The revolution was confined to the vicinity of the capital and lasted less than a week. It involved mass demonstrations and armed clashes with police and the last loyal forces of the Tsar. In the last days, mutinous Russian Army forces sided with the revolutionaries. The immediate result of the revolution was the abdication of Tsar Nicholas II, the end of the Romanov dynasty, and the end of the Russian Empire. The Tsar was replaced by a Russian Provisional Government, an alliance between liberals and socialists who wanted political reform. They set up a democratically-elected executive and constituent assembly. At the same

time, socialists also formed the Petrograd Soviet, which ruled alongside the Provisional Government, an arrangement termed Dual Power.

Andrei Bodrov consistently implemented the decisions of the Party. As a member of the District Committee, he, along with other Bolsheviks called for the masses to support the armed uprising and actively participated in the overthrow of the Provisional Government. At the end of 1917, when Bodrov was working at the Okhta Gunpowder Factory, the party sent him into Petrograd, where together with K S Eremeev & B P Pozern he engaged in the formation of the Red Army. A M Bodrov participated in the civil war as the head of the political department of a number of armies.

We know that after the Civil War Bodrov was rewarded for his loyalty to the Party by becoming the Director of Tochmekh. We have also learnt about his efforts to establish the watch industry. By late 1930 he was transferred to the new State Bearing Plant in Moscow where he becomes involved in its conception and planning, later becoming the factory Director. This was a prestigious appointment in a key industry and one that would require much political diplomacy as at the time different factions were vying for control of decision making. Bodrov was a member of the local Moscow MK (MGK) committee and so nailed his allegiance to them (which may have been the thin end of a wedge, with the more centralised Politburo becoming more prevalent).

From 1936 he was the Director of the secretive Plant No. 192, where radio control devices for torpedo's etc, were being developed. It was probably factional infighting that led the ever paranoid Stalinist's to associate the lack of progress at the Plant with sabotage. All of Bodrov's appointments were clearly political, he was neither an academic or an engineer. During the purges, loyalty, ideology and conscientiousness were no protection and along with many many other Bolsheviks and non Bolsheviks he paid with his life. He was arrested, tried and executed within a month, during the Fall of 1938, on the pretence of participating in counter-revolutionary organisations. He was rehabilitated in the 1950's.

Career.

- 1910 - 1912 Apprentice at the Tilemans Factory.
- 1914 - 1917 Putilov Factory& Okhta Gunpowder Factory.
- 1917 - 1924 Revolutionary & Civil War Bolshevik.
- 1924 - 1930 Director of Tochmekh.
- 1930 - 1936 Planner then Director of the First State Ball Bearing Factory.
- 1936 - 1938 Director of Plant No. 192 (Remote Control Devices).

Heinrich Kann

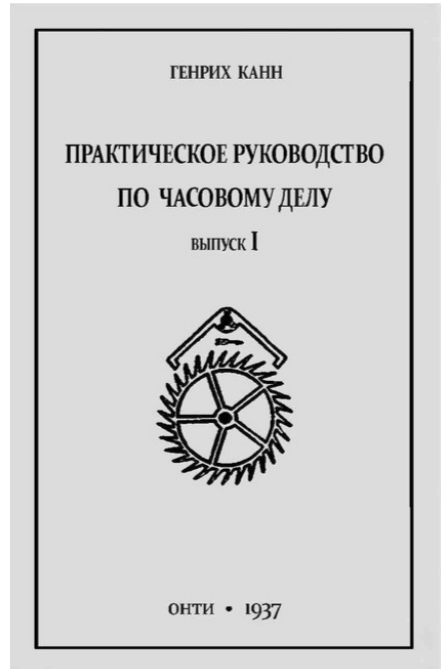
(in collaboration with Marco Stella)

Heinrich Kann (Kahn - also known as Henry Kan) 1872 to 1945 - was one of the major timepiece trading houses of the Russian Empire, and supplier to the Imperial Guard of watches, medals and mementos. There are pocket watches bearing his name with both Cyrillic and latin spelling.

Heinrich Kann's name has German origins and was written Kahn pre-1917

Heinrich Kahn himself was a remarkable craftsman, with a profound understanding of watchmaking.

Pocket watches made in his workshop were much appreciated and highly sought after at the times of Imperial Russia, on a par with Pavel Buhre and perhaps better than other local watchmakers of Swiss origin like Henry Moser, William Gabus, Georges Favre-Jacot, etc.



Kann's book on watchmaking.

Of all the pre-revolution watchmakers, Kann was the only one of them who did not flee abroad after the October Revolution, but instead he stayed and joined the cause. His contribution to the birth of Soviet watchmaking is enormous, especially as a teacher at the School of Precision Mechanics. Later he worked at the Peterhof Lapidary Works, which in 1930 was renamed the 1st State Plant of Precision Technical Stones.

He has left us the legacy of his 1937 "Practical Guide to watchmaking, parts 1-4" ONTI NKTP USSR, Leningrad, Moscow, 1937. These publications have stood the test of time and are still used for reference by watchmakers today. Previously, Kann had written two other reference books "A Brief History of Watchmaking" (1926) and "Watches and their application" (1928).

Interestingly, these books were published either side of the Council of Labour and Defence's 1927 directive, which set out the establishment of the watch industry in the USSR. In his Brief History of Watchmaking (1926) he famous exhorts his superiors to establish a great domestic watch industry, in what was to become a kind of manifesto for the subsequent years. Indeed, it probably greatly influenced Andrey Bodrov, head of Gostrest Tochmekh, to push for the Council of Labour and Defence decision.

"Its time to shake things up, and we understand that we can become a serious competitor in international watchmaking. However, we must not close our eyes to the fact that the current standard of watchmaking abroad is at such a height that it will require considerable efforts to catch up. We are late starting in the industry, very

late, but it is not hopeless, because on our side we have the advantage of a large domestic market. The current consumption of our watches, and all kinds of movements, is negligible compared to the potential future demand. Our people certainly have the innate abilities and talents needed for planning and developing a great watch industry, running like clockwork. At this time our craftsmen are not good enough watchmakers and we need to support them by providing them with the modern means of production and the necessary materials. The State Trust of Precision Mechanics should, first and foremost, serve the watchmakers and meet their immediate needs, by supplying them with materials for manufacturing and repairing watches from our own resources. Currently, this is their most important task as it will free us from buying from other watchmaking countries. With this I conclude in the hope that my modest work, together with the respective authorities in the Russian Federation, will combine to do everything in our power to uplift and develop some of the finest timepieces in the world.”



Kahn Imperial Letterhead.

Vladimir Osipovich “Wolf” Pruss

(in collaboration with Dmitry Pruss)

V. O. (Wolf) Pruss had been jailed for pacifist agitation against the Russo-Japanese War of 1904-1905 when he worked as a railroad chronometer repairman in Irkutsk.

During an amnesty he was released, undeterred he joined the socialist protest movement in then-Russian-ruled Lithuania, was rearrested, skipped bail, and escaped to Switzerland.

In Switzerland he sought advice from Lenin, who was a law student and made a living advising fellow exiles. Wolf's girlfriend had joined him in Switzerland but in the conservative northern Swiss cantons, where they worked, the landlords wouldn't recognise their civil marriage and wouldn't rent them a house. Lenin shrewdly advised them to move to Geneva for a year, where the landlords weren't morals-obsessed and then move back with a recommendation letter from the previous landlord. But the Pruss family ended up staying in Geneva and Wolf also studied there as a vocational educator in the newly formed J-J. Rousseau Institute.

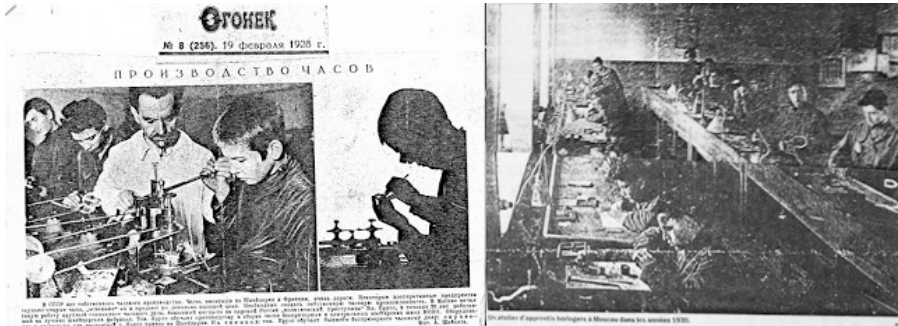
Like other left-leaning exiles, he was ready to return to Russia after the fall of the Tzar, in one of the 1917 German-sponsored “Sealed Train cars” which Lenin had used to return. However, Wolf's wife was pregnant with their 4th and youngest child at that time and their friends talked them out of this risky travel scheme, assuring them that it won't be long before the next opportunity came along. But owing to the Civil War and destruction in Russia, they had to wait for a further nine years.

By then, Pruss had put down roots and wasn't planning to return. He was keenly interested in education, social work, and supporting education charities. An American in Geneva, the brother of Anna Louise Strong, collected funds to rescue and educate homeless children from Russia. Wolf helped him and, eventually in 1926, signed up for a stint in Russia as a vocational teacher. They built a watchmaking workshop under the auspices of the American Industrial Workshops Charitable Project, which, whilst being plagued by red tape, managed to train the children to become Precision Engineers and Watchmakers.



*Wolf Pruss at his bench (Top) and his watch
© Dmitry Pruss*

Pruss did in fact establish and for a short period run the MONO (Moscow Department of Education) training facility, which trained teenagers in the watchmaking arts. A high proportion of the students were destitute street children many of whom were female. In September 1929 the People's Commissariat transferred the MONO organisation to Tochkemk and Pruss took on the role of "General Consultant to the Director of IGCHZ". By 1937 he was working at the 4th office of Ministry of Defence Industry. Following a brief show trial in 1937, during Stalin's purges, Wolf Pruss was found guilty of Spying and executed. He was rehabilitated in the 1950's.



Transcript of the above “Ogonyok” magazine, Feb 19, 1928

There is no timepiece production in the USSR. French and Swiss-made watches are very expensive. Some cooperative enterprises buy up old watches, “refresh” them and resell, also for a fairly high price. We must create our own watchmaking industry. In Moscow, this work has been started by a leading specialist of watchmaking technology, V. O. Pruss who once escaped Czarist Russia as a “political lawbreaker”, who has 20 years of experience at the best Swiss factories. Comrade Pruss teaches manufacturing and watch assembly to homeless children in the Central Workshop of the MONO School System. The equipment and the materials for the workshop has been brought by Comrade Pruss from Switzerland.

The Dueber-Hampden purchase

During the commissions visit to America, pragmatism prevailed and finding the bankrupt Dueber-Hampden (and Ansonia Clock Co.), plant up for sale the Soviets, through Amtorg, purchased patterns, machinery, tools and stock. Poljot history has it that two contracts were signed on the 26th April 1929. The first was for factory equipment at \$325,000 and the second for spare parts and part-finished timepieces at \$125,000.

The Dueber-Hampden Watch Company was located in Canton, Ohio, and sold its watches under the Hampden brand. With no interest in the Hampden or Dueber trade names, they assigned them back to the liquidator.

A report in The Daily Republican newspaper from the next door state of Pennsylvania, confirms that Amtorg's head commissioner for the purchase of the Dueber-Hampden factory was Mr A. Vladiminsky (he would become the first Director of the Moscow factory). Although based in New York Vladiminsky would spend much time in Canton negotiating with Receiver Raymond Loichot. Two Soviet commission members Alexander Breytburd and Percy Dreyer (who unlike Breytburd, spoke good English) were sent from Moscow to supervise the packing. They were joined by a Russian emigre to the US, Samuel Zubkoff.

Zubkoff, a watchmaker, was hired by Amtorg to accompany the 23 American watchmakers, on a similar contract. For an American emigre his background is unusual for he had joined Poalei Zion (the Jewish Communists) in 1915, took part in the revolution of 1917 and fought for the Bolsheviks in the Civil War. Having fought to realise his political desires it would have seemed he was all set to participate in the brave new world. However, right after the Civil War he emigrated to the US "to join his wives relatives". By 1923 he had joined the US Communist Party and was actively involved both in the party and in trade union work. In 1928, he arrived in Moscow as a delegate of the American Union of Watchmakers to the Congress of Trade Unions. One could speculate about Zubkov's roles and motives; perhaps it was simply opportune that this communist watchmaker was available to Amtorg at the right time. According to Sue Killen, when they got to Moscow, Zubkoff and his wife Zina were given an apartment in the same block as her and her colleague Alfred Fravel. Herman London's family felt they had much in common with the Zubkov's as new American citizens, longing to return. Of course their political outlooks varied widely, but we may never know if politics were discussed between them.

What little we know of Dreyer is down to the recent researches of Dmitry Pruss and I am grateful to him for his help. Percy Dreyer was born in Riga, Latvia, in 1900 to an educated Jewish family, and eagerly pursued engineering, the sciences and socialist politics in his teenager years. In the aftermath of WWI he was forced to flee through Lithuania to Germany where he distinguished himself and was rewarded with a scholarship to the Arnstadt Technology Institute. Afterwards he worked in the nearby watchmaking town of Gera, Thuringia, where he may have become familiar with watchmaking equipment. Percy Dreyer was a KPD (Kommunistische Partei Deutschlands) member and categorised by the state as a Soviet citizen. This, or the economic meltdown of the Weimar Republic, made him move to the USSR in 1924. Tochmekh files state Dreyer was married at the time he was sent to help pack the Hampden equipment in Canton. He was

chosen for the mission as the only fluent English speaker Tochmekh had at its disposal. According to the US Manifest of Alien Entry, his wife's name was Annemarie and she lived in Gera, Germany. It is likely that Dreyer had met and married her when he lived in Gera prior to his move to Moscow.

To the astonishment of the former Hampden watchmakers, during the journey from Canton to the USSR, Dreyer slipped away from the party in Berlin and failed to complete the journey to Moscow. Having a family in Germany may have been a reason for defecting. Tochmekh tried to re-establish contact with Dreyer, and after writing to him without any response, asked Wolf Pruss to make a follow-up visit to his home in Gera; Pruss was on one of his watchmaker recruitment drives. The letter must have discussed the matter of outstanding payments Dreyer should have repaid when he defected and defaulted on his contract with Tochmekh. When Pruss arrived at Dreyer's house Annemarie opened the door but didn't let him in. Pruss wrote back to Tochmekh saying, "She tries to persuade me that he is ill, but adds that no one can visit him. She says that she doesn't even show him the letter, so as not to upset him". No more is known of Dreyer and his family; his likelihood of surviving in Nazi Germany would have been slim, had he stayed. So far no evidence of him being a holocaust victim, or of emigration to any of the likely places has emerged.

Raymond Loichot would have relied heavily on the Factory Superintendent John C. Miller for technical help. Miller would lead the party of Canton watchmakers to Russia to train the new workers. On the Soviet side the Chief Commissioner Vladiminsky would have been told that four models, from the extensive Hampden range, had been ear-marked for production in Moscow and then worked with John Miller to identify what equipment was needed and also what spares could be utilised.

By April 1930 a freighter with the Dueber-Hampden equipment aboard had left for Russia. Twenty-eight freight cars full of machinery and parts were transported from Canton to Moscow. These acquisitions were the embryo that helped to establish an impressive industry that still flourishes to this day.

Dueber-Hampden watchmakers in Moscow

Twenty three former Dueber-Hampden watchmakers, engravers and various other technicians, who lost their jobs when the company went into liquidation, were re-hired, on a years contract, to help train the Russian workers in the art of watchmaking. The party, including Sue Killen the only female watchmaker, left Canton on the 25th of February 1930 and spent several days in New York before setting sail aboard the RMS Aquitania on March 1st. The eight day sea voyage was reportedly rough and ended in Cherbourg. The party reached Moscow on the 16th of March via Berlin and Warsaw. A band and a large crowd greeted them before they were taken to their allotted accommodation throughout the city. On the 18th of March they were given a banquet at the Grand Hotel with table settings belonging to the late Tzar. During the wait until the factory was finished they were entertained and enjoyed being shown around the city, including a visit to the Kremlin.

Pictures of the factory under construction (page 37), originally belonged to John Miller and I am grateful to his great grandson Dave Miller for permission to use them. Dave told me *"Great grandfather was the superintendent of the Dueber-Hampden in Canton. He started there about 1889 when he was only 14-years-old and spent 41 years working at*

Watchmakers Plan Russian Trip Believing Dueber-Hampden Sale Near

CONTINGENT on the sale of the Dueber-Hampden Watch company, one of the oldest industrial institutions, to the Russian Soviet government, more than a score of Canton residents will sail for Moscow to instruct Russian workmen in the highly specialized trade of watchmaking. The men selected to make the trip expect to remain there about a year or until such time as the native workmen have thoroughly mastered the art.

For several months Russian officials have been in Canton conferring with Raymond Lotchof, receiver for the company. No definite agreement has been reached so far, but negotiations for the purchase of the property of the Canton concern are still going on, and Mr. Lotchof is hopeful that the deal will be consummated within a few weeks. Tentative agreements made with more than 20 foremen and job masters call for their departure from this country early in January, 1930.

John Miller, 815 Brown ave NW, superintendent of the Hampden division of the company, and connected with the firm for 41 years, with Mrs. Miller, will make the journey in the event the deal goes through. Accompanying him will be at least 22 foremen and job masters, all key men of the watch industry here.

No Contracts Signed.

"Whether we go to Russia or remain in Canton will, of course, depend entirely upon the outcome of this deal," said Miller. "We are making our plans to go in case the deal is consummated. None of us have signed any contracts for work in the foreign country."

The contracts, according to Miller, call for one year of service in Moscow. The passage from Canton to

Moscow and return will be paid. The financial dealings will be handled by the Amtorg Trading corporation of New York, who are acting as agents for the Russian government. The workmen will be paid a specified salary. A certain sum will be placed in a savings bank named by the individual, and the balance will be paid to them in equivalent to Russian currency.

A large modern stone and brick apartment has been erected and will house the Canton families. "We have been informed that the apartment already has been completed and is modern in every detail. We will all be housed in this building. The factory has also been completed and is a large four-story structure of stone and brick."

Only the "best style" timepieces would be manufactured at the new factory. They would make several styles of wrist watches for women and a wrist and pocket watch for men. The same models that are being made in Canton would be closely patterned in the factory there.

5,000 Output Expected.

When operating at capacity they expect to have an output of 5,000 watches a day. It is the idea of the Russians to supply the entire demand for their country.

It will be the first trip abroad for most of the watchmakers. Concerning the trip, there seems to be a divergence of opinion. A number of the workmen who have spent the greater part of their lives working at the industry, are quite willing to remain in Canton, while others are interested with visiting foreign lands.

Dr. A. Aungst, model-maker, who has been with the factory since he was 18 years of age, says that he

would much prefer to have the factory remain in Canton but expects to go to Russia accompanied by his wife if the opportunity is presented.

Another employee, William Goodenberger, master mechanic, is somewhat interested in the thought of spending a year in Russia. He too, has been at the factory for more than 40 years.

If the deal is closed all of the intricate watch-making machinery, and equipment will be carefully packed and started on its long journey to Russia. The supplies now on hand at the Canton plant also will be sent.

Russian Dial Different

As the Russian dials call for 24 numerals instead of 12 used in this

country the dials at the factory here will be of no value. On the Russian time-pieces the first twelve numerals are on the outer edge of the timepiece, and directly beneath them are the numerals from 13 to 24.

"Russia has a great many natural resources and would be able to supply everything for the manufacture of the time-pieces with the exception of the jewels. They would come from Switzerland," said Miller.

Workmen contemplating the trip have been reading numerous books, becoming familiar with the habits and customs of the Russians.

Moscow is a modern city with a population of two and one half million people.

WHERE CANTON FOL'S WORK



THE ABOVE picture shows the new Russian watch factory in Moscow, Russia, which will be completed July 1, and in which 21 former watchmakers from the Dueber-Hampden company will be employed. The equipment, which was shipped from the Canton works to Moscow, is reported to have arrived in best clock condition. The picture of the new factory was sent to "The Repository" by J. C. Miller of Canton, who is now in Moscow.

Two Canton newspaper reports telling of the pending trip and a clipping about the Moscow factory.

the watch works moving up through the ranks. When the works moved to Russia it was great-grandfather who was in charge". Each of his Canton men, had his own individual skill and expertise to train the Russian workers in their corresponding departments. For example: Collins Wilcox was foreman of the flat steel and screw department; Charles Hammer was an automatic linemen; Sue Killen worked in the watch train department; William Goodenberger was a master mechanic; Alfred Favel a tool maker; Isaac Jackson was the foreman of the escapement department; Theo Freymark a machine shop foreman; Joe Snyder was the balance dept. foreman; Ira Aungst a model maker; G. Woolston was a watchmaker; Louis Ryman screw department foreman; Karl Krumm worked in the motion department; Victor Roust worked in the escapement department; H. Gebhart was a finisher. Herman London was the Job Boss of the Leaf Cutting dept.

All the Americans reported that they were well looked after and that all their expenses were met. They were given pay even when they were too ill to work and free hospital treatment, neither of which they enjoyed in Canton. Each worker was said to have been paid around \$4,650 (\$66,000 in today's money) plus \$300 expenses and provided with a cook and a waiter. One of the party, Ira Aungst the first Cantonian to have been employed by John Dueber, was very impressed by the speed that the Russians picked up the skills, especially the women. Only Samuel Zubkoff and Herman London could speak Russian, otherwise after English, German was the most common language used

between the US and Russian workers. It's interesting to note that North Canton, close to the site of the Dueber-Hampden factory, was called New Berlin until 1918 and had been predominantly settled by German immigrants.

In propaganda terms the Soviets were at pains to play down any real need for American involvement and to imply they were somewhat incompetent. Here are three snippets from Gershenzon's account (some liberties have been taken with the translation).

May 3, 1930 at the technical meeting of the plant the control figures of the product plan were discussed 1930/31 and 1931/32 economic years. A call to speed up the installation of equipment was not met with enthusiasm by the American Superintendent John Miller. The American said that the technical document for the installation of the works had been prepared incorrectly, making going faster impossible, especially as Russians do not know English and we do not know Russian. The factory construction work was incomplete only the bridge and the assembly shops are ready, and even then not fully. With only a few machines for training the managers, foremen and engineers.

The American instructors attention was drawn to the creaking of one machine, especially when it started to work. To find out the reason the American took a part being made out of the mill and went to the next shop where the translator was working. So the Russian trainees quickly dis-assembled, cleaned and re-assembled the machine. When the American and the translator returned the trainee said "Tell him there are no polar bears here.", meaning they were not stupid. The trainees explained what they had done to the machine and that it was working fine, the American seemed to think the fault had simply gone away on its own. Later, as word spread, a whole delegation came: the Director of the plant Vladimirsky, Superintendent of Dueber-Hampden John Miller, Chief engineer of our plant Breytbur, consultant to the director VO. Pruss and foreman IS. Ilyin. The Director said "You could not have repaired the mill without training". So the trainees again dis-assembled the mill, pulled out a part and showed the chief engineer. They said the part had been covered in rust and had formed deep scratches. By the terms of the contract the Americans had been required to refurbish all the machines before sending them to the USSR. As a result of the meeting the whole machine was refurbished, repainted to look like new.

Markoff the Russian Head of the department of semi-automatic machines recalled "In the machine shop worked two American instructors Jackson and Sue Killen. She had been head of the department of semi-automatic machines, a 60-year-old woman in poor health. They were reluctant to pass on their experience. We, through the translator, tried to find out absolutely everything that they knew. Frustrated we got down to concentrate directly on the machines and began to process all the details of all operations for ourselves and to record the sequence of these operations. Given that the machines are old, worn, requiring frequent adjustment, we decided to study not only how they work, but also their design elements to be able to repair and adjust the machines. Sue Killen often did not show up for work for several days on end. On one of these days there was a problem with the most complex machine. So we decided to fix ourselves, we dis-assembled it and cleaned it and put it back together successfully. This caused a scandal and the indignation of Jackson, the other American instructor in the shop.

William Goodenberer made a scrapbook, and in it he kept newspaper cuttings of the trip, postcards, photos of some of the Muscovites they trained and many other mementoes. It's probably the best record that was compiled. Interestingly, the book itself was made from an old Dueber-Hampden factory production ledger.

The Soviets would have been happy for any American to stay after their one year contracts were up (and a six month extension for some six men) but at Soviet pay rates. All but one returned to the US. Many friendships were formed and the comrades tried to keep in touch, but over a relatively short period the heavily (Soviet) censored correspondence dried up. You must read the Herman London appendix to find out about the one who remained.

There is no evidence that souvenir watches were brought back, nor that they were they given as presentations. Certainly their leader, John C. Miller, was not rewarded this way.

In a letter home, dated March 21st 1930, Sue Killen the only woman worker to travel from Canton, writes her friend telling about the first days in Moscow.



"The Trust gave a banquet for us at the Grand Hotel on Tuesday night. The hotel really is a "grand hotel" and was formerly occupied by the royalty. The banquet had all the trimmings and was not over until 3 in the morning. The orchestra was wonderful and during the evening played many American tunes.

They plan to setup the machinery in the one completed wing at once and we will instruct there.

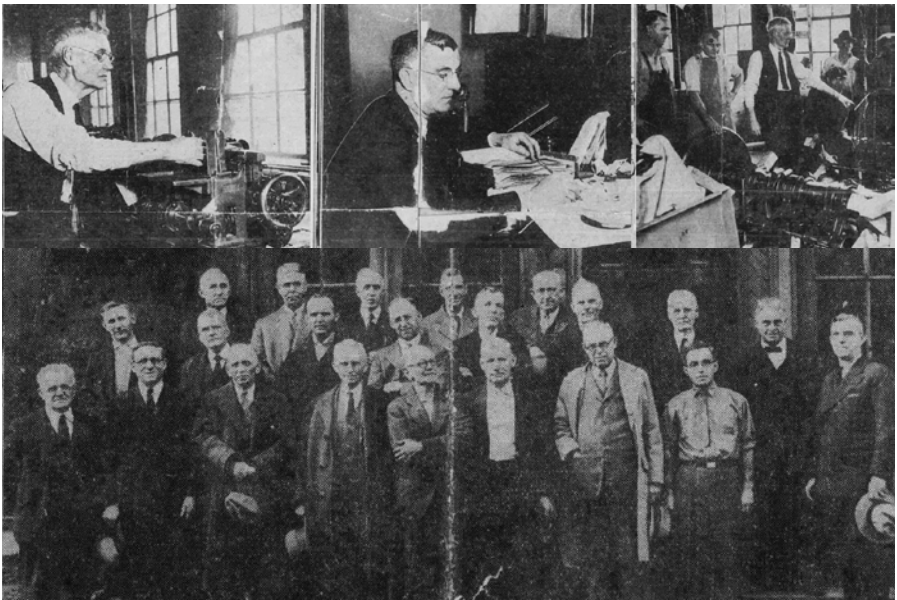
We arrived in Moscow, Sunday March 15th, and were served lunch at the station. We were then taken in Ford taxi cabs to our apartments, 3 miles apart. I haven't seen any of the other Canton people since we left the station.

Mr Fravel, the Zubkoffs and myself are on the second floor, and six other Canton men are on the first floor of this home. It was formerly owned by the aristocracy and was confiscated by the government. It was built in the 17th century and the walls are 3 feet thick. The heating and plumbing are not the best but they are modern. The bath tub is carved from one piece of marble.

I haven't done anything this week but sit around here and read. It's so cold here. I can't go outside and it's so hard to walk on the rough sidewalks. The boys go out and wander around the city. The language is absolutely impossible to learn and when you can't talk to anyone it's hard to get around. I've been waiting all week for someone to take me to the bank to get some checks cashed."



Goodenberger's photo and notation of many of the party aboard the Aquitania in New York harbour.



Below. The Dueber-Hampden male staff. Above. Wilcox and Miller at work.
 Courtesy of the Canton Repository



John Miller, seated, giving instructions at 1GCHZ. © RGAKFD



William Goodenberger scrapbook entry page showing his USSR ID Card. His note says all Russians must carry one. His scrapbook is an old Dueber-Hampden ledger. Courtesy of the McKinley Library and Museum.



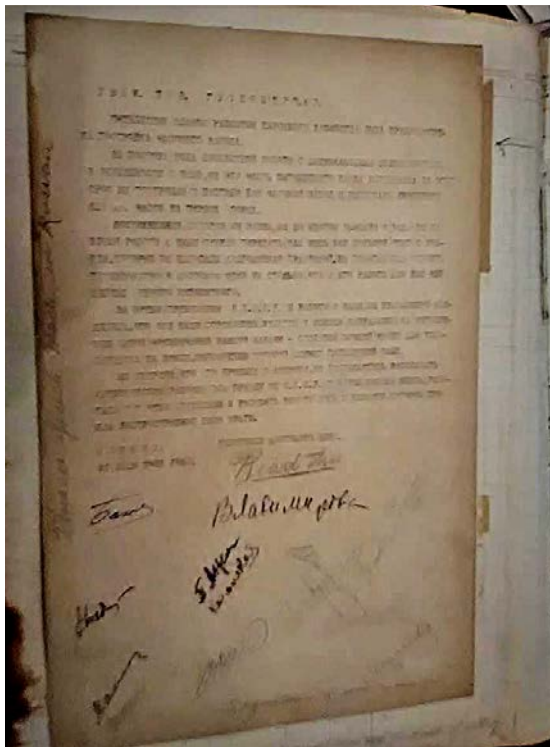
Collins Wilcox in the middle of his shop © ANHYSBYS



London, Gebhart, Jackson, Killen & Hammer in the middle of their shop workers
© ANHYSBYS



Photos taken from Goodenberger's scrapbook of some of the Moscow workers, their names and jobs. Courtesy of the McKinley Library and Museum



This is a signed letter from the Plate Dept. to William Goodenberger. English courtesy of the McKinley Library and Museum.

The letter is contained in Goodenberger's scrapbook which was an old Hampden ledger.

Translation...

Comrade Goodenberger

The Five Year Plan of our industry called for the construction of the Watch Factory in Moscow.

This Five Year Plan has been carried out during the past year and a half, by co-operating with the American specialists and especially with you Comrade Goodenberger.

During this period we built our factory and started production with an average output of 250 watches per day for the

beginning.

We are greatly indebted to you comrade Goodenberger, for these accomplishments. During this time you succeeded in conveying to us all your great knowledge and experience in watchmaking, acquired by 40 years of actual work.

You helped us in learning the Plate Department, so now there are no secrets left whatever in the work of this department.

During your stay in the U.S.S.R. you undoubtedly realised that all our aims and wishes have no other goal but to create better life for the mankind on the earth, for which purpose our Five Year Plan is serving.

We are sure that on your arrival to U.S.A. you will try to relate to the American workers the whole truth about U.S.S.R. - about our life, our work and our aims and to reveal the lies about U.S.S.R. spread by our enemies.

The workers of the Plate Dept. First State Watch Factory, Moscow, 19th August 1931.

Other foreign watchmakers.

The Canton watchmakers were not typical of other guest workers hired by the Soviets at this time. Their purpose was limited to the installation and operation of the old Dueber-Hampden machines. The Soviets desperately tried to recruit hundreds of Swiss and other western watchmakers, as there were too few skilled workers in the USSR. Many of these recruits were suffering deprivation from the depression affecting the west, some were idealistic socialists. But the plan failed generally; for one thing the Swiss authorities made emigration difficult, for another the promised Soviet utopia failed to materialise, making life harsh for those watchmakers and their families that had emigrated. Germany was another source of recruits especially those with socialist leanings, and to an extent those with a Jewish background. Anti semitism was more apparant in the rapidly expanding Nazi regime than in the USSR. In the period leading up to WWII the vast majority returned home only to have all their possessions and funds confiscated at the border. Pruss was fundamental in this recruitment as he was one of a few Russians with good contacts in Switzerland. He was still convinced that the pocket watch technology approach had been a mistake. In the end his attempts failed and because of his association with foreigners it possibly contributed to him facing a trumped-up charge of spying, for which he paid with his life.

However, not all guest workers were treated badly. Writing in the German "Uhren und Schmuck" publication in 1985, Helmut and Edith Klemmer reported that on August 8, 1930, 12 skilled workers, from the Saxony watchmaking town of Glashütte, went to Moscow to help build the watch industry. The source of the information was a contemporary article in the "Uhrmacherkunst" magazine. 'The twelve men were: Fritz Bernhard, Willy Dittrich, Willy Estler, Ernst Hruschka, Eugene Kulms, Paul Mende, Alfred Moche, Johannes Moche, Alfred Reichel, Hans Tittel, Fritz Walter and Alfred Weichert. These watchmakers, toolmakers and maintenance men went to train new workers with the skills required for production and development of watches at the newly constructed State watch factory. Their contract lasted five years, and expired on November 7, 1935. At the conclusion everyone received a pocket watch with dedication'



Советские Тацкенштр. Купобатен, Купобатен, Купобатен





John C. Miller

John Miller was born on October 13, 1875 in Williamsport, Pennsylvania USA. He started work at the Hampden watch works at the age of fourteen and rose to become the Superintendent of the Dueber-Hampden Watch Co., by the time of the factory closure in 1930. That same year he led the party of watchmakers, who had worked under him in Canton, to Moscow Russia. His wife Stella accompanied him but they had to leave their son Richard behind. When his 12 month stint in Moscow was completed he returned to his home in Canton. Just 3 years later John suffered a heart attack and passed away on October 19th 1934, just six days after his 59th birthday.

Picture of John Miller and his Russian train pass, courtesy Dave Miller.



1st State Watch Factory 1ГЧЗ



Tobacco Factory "Krasnaya Zvezda"

Gostrest Tochmekh

At about the same time the equipment was shipped from the USA, the building of the 1st State Watch Factory Trust of Precision Mechanics (1-й Государственной Часовой Завод Треста Точной Механики) was started as a 'top-priority' project. The main block was built on the previous location of a Tobacco Factory called "Krasnaya Zvezda" (Red Star) in Vorontsovskaya Ul., d.35/a (Street), Moscow. Work commenced in February 1930 and would be finished by June 1930. Installing the main equipment was finished by September 15 of 1930. The abbreviation for the factory is 1ГЧЗ or in English 1GCHZ.

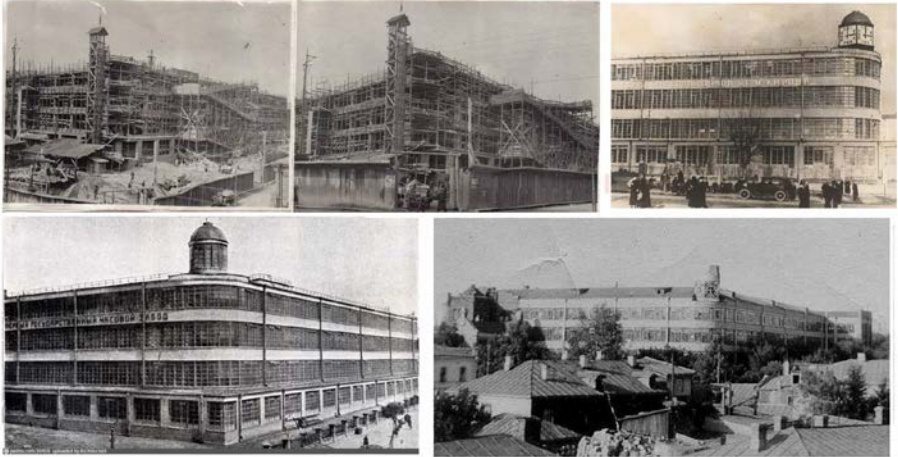
The First Watch

By November 7th the first 50 pocket watches were ordered for manufacture. These watches were presented at a ceremonial meeting in the Revolution Theatre, now known as the Bolshoi Theatre.

The actual body ordering production is difficult to pinpoint, but was most likely either the Council of Labor and Defence, or the Supreme Economic Council. From 1932 the following Commissariat's and institutes took over direct responsibility.

- HKТП - 1932 to 1936 People's Commissariat of Heavy Industry.
- HKМ - 1936 to 1938 People's Commissariat of Engineering.*
- HKOM - 1938 to 1940 People's Commissariat of General Engineering.*
- NIIP, NII-5 & NIChasprom - 1940+ (see below).

**HKМ & HKOM appears on the movements of watches from 1GCHZ & 2GCHZ during the dates shown. ** Marine/Aviation chronometer with a NII-5 signed dial is cataloged in Mark Gordon's former collection.*



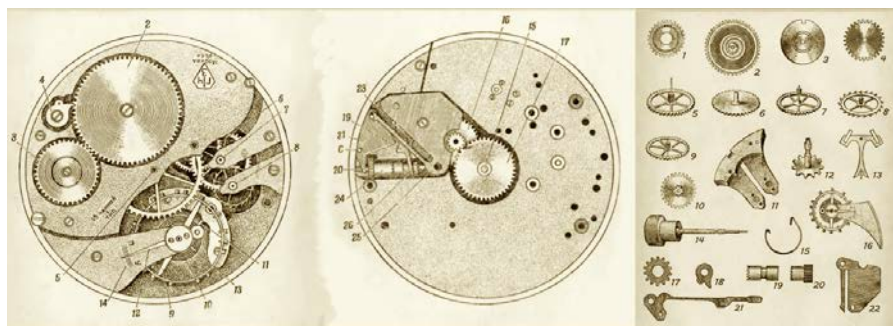
Site during and after construction. Construction photo's courtesy of Dave Miller.

According to NIChasprom.ru the Institute was established by the order of People's Commissariat of General Engineering in September 1940 as the Research Institute of Instruments or NIIP and later in December 1943 by order No. 459 of the People's Commissariat Mortar Weapons, the Research Institute of the Main Directorate of the Fifth Commissariat of Mortar Weapons or NII-5**. Entrusted with all matters of technical policy in the field of watchmaking. During the Great Patriotic War, the institute continued to operate and carry out state orders for military purposes. Later transformed into the Research Institute of the Watch Industry or NIChasprom.

The watch design chosen would be designated Type-1 (K43) and based upon the Hampden Size 16 movement. In addition there were the Types 2, 3 & 4, also based on Hampden designs. However, these latter watches were relatively short lived and not produced in the quantities associated with the Type-1. We should consider Type-1 (2, 3 & 4) watches as those made substantially of Soviet manufactured parts. Early watches which comprised of substantially, or completely, Hampden made parts are really no different to the other pre 1930 Tochmekh imports.

K-43, Type-1, ChK6.

Type-1 and K-43... Type-1 is the designation/caliber of the movement and the name speaks for itself. K-43 is the designation of the completed watch, where K is the abbreviation of "карманные" "pocket" in English and 43(mm) is the diameter of the



Type-1 movement schematics.

watch. Placing the Type-1 movement into the wristwatch ‘Saucepan’ case did not change the designation, these watches are still referred to as K-43’s. Additionally, Alexey Kobtsev explained to me that all early Soviet pocket watch movements were generically said to be calibre ChK-6 (also known as ЧК-6 or YK-6 or Cheka 6 or pocket-watch 6). This included models based on Lip movements like the Molnija

The Type-1 in either pocket watch or wrist watch configuration are often referred to as Kirovskie’s. However, strictly speaking this should only be used to describe watches made after 1935 at 1GCHZ Kirov. Many post war models made at the First Moscow Watch Factory Kirov, like the Pobeda, are also called Kirovskie’s.

Some sources site the Lip collaboration as the foundation of Soviet manufacture, but it wasn’t until 1936, when Lip had financial problems back home in France, that Fred Lipmann signed a deal with the USSR to export technology and parts. (Lip is expanded upon in chapter 17). This was some six years after the start of Type-1 production by 1GCHZ in Moscow. Lip’s modern designs no doubt highlighted the shortcomings of the aged Hampden pocket watch technology, nevertheless, the Type-1 was the first watch to be manufactured in the USSR and was modelled on a Hampden Size 16 movement with the distinctive Twin-Bridge layout (although in fact the two bridges were one piece with a milled out slot in the middle - later there is an example of a bridge without the slot.) It was robust, repairable, accurate and reliable. Furthermore the Type-1 probably lasted until the 1980’s in one guise or another.

“The Dollar Watch was rejected”

During the early part of the 20th century ‘Dollar Watches’ were popular in America and made the ownership of a timepiece available to the masses. One such basic pin-pallet movement was offered by the Ansonia company at 99¢ and it would have seemed logical for the Soviets to adopt this Ansonia model. In 1957 a British delegation visiting the Moscow and Penza watch factories discovered that no pin-pallets were made at all. Some time ago, they reported, a pin-pallet wrist watch was put on the Soviet market but it was not successful and apparently “would not sell, even to a timepiece hungry population”. The Dollar Watch was a disposable item in a non-disposable economy and I think the term “would not sell” probably got misinterpreted.

Romanov’s 1981 book on the history of watchmaking tells us: Amtorg entered into

negotiations with a watch works (possibly New Haven), to train 200 of our engineers and technicians, they consented on the provision that the USSR would buy 200 thousand pieces of cheap “dollar” watches. 20 thousand watches were purchased and sent back to the USSR for feedback on their quality. Reviews were negative. These dollar clock were inaccurate and resisted repair. The country needed a reliable watch with a long life, so the question of the production of “dollar” pocket watches in the USSR was withdrawn from the agenda.

From the outset Soviet engineers and innovators set out to simplify the manufacturing process. For example they discovered that outsourced Hampden watch hands had

taken eight separate operations to make, they were able to reduce it to one. In fact there is some evidence that a stamping die for this operation was designed by an American journeyman mechanic Sam Weinberg. He had followed the Ansonia workers from New York and found a position at 1GCHZ. However, his department boss forbade him to ‘waste time’ designing tools, so he did it in his own time..



Hampden had not manufactured 100% of its watch components in-house and this had a knock-on effect for 1GCHZ. In 1930 V. O. Pruss was sent to Lörrach, near the Swiss German border (he wasn't allowed into Switzerland). Here he met with Swiss wholesalers to negotiate the purchase of equipment and supplies needed to feed the production of watches in Moscow. In particular, he was asked to buy watch hands by the director of the 1GCHZ, Vladimírsky. The Swiss asked for

unsustainable amount of money, so Pruss communicated back in a memo that he had bought no hands and implores Vladimírsky to speed up the domestic production.

This situation is further highlighted by the document on page 44. Hand, Mainspring, Hairspring and Jewel manufacture was being introduced gradually and 1GCHZ management are tersely stating that without the import of these components production would cease.

These factual accounts of the difficulties and tensions clash with the sanitised version of events reported to the public. Well illustrated by a book published in the early 30's called First Watch (Clock or Time depending on your choice of translation) первые часы. M. A. Gershenson and his photographer had been sent by the Proletarian World, a Moscow publishing house, to cover the workers gathering celebrating the end of a decisive period for 1GCHZ. It is written for a naive audience and has an almost adolescent tone. It chooses to describe the factory in terms of Gulliver's Tales. The photographs (see page 43.) used to illustrate the book are quite comprehensive and are a valuable record of this very early period, despite being of poor quality. There is little doubt the machinery depicted will be the original Hampden equipment installed just a few years earlier.

Before the evening meeting the pair were given a tour of the factory by Comrade Rakov, the head of the Bureau of Plant Inventions. Gershenzon reported how modern, spacious and well lit the rooms were. He was somewhat taken aback by the scale of things. He said that it was like being in the land of Gulliver where Lilliputian workers operated Lilliputian machines. Rakov explained to him that the production of watches was a “tricky business”. “The pocket watches consist of about three hundred different items. To make them, it takes more than two and a half thousand operations. And some of the details so delicate that we have to work with very strong lenses”. He showed them a balance staff, which Gershenzon reported was no more than the size of a caraway seed. Precise and minute gears wheels were picked up on the tip of an oiled finger and the finger look like it belonged to a giant.

Later in the evening the workers and engineers of 1GCHZ gathered in the social club for a conference, to take stock and to discuss their progress and the forthcoming year of 1932, the last year of the First Five Year Plan.

The chairman of the factory committee Sokova (Salkova) welcomed their guests from the 2GCHZ who were, in addition to electric clocks and other timers, now producing alarm clocks and table clocks using the parts and machines from the American Ansonia company.

Sokova gave a presentation on the work of the plant and a brief history of watchmaking. “Before the revolution, we had no watchmaking. Tsarist Russia imported watches from abroad. We bought in America two old factories - Dueber-Hampden and Ansonia”. Dueber-Hampden was an old factory, with worn equipment. We brought their machines and complete sets of watch movements; also finished and unfinished parts. This purchase was installed at our new plant.

On on October 1st 1930, “the day of the hammer” we started up the plant. The first year was a learning year for us. We did not fulfil our financial plan, we have made only forty-two thousand pieces of watches. Machines were breaking down and there was no repair shop. There was a shortage of skilled workers. Elaborate rules were not yet established. What rules there were lacked teeth and there was not enough detail. What about the second year? We have solved our bottlenecks one by one. We now have an excellent repair shop and the machines are repaired. Our teaching schools give us trained and well prepared youths. Three thousand rules of operation are now available. By December our plan was fulfilled by 135%. These figures, comrades, must be music to our factory!”

Gershenzon says that after that Sokova then discussed the plan for 1932, incidentally the last year of Stalin's 1st Five Year Plan.

“We got an order from the Trust to release in 1932 sixty thousand watches. However, the factory workers have put forward a counter-plan for seventy thousand watches, of good quality!”.

I have greatly reduced and simplified the content, which goes into far more detail about the production of watches and discusses the workers inventiveness. Overall I found the book informative, but it isn't possible not to be a little cynical - such as with the last quotation above.

The Stakhanovite Movement

When Soviet industry became embroiled in the 'Stakhanovite Movement' during the mid 30's 1GCHZ was not immune and it is perhaps important to understand a little of the background. It is also relevant as it gives an insight into the fate of many of the people who are involved in this story.

It was a phase of 'enterprise' in communist industry, named after Alexey Stakhanov a miner who famously kept surpassing his quota of work setting a precedent for other workers to follow. Similar movements had preceded this one, namely "Shock Workers" or "Udarniks" These workers took pride in their ability to produce more than was required. By working harder and more efficiently, they were seen as strengthening the communist ideal. The Stakhanovite Movement spread throughout all industries and was officially encouraged as part of the "Socialist Emulation" policy, which allowed ordinary workers to earn more money if they produced more. More of everything was what the state was predicting at the start of the third five year plan (1938). This movement grew into more than just a work ethic and would encompass a whole way of life. As workers acquired more technical knowledge and mastery of production, they discovered the defects in industrial production which previously had been regarded by 'management' as unavoidable, or inevitable, due to unique circumstances. This knowledge significantly strengthened the Stakhanovites cause. At 1GCHZ we can see the seeds of the "Shock Worker" and later "Stakhanovite" movements in the accounts of Weinberg and Gershenzon. These workers were called Udarniks, or, 'Drummers', as if they led the march of workers towards glory despite poor management. In his book 'The Nature and Origins of the Stakhanov Movement,' Donald Graham quotes; A report in the spring of 1936, from 1GCHZ, identified that output could be raised on the initiative of some Stakhanovites. It was on condition that workers were provided with good tools and with a sufficient number of measuring instruments and that the entire equipment of the factory was put in good condition. The Stakhanovites declared:

"Many of our demands were adopted in the plan for organizational-technical measures. But not one of the demands were fulfilled. The equipment was not put in good condition; it is more run down today than it was before. The work tools are of even worse quality today. All this has led to deplorable results. In our section, the established performance norms are fulfilled by only 58%. The earnings of Stakhanovites to say nothing of other workers, has declined. The turnover in personnel has reached extreme proportions. More and more Stakhanovites are leaving the plant".

Anyone hindering the progress of the Stakhanovites could be accused of, in effect, being a traitor. For example if you were in charge of quality and rejected pieces you could be deemed a wrecker. If you took a machine off-line for maintenance, you could be seen as a wrecker. If you had legitimate contact with foreigners you could be a spy. This divisive state of affairs came to a head with the onset of Stalin's Great Purges when "wreckers" and other "enemies of the people", which included wreckers, socially hostile elements, spies, and saboteurs all fell victim of the 1937-1938 terrors.

The State Watch Factories were under the overall leadership of The People's Commissar of Heavy Industry Grigory Ordzhonikidze. Ordzhonikidze was very protective of his engineers and executives and would not let them simply be purged. This irritated Stalin and put Ordzhonikidze at odds with the Stalinist leadership and when they unleashed this particularly bloody wave of purges, Ordzhonikidze caved-in and allowed people

like Georgy Pyatakov, his deputy, to be hauled off for execution. Just after Pyatakov's death Ordzhonikidze either committed suicide, or was eliminated, depending on your view point. Officially he died of 'Heart Seizure'.

Bodrov was also one of Ordzhonikidze's executives. He had been personally responsible for recruiting Bodrov from Tohmekh in 1930, to establish the State Bearing Factory in Moscow. Bodrov in turn recruited Samuel Zubkoff and sent him back to America to acquire bearing technology. Both would eventually be shot as victims of the purges, as would Neufeld, Breytburd and Pruss.

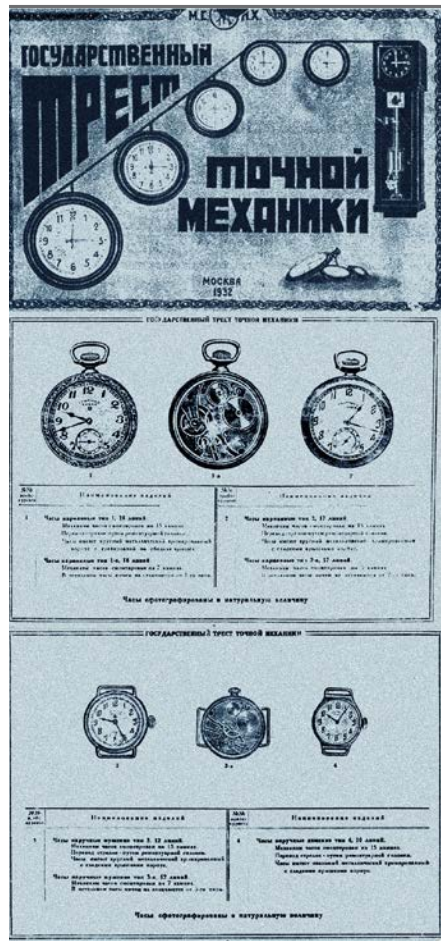
One way or another the Stakhanovite Movement survived into the Cold War period after WWII and was exported to other eastern block countries. By the mid 80's Pravda was discrediting the movement as "Stalinist puffery". Alexey Stakhanov, who became the model for the character 'Boxer' in George Orwell's novel 'Animal Farm' died in exile in 1977.

Type-2, 3 & 4 watches

The factory's 1932 catalog lists Type-2 pocket watches and Type-3 and Type-4 wristwatches (don't confuse the Type-4 with the cut-down Type-1 pictured on page 2, the Type-4 is modelled on a much smaller Hampden 8.0 movement). These watches could contain almost any suitable part or completed Hampden movement, obtained during the original purchase. Anything that would fit a stock case and operate. There is little evidence of the quantity of movements wholly made at the factory, the majority of surviving watches comprise of original Hampden movements. It's worth reiterating that these watches are rare and very few have survived. Some have Hampden top plates with dates going back five or six years prior to the purchase date (1930), coupled with later balances and modified jewel settings. The best way to look at this period is as one of efficient housekeeping. Demand was outstripping supply and the ever thrifty Soviet system was using up every scrap of materials it could, after all it had been doing just that since the 1920's. Nevertheless, example of Soviet manufactured Type-2, 3 and 4 do exist.

Two reason why these watches may have not survived.

- 1). Romanov seems to imply that the fledgling industry has troubles enough



1932 catalogue showing all four types

producing one type of watch. Much of the material was still either imported or not up to the standard used in the US factory, making production difficult.

Some of the Canton workshops had not been sent to Moscow leaving gaps in manufacturing facilities. Taking on 4 types was curtailed and the vast majority of effort went into the Type-1.

2). There is anecdotal evidence that during the Great Patriotic War many of the women who wore Type-3 & 4 watches were communist party activists, probably given them as rewards. Ownership of these watches would be a 'poisoned chalice' marking out a wearer, making them especially vulnerable to capture by Axis forces resulting in almost certain death. Once this was recognised many women would seek to discard their treasured watches and this may well account for the lack of surviving models. Indeed the very early Type-3 and 4 would have been handed out to very high ranking party members as they were very scarce. The Zvezda ladies watches from Penza made after 1936 would have been more numerous.

Penza starts-up.

In 1935 the "All-Union elder" Mikhail Kalinin signed a decree awarding The First State Watch Factory the name of Kirov after Sergei Kirov (see pages 50 & 51). He was a prominent early Bolshevik leader in the Soviet Union, Kirov rose through the Communist Party ranks to become head of the party organisation in Leningrad. He was seen as a focal point of opposition to the more extreme policies of Joseph Stalin and on the 1st of December 1934, he was shot and killed (by Leonid Nikolaev a former apprentice watchmaker) at his offices in the Smolny Institute.

The name change heralded a crucial time in the history of the factory as the reconstruction of the enterprise was perfected. Production of pocket watches (nicknamed Kirovskies) increased to 450,000 pieces. In addition the production of special clocks for cars and aeroplanes began. Watches produced during the 1940's were commonly used by officers of the Red Army. Watches with distinctive engravings were given by the army as a form of reward. Indeed watches were used extensively to reward Soviet citizens, party officials and especially the Armed Forces. Ownership of a pocket watch, and especially a wristwatch was very desirable (the technology of it's day).

"Kirovskies".

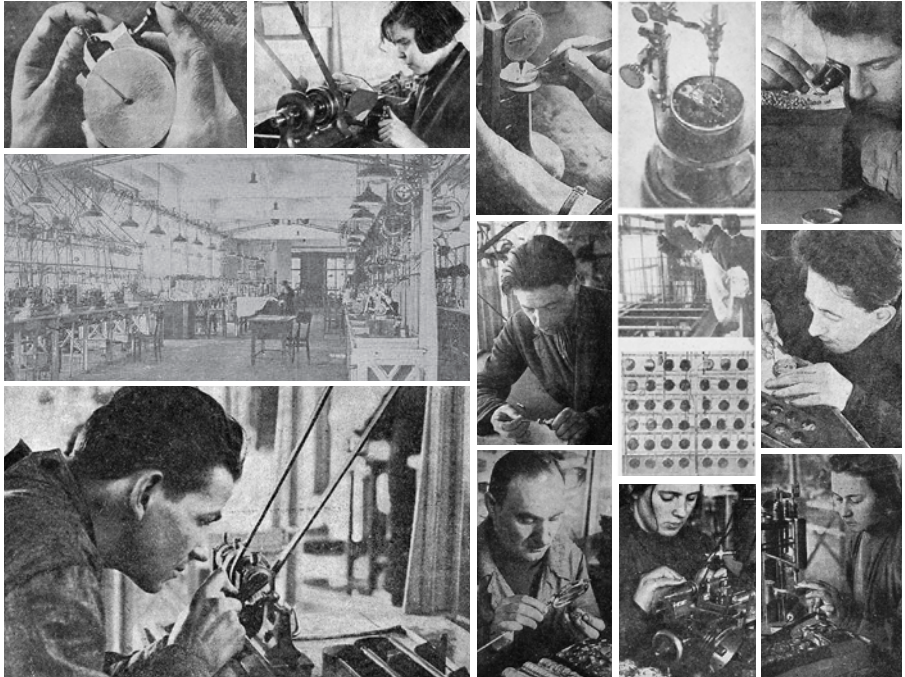
Just to repeat what was said earlier. The Type-1 in either pocket watch or wrist watch configuration are often referred to as Kirovskies. However, strictly speaking this should only be used to describe watches made after 1935 at 1GCHZ Kirov. Many post war models made at the First Moscow Watch Factory Kirov, like the Pobeda, are also called Kirovskies.

During the period from 1935 to 1941, 2.7 million Type-1 wrist and pocket watches were produced, according to Poljot's history. Whilst this was a great achievement, the quantity (even if doubled to account for both state factories) is insignificant when compared against a population of 170 million (1939 SU census).

It was in April 1935 that a third factory, 3GCHZ, was formed in Penza, a city 625 kilometres southeast of Moscow, from the remnants of the old Frunze Plant, using tooling

acquired from Lip. The watches they produced were small, modern wristwatch designs which would later be branded under the name Zvezda (Star). Type-1's were never made at Penza.

On April 21st 1935 a decision was made by the Council of Labor and Defence that instructed 2GCHZ to also assemble pocket watches from parts made at the 1GCHZ. I wonder if these latter events don't conveniently coincide with the assignment of the Kirov name to 1GCHZ Was this perhaps by way of a placation?



The photo's above illustrate the "FIRST WATCH" book.

1-й Государственный Часовой Завод Треста Точной Механики

ТЕЛЕГРАММЫ:
Москва—1-му Пбс. Час. ЗаводуТЕЛЕФОНЫ:
5-92-34; 2-05-11;
3-24-85; 5-92-40

КОНТОРНЫЙ СЧЕТ.

Протокол
Москблкомбанка № 20 счет № 657
В Замоскворецком
отд. Госбанка

Москва, Воронцовская ул., д. 35/а.

Не подлежит оглашению.

В УПРАВЛЕНИЕ ТРЕСТА ТОЧНОЙ МЕХАНИКИ

№ 50.82

от 31/УП-32г.

Наш №

Дата 2/УП-32г

ОДИН СЛОВО

Телефон

42-72

Как известно Управлению Треста, и, вероятно, Наркомвнешторгу, наш завод в Америке пружин, волосков, камней и стрелок не производит. Оборудование для этих производств не имел и не имеет. Поэтому, если бы Завод проработал не только три, но и 103 года, совсем не обязательно, что бы производство это без всяких затрат капитального порядка эти производства мог поставить. В то же время за все три года на постановку этих производств ни копейки валюты отпущено не было.

По существу дело обстоит следующим образом:

- 1/ В отношении стрелок. Производство нами ставится. От импорта в 1933 г./как и в 1932 г./ можно отказаться.
 - 2/ Волоски. Нами ведутся лишь экспериментальные работы. Для постановки производства потребуется затраты в валюте до 2.000 руб.. Импорт можно снять не ранее II квартала 1933 г.
 - 3/ Камни. Ведутся лишь первые эксперименты. Оборудование для производства нет. На него требуется до 80.000 руб. валюты. Снять с импорта в 1933 г. значит остановить производство.
 - 4/ Пружины. Нет оборудования, методы производства нам неизвестны. Экспериментов не ведется. Снятие с импорта - равносильно остановке завода.
- Поставить производство без интехпомощи невозможно.

ДИРЕКТОР ЗАВОДА: *И.И. Чейфельд* /Чейфельд/ЗАМ. ДИРЕКТОРА по ТЕХЧАСТИ: *И.И. Брейтбург* /Брейтбург/

экз.

ИД.

1st State Watch Factory Trust of Precision Mechanics

Moscow, Vorontsovskaya Ul., d.35/a

Do not disclose

TO THE MANAGEMENT OF THE TRUST OF PRECISION MECHANICS

Protocol N° 50.82 of: 31/July- 1932

Date: 2/August 1932

As it is known to the Management of the Trust, and probably to Narkomvneshtorg [Ministry of Foreign Trade] as well, the factory did not produce mainsprings, hairsprings, jewels and hands in America, nor had, let alone has, the equipment to produce them. Therefore, should the plant run not only for the next three, but 103 years, it is impossible to go on with the production without any capital expenditure. However, no money has been provided yet to fund the production for the next three years.

At present, the situation is as follows:

1/ As to watch hands. We've started production. We can do without imports in 1933 / as we did in 1932.

2/ Hairsprings. We did some experimental work. To start actual production 2,000 rubles are necessary. We can do without imports, but no earlier than II quarter 1933.

3/ Jewels. Only preliminary experiments are underway. We lack the equipment to manufacture them. It might cost up to 80,000 rubles. Removing imports in 1933 means to stop production.

4 / Mainsprings. No equipment nor production methods are known to us. No experiments conducted so far. Removing imports is equivalent to close the factory.

It is not possible to start production without Intekhpom.

DIRECTOR OF THE FACTORY:

Neifeld

DEPUTY DIRECTOR of the TECHNICAL DEPARTMENT:

Breytburt

Here IGCHZ management tersely tell Tochmekh that without the import of these components production would cease. English courtesy Marco Stella.

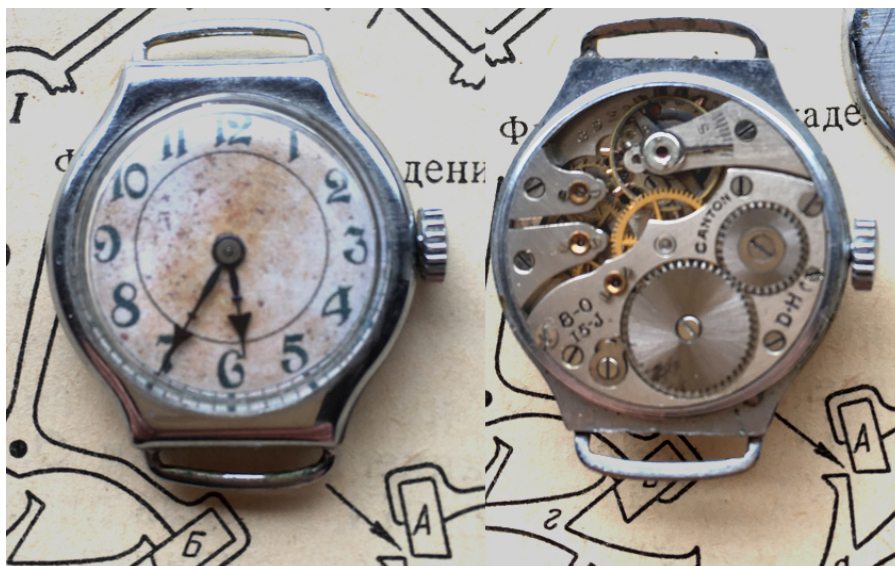
1-й Государственный Часовой Завод Треста Точной Механики



A 1932 postcard depicting Type-1, 2, 3 & 4 watches plus Zina Lurie a worker (Zina featured in many photos and was a genuine worker).



*Various servicemen with their watches - all Soviet issue.
Where the props, taken away after the photo shoot?*



Type-4 with 8-0 Dueber-Hampden movement.



Left. Pocket Watch with lugs added.

Right. "Saucepan" case wrist watch late 30's.



Top & bottom left with a 'Pin Set' movement. (pin between 12 and 1)
 Top & bottom right very early watch probably with Hampden parts.

ПОСТАНОВЛЕНИЕ ЦЕНТРАЛЬНОГО ИСПОЛНИТЕЛЬНОГО
КОМИТЕТА СОВЗА ССР

ЦЕНТРАЛЬНЫЙ ИСПОЛНИТЕЛЬНЫЙ КОМИТЕТ СОВЗА ССР.

П О С Т А Н О В Л Я Е Т :

Удовлетворить просьбу рабочих и общественных организаций
Первого Московского часового завода и присвоить названному
заводу имя тов. Кирова С.М.

Председатель Центрального
Исполнительного Комитета
Совза ССР

М.Калинин

Секретарь Центрального
Исполнительного Комитета
Совза ССР

А.Акулов

Москва, Кремль.

16 декабря 1935 г.

Kalinin's decree, the root of the Kirovskiel! - English courtesy Dimitry Pruss.

DECREE OF THE CENTRAL EXECUTIVE
COMMITTEE OF THE USSR

D E C L A R A T I O N

To satisfy the request of the workers and social organisations
of the First State Watch Plant and assign the plant the name
of Comrade S. M. Kirov.

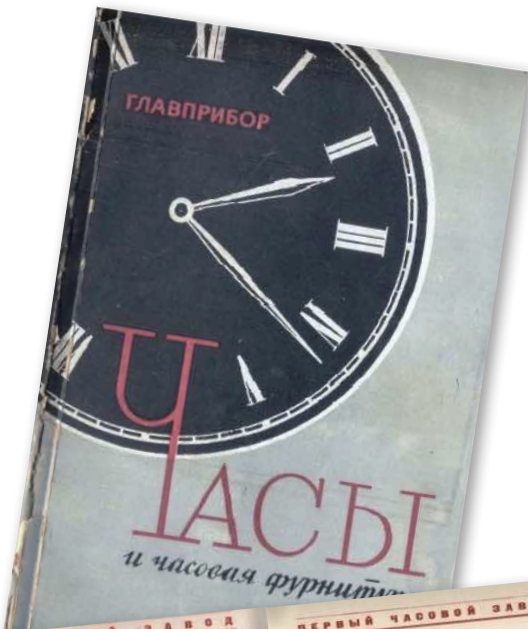
Chairman of the
Central Executive Committee
of the USSR.

M. Kalinin

Secretary of the
Central Executive Committee
of the USSR

A. Akulov

Moscow, Kremlin,
16 December 1935



ВТОРОЙ ЧАСОВОЙ ЗАВОД

2-й ЧАСОВОЙ ЗАВОД
ПОДГОТОВЛЯЕТ:

1. Часы карманные мужские.
2. Балансовые часы.
3. Магнитные часы.
4. Электрические часы.
5. Фурнитуру к балансовым, магнитным и электрическим часам.

ЧАСЫ МУЖСКИЕ КАРМАННЫЕ ИЧ



Рис. 4. Мужские карманные часы ИЧ



Рис. 5. Мужские карманные часы ИЧ (вид со стороны крышки)

Механизм смонтирован на 15 камней. Ход якорный. Баланс компенсационный биметаллический (разрезоной). Пластина и мосты никелированные или посеребрённые. Диаметр 41,5 мм. Корпус часов гладкий, хромированный. Стрелки переводятся посредством ремонтурной головки. Завод оточный. Гарантированная точность хода ± 1 мин. в сутки при всех положениях часов.

Гарантийный срок службы — 1 год.
Отпускная цена промышленности — 180 руб.

ПЕРВЫЙ ЧАСОВОЙ ЗАВОД ИМ. КИРОВА

ЧАСЫ МУЖСКИЕ КАРМАННЫЕ 15-КАМНЕВЫЕ

Механизм смонтирован на 15 камней: 2 наладных и 2 сквозных камнях баланса, 1 эллипсе, 2 палетках, 4 якорных и 4 антракитных камнях. Механизм никелирован и имеет ажуровку.

Корпус, ободок, корпусное кольцо, задняя крышка хромированы. Часы выпускаются с рисунком на ободке и крышке и в гладком корпусе. Циферблат — белый, окрашен под эмаль. Имеются несколько рисунков циферблатов.



Рис. 1. Карманные 15-каменные часы



Рис. 2. Механизм 15-каменных карманных часов (вид со стороны моста)



Рис. 3. Механизм карманных 15-каменных часов (вид со стороны циферблата)

Гарантированная точность суточного хода ± 1 мин.
Отпускная цена промышленности — 180 руб.

Other Type-1 factories

In the main production of Type-1 devices were confined to these factories...

1GCHZ - 1930 - 194

2GCHZ - 1935 - 1941

Zlatoust - 1941 - 197-(inconclusive)

Chistopol - 1941 - 195-(inconclusive)

Factory 53 - 1943 - 1945

2nd State Watch Factory 2GCHZ

Earlier we read that in 1928, Tochkemk absorbed the troubled Moscow Electro Mechanical Plant (MEMZ) which was housed in a renovated three-story stone building at Tverskoy Zastavy, Moscow.

With the establishment of the 1GCHZ in 1930 this institution now needed to become known as the 2GCHZ, second only because of the timing not because it was the second oldest. Indeed, Tochkemk still operated from there until it's demise a few years later.

As the 1GCHZ embarked upon the production of pocket watches, so the 2GCHZ set about utilising the Ansonia clock making equipment also sourced from the USA.

On April 21st 1935 a decision was made by the Council of Labor and Defence that instructed the 2GCHZ to also assemble pocket watches from parts made at the 1GCHZ. Production continued up to the start of the Great Patriotic War (WWII). During this time the manufacturing of parts was started at the 2GCHZ and differences in patterns became discernible. From the first days of 1941 the work of 2GCHZ was placed on a war footing. They discontinued alarm clocks, clocks and greatly reduced the release of pocket watches, at the same time significantly increasing the number of military orders (timers and fuses). Many workers were called upon to join the army, about 200 people joined the national militia, formed in the Leningrad region of Moscow. Their places are taken by women and young people. The working day was increased to 12 hours. Despite the growing alarm inside Moscow, the resolution of the Council concerning the evacuation the factory to Chistopol (dated 15th October 1941. No.180) was a surprise for the plants management.

After the factory returned to full production it is doubtful Type-1 equipment was returned from Chistopol as the now 2GCHZ would begin to produce watches based on the Lip designs. Watches made at this factory would become branded as Slava (Слава) meaning Glory.

Factory 853.

Researching the history of the Soviet watch industry is not easy, access to

documentation is very limited. As a consequence parts of the Type-1 story has been the most difficult to assemble. In addition to the general lack of written evidence, all this happened during a time of what could only be described as organised chaos. Much of what I write is conjecture on my part, combined with valued observations from other enthusiasts. Indeed discussions regarding the Great Patriotic War period are evolving constantly. It does appear that whilst the need to evacuate expanded the number of satellite and new factories, workers were still able to keep the original Moscow factories active, as the threat to Moscow alleviated. Factory 53 (or 853) is probably one of the most difficult area to research. The majority of this information has been derived from the Slava (Second State Watch Factory) site history and I must thank Dorofey Goremykin for her assistance with the translation. Kazan is a city in Tartastan on the Kama river, en-route to Chistopol and may be the location of factory 853. As the 2GCHZ was evacuated part of the equipment may have stayed in Kazan where it was used to establish the elusive Factory 53 during the war. Rightly not entitled a watch factory as it was designated to make timing devices with priority on the needs of the war. The Type-1 watches made there certainly look like 2GCHZ watches apart from the stamp of 53 inside a pyramid. The official factory number was 853 and was established by 1943 to build fuses and pocket watches. The factory operated under the Ministry of Mortar Weapons of the USSR. The factory manager was Ivan Bocharov.

The Zlatoust (or Slatoustowsky). Factory 834.

Due to the military situation in Moscow work stopped at 1GCHZ on the 22nd of October. An order of the People's Commissariat of General Engineering of the USSR ordered plant director Ivan Bocharov to evacuate to Zlatoust a city beyond the Ural mountains. This was by no means unusual, in all around 1500 factories were moved, in over 1800 trains, to safety behind the Ural's.

November 26. People's Commissariat of General Engineering of the USSR transformed into the People's Commissariat Mortar Weapons of the USSR.

By November 28 the complete evacuation of 1GCHZ Kirov, was underway. It removed 1260 pieces of equipment, a significant amount of basic and auxiliary materials, other production assets and inventory. Together with the equipment 296 technicians and watchmakers were evacuated. On November 30th. there was a farewell performance at the Drama Theatre of Alexander Griboyedov's comedy "Woe from Wit".

Despite the difficult operating environment, the factory now produced more than 300 thousand watches and more than 14 million parts for ammunition timers. Zlatoustsky clocks (with pocket watch movements) were fitted to 92% of Soviet tanks and 98% of the aircraft during the war.

After the war, the plant switched to production of products for civilian use; including pocket watches, special watches for the blind, car clocks, time switches for washing machines, odometers (instrument for measuring curves).

Examples of timepieces made during the first period are indistinguishable from Moscow made models of 1940-41. Zlatoust operated as 1GCHZ - Kirov (logo 1ГЧЗ) including the continued use of factory stampings and logo's; cosmetic considerations not being a priority during those days. The earliest pocket watch I've seen with the familiar Zlatoust mark, of 343 inside it's pyramid, is 1951.

By 1943 the Red Army was on the offensive and the Moscow factory was re-established and re-equipped. It did not revert to Type-1 production. The return to production coincided with the time 'State' was replaced in the title with 'Moscow', thus becoming the 'First Moscow Watch Factory - Kirov (logo 1M43 or 1MCHZ in English). The proliferation of factories that occurred when the Zlatoust and Chistopol units were established during WWII may well have prompted the need for a name change. In the excellent 'Russian Times' web site you can find a chronological series of movement logo's with 'State' still being referred to in 1942 but by 1945 they have become "Moscow". In addition, I have a document from 1942 which orders aircraft clocks from 1GCHZ (then in Zlatoust).

To date no documented proof of the name change is readily available, perhaps one day one will surface. What is for sure is that a number of cataloged watches, said to be First Moscow, all have First State logo's and I think that speaks for itself. The Zlatoust factory was responsible for manufacturing Agat Stopwatches and these had their own movement stamp. This stamp can also be seen on later Type-1 movements. The Agat name lived on and still today markets watches (including a good replica's of the Soviet Navy Divers - Vodolaz).

Directors at Zlatoust.

- 1941 - 1948 Ivan Bocharov.
- 1948 - 1954 Nikolay Gurevich (director Chelyabinsk 54-69).
- 1954 - 1961 Alexey V. Kazantsev.
- 1961 - 1967 Boris Potapov
- 1967 - 1968 Boris Prokopevich Klimov
- 1968 - 2000 Anatoly I. Goncharenko

Chistopol (Tschistopolsky). Factory 835.

Once again the majority of this information has been derived from the Slava (Second State Watch Factory) site history.

On October 20, 1941, there began the evacuation of 2GCHZ to Chistopol, a small town on the river Kama, in the Republic of Tatarstan. 170 trucks evacuated equipment and property, alongside 488 people, of whom 128 were engineers and technicians. Much of the equipment got held up in the midway town of Kazan when the river Kama froze and the marina was locked up. What did get through was also delayed in Chistopol until the local government managed to accommodate the factory in an old distillery. This, however, accounted for only 25% of the required space. Nevertheless, in early 1942, it began production of magnetic fuzes.

The factory was given the number 835 and indeed did not exclusively become a watch factory until after the end of the war.

By the spring of 1942 the rest of the equipment has been moved from Kazan and in

Чек и пр 190. 14.11.44 -105 -
Д.А.М

П Р И К А З

НАРОДНОГО КОМИССАРИАТА МИНОМЕТНОГО ВООРУЖЕНИЯ СОЮЗА ССР

№ 104

гор. Пенза.

"26" декабря 1941 г.

В соответствии с решением Правительства ПРИКАЗЫВАЮ:

1. И.о. Начальника Главприбора тов. ЛОСКУТОВУ на базе эвакуированного оборудования Московского 1-го Часового завода им. С.М. Кирова и на площадях городского театра и школы в гор. Златоусте организовать завод по выпуску часов и часовых механизмов, присвоив ему название: "Златоустовский" 1-го Государственного Часового завода Главприбора НКВД.

2. Назначить:

а) Директором Златоустовского 1-го Госчасзавода тов. БОЧАРОВА Ивана Ивановича, освободив его от этой должности на Московском 1-м часовом заводе им. С.М. Кирова

б) Главным инженером и заместителем директора Златоустовского 1-го Госчасзавода тов. СНИЖКОГО Бориса Исаевича, освободив его от этой должности на Московском 1-м часовом заводе им. С.М. Кирова;

в) Главным бухгалтером Златоустовского Госчасзавода тов. ШЕДЯЕВА Бориса Абрамовича, освободив его от этой должности на Московском 1-м часовом заводе им. С.М. Кирова

ЗАМ НАРОДНОГО КОМИССАРА
МИНОМЕТНОГО ВООРУЖЕНИЯ СОЮЗА ССР

А. КОЗЛОВ. -

Москва
26.12.41
24/11
24/11

A copy of the order which instructs the senior management of the 1GCHZ in Moscow to transfer their duties to the 1GCHZ in Zlatoust. English courtesy Marco Stella.

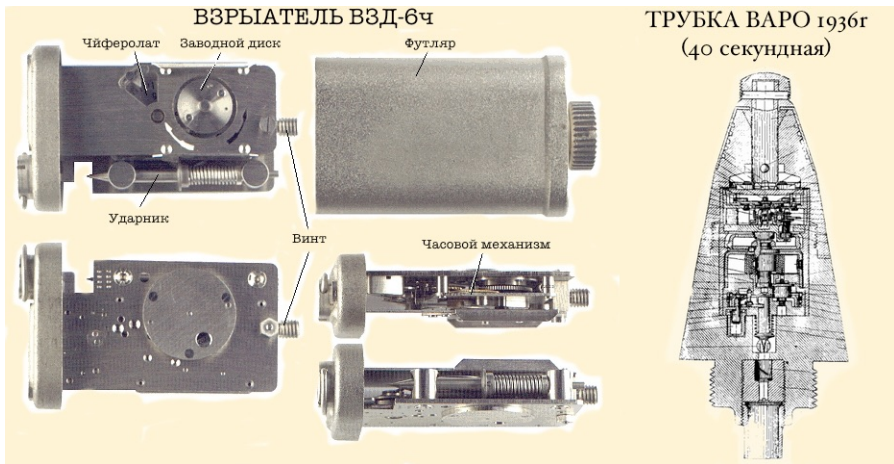
June it is reasonable to assume that the plant was fully operational. In addition to purely military production, there was full-scale production of watches caliber Type-1. During 1941-42 local people were trained in various specialties for the factory.

Immediately after the threat of the German forces was removed from Moscow, 2GCHZ began to revive and re-employ the skilled workers that had remained in the Moscow region. The Director of the restored factory was Sergey Tarasov and later V. I. Sergeyevich.

After the war ended most of the Type-1 equipment remained in Chistopol. The factory brand would eventually be known as Vostok (Восток).

In reality there was a whole raft of other work going on behind the Vostok doors. Much of this was electronics research and manufacture for the USSR military. With the break-up of the Soviet Union watch stocks were used as payment to some of the sub-contractors. One such supplier was a Lithuanian research institute which sold the watches on the local streets to pay the wages of their employees. This same institute later became Vostok-Europe which perpetuates the brand today.

There is a comprehensive and well written article about the establishment of the Chistopol factory by Miguel Angel Cladera.



Typical clockwork activated fuses. Left: VZD-6CH TIMING DEVICE. Right: 1936 (40 second) artillery shell fuse.

Artels

During the 1920's the range of articles produced by Artel co-operatives was very extensive; they produced not only consumer goods but also factory equipment, tractor parts and precision instruments. The 1930's saw a change towards confining Artel production primarily to consumer goods. This curtailment allowed the highly centralised 'Command Economy' to replace co-operative production.

In the transition period after the 1st and 2nd State Watch Factories started-up, Artels, that had been the main stay of pre-1930 watch repair and maintenance, were still in existence. The two better recorded Artel's in Moscow were ABB, abbreviation of Артель Верное Время (Artel Right Time) and ТМП, abbreviation of Трест Местной Промышленности (Trust of Local Industry). According to their own history the Artel Right Time, ABB, was situated at "Arbat House 5." and were primarily responsible for repairing foreign watches and were staffed by master watchmakers. Both were responsible for the assembly of early Type-1 modified chronograph stopwatches, like my single button example. To paraphrase Mark Gordon's description... *"Engineers added an additional stage to a standard Type-1 pocket watch movement. With a start/stop/reset button at '11'. Note that the Chronograph sub-dial counts elapsed minutes in an anticlockwise direction. This was probably done to minimise the number of gears that needed to be added; additional gears would have increased the thickness of the watch."*

It is possible that Artels were encouraged initially to utilise the stock of imported Hampden parts to produce the cataloged Type-2, 3 & 4 watches, in some quantities.

ПКК (РПК), another Artel, but possibly one that was hastily organised at the start of the Great Patriotic War rather than one in the accepted sense of the Artel movement. Type-1 watches were produced/finished-off/assembled in Pushkino a town located at the confluence of the Ucha and Serebryanka rivers, 30 kilometres northeast of Moscow. Surviving examples are uncommon.

Smaller, possibly unofficial, workshops or watchmakers were more likely to have produced modified Type-1 movements, almost to order. Like the undocumented rare examples that crop-up for sale on the internet, from where the upper images on page 63 were taken. Example 'A' is a Type-1 movement that has been modified, and re-bridged, in a crude way to fit it's case. The original stamps have been ground down and re-engraved by hand. The illustration shows how it originated from a superimposed Type-1 movement. The lower version on the right just reinforces the view that these models were one-off's. It has no visible markings on the movement but this time the case appears to be a little larger allowing both bridges to remain. The example lower left has retained both it's bridges and it's factory stamp. More likely to be the work of an individual watchmakers, I have included them as they illustrate the robustness of the movement.

The eventual fate of the watchmaking Artels is elusive but as a child of Lenin's 'State Capitalism' policy they may have struggled to survive Stalin's 'Collectivisation' period which extended up to the start of the Great Patriotic War.

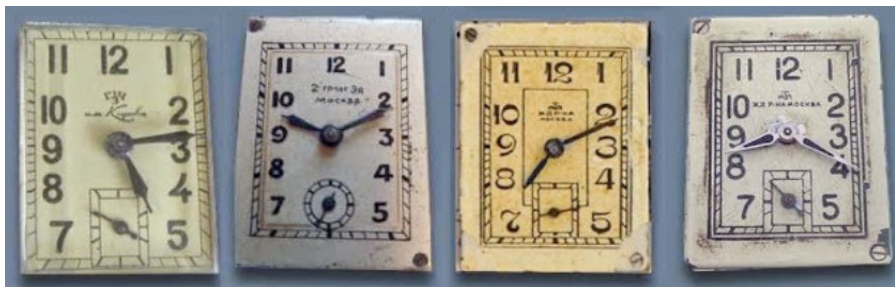
The Type-17 'Brick'.

Still on the subject of Artels, the first watch thought to have been wholly designed and manufactured in the USSR was designated the Type-17 and it is the rarest watch I own. It's not clear if the Type-17 ends as seventeen or in effect Type-1 version 7. If it is the former then it means there are 13 unknown types, between the Type-4 and the Type-17.

Mark Gordon catalogues three, which he refers to as "Type-17, Type-1 modified" and says there were often known as 'Boys Watches'. I have also seen them referred to on Russian speaking forums as 'Bricks'. It is possible that this model was assembled in an Artel with the machined parts and components coming from the factory (one of the dials above is marked ТМП (Trust of Local Industry). However as many Type-17's are stamped 1941 there is also a compelling argument for saying that these watches were indeed factory made, as the Artels were under great threat during that period.



Type-17



Type-17 dial fonts, hands & logos



Type-1 modified stopwatches.



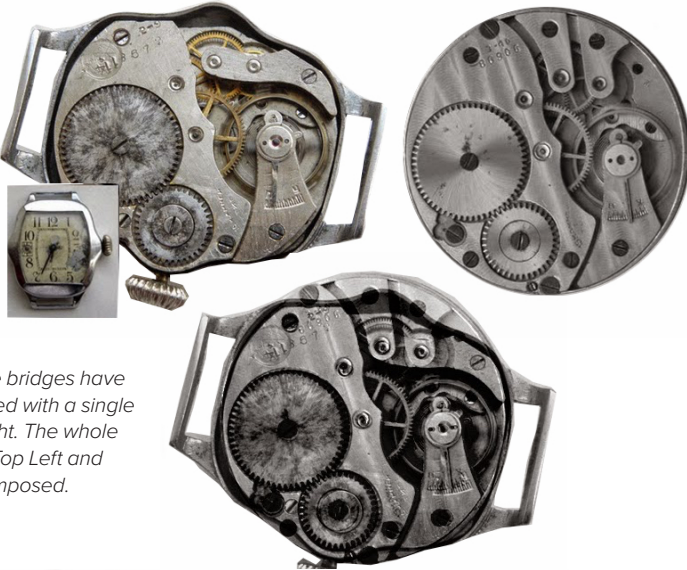
Above: Type-1 modified 1939 ABB dialled and cased Single Button Chronograph



Types 2/3/4 have Hampden movements, the Type-2 being a 'Viking' movement, the Type-3 a No. "400" and an "8.0" movement in the Type-4. Courtesy of Alex Ballod.

Examples of cut-away Type-1 movements

An illustration of the robustness of the movement and of Soviet thrift, ingenuity and craftsmanship.



Top Left. The bridges have been replaced with a single one. Top Right. The whole movement. Top Left and Right superimposed.



Two more "matching" examples, cut-away less drastically. The one on the top is in authors collection and functions to this day.

Diverse Type-1 movements

Example photo

A: The “Gun Camera Clock” is a re-worked Type-1 Zlatoust movement with a modified dial face and central second hand. The case fits inside the movie camera (the housing beside the lens lower left) which is set in-line with the gun sight. When the gun is fired, the camera records the target with a time stamp. Thanks to Phil at ‘Russian Times’ for the use of his picture.

B: One of my favourite uses for the movement has to be the Type-1 mantle clock. With its milky white opaque glass and chrome body, it has a classic 50’s look. It was made in the 3rd quarter of 1957 at the Zlatoust Watch Factory and carries the factories distinct logo.

C: A female Zlatoust worker packing ‘Tank’ Clocks and right my 1952 example.

D: From the late 1950’s Zlatoust manufactured the impressive “Vodolaz” 191-ChS (191-4C) watch for Soviet Navy Divers. Vodolaz (водолаз) translates as Diver. A very large watch who’s diameter (without the crown) is about 60 millimetres and which weighed 250 grams. Production of these unique watches was stopped in the first half of the 1970s.

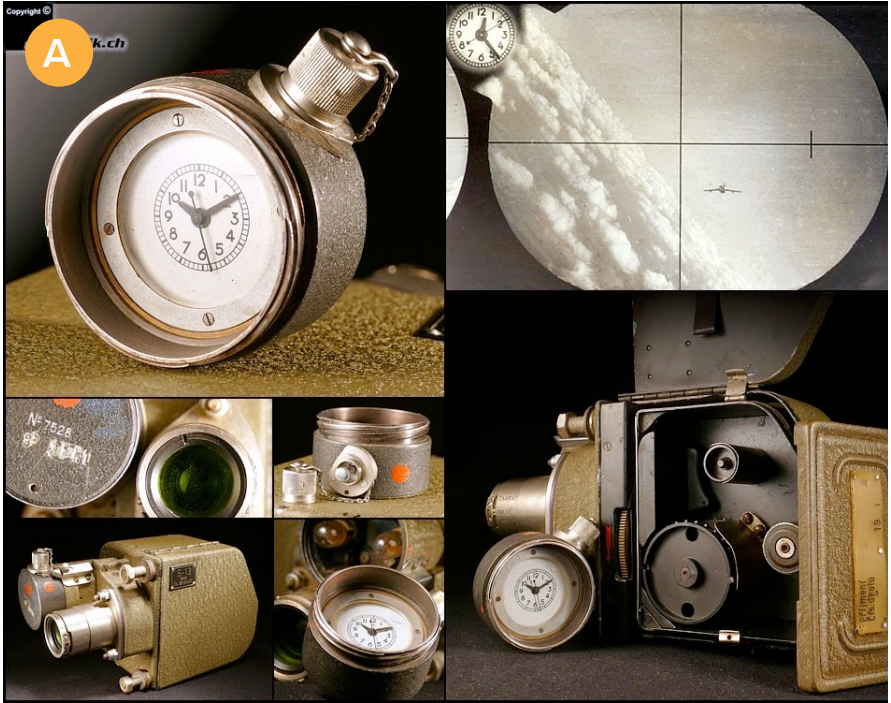
The 191-ChS were issued together with a matching Depth Gauge and Compass. The Type-1 movement is significantly upgraded, being of a higher quality and finish. The one pictured has a fused bridge movement and the stopwatch logo. The fused bridge is found on other later Type-1’s from the Zlatoust factory. This feature was also found on some Hampden Size 16 movements like the one pictured behind and to the right of the Vodolaz movement. To the right you can see a photo of a Soviet diver wearing his Vodolaz watch.

A watch, of which there are several replica’s and many fakes.

Circa 1970 Vodolaz watch with fused bridges. The watch, compass and depth gauge are from my collection.

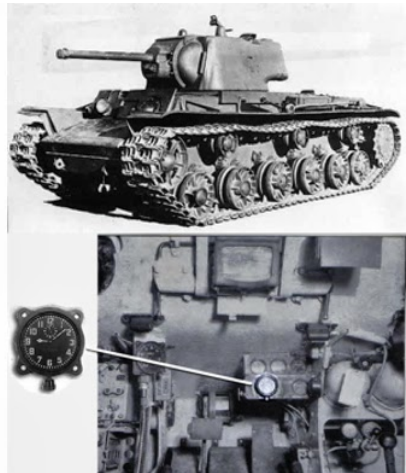
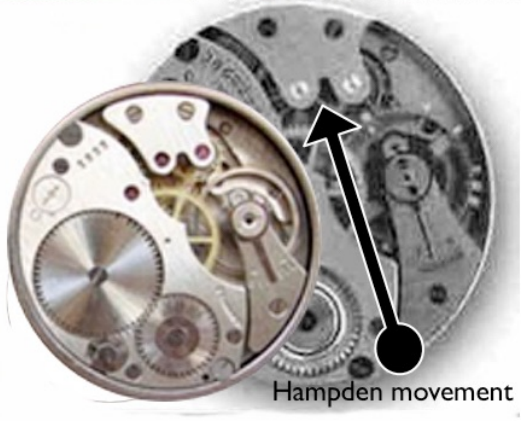
E: More examples of uses for the Type-1 movement can be seen below, tank clocks and aircraft clocks. There is also evidence of the movement being used as vehicle clocks. I think it’s safe to say the movement was adopted as a general purpose movement, initially for military use and then for domestic consumption.

Left. Cockpit clock from the I-16 Ishak (Little Donkey). Right. KV-1 heavy tank showing clock in centre.



Above courtesy of ill-phill @ netgrafik.ch/soviet_collection.htm





Lip and the early Post War period

The Type-1 family of watches would continue in production for some time but by 1956 the watch industry had embarked on a new stage of development. New factories were being established and the old ones revamped. This expansion required the introduction of many new workers with multiple skills. Glavchasprom, the Administration of the Watchmaking Industry, and NIIChasProm, the Scientific Research Institute of the Watchmaking Industry, lead the way and make no mistake the industry became a serious enterprise second only to the Swiss in production terms.

Please look on page 81 where you will see a 1957 US article about the state of the watchmaking industry in the Soviet Union. It reports on a visit by a British horological delegation and contains interesting facts and figures.

Pobeda or Victory watch was probably the most prodigious model ever made, anywhere in the world.

Lip

With much help from Nick Downes, I would like to include a brief account of the role played by the French Lip company.

In 1867, Emmanuel Lipmann had set up a watch making business, the Comptoir Lipmann, in Besançon, the center of France's watch making industry. Soon, fifteen employees were producing watches using ebauches bought from local and Swiss suppliers. In 1893 the company became the Societe Anonyme d'Horlogerie Lipmann Freres, with Emmanuel and his sons Ernest and Camille,

During the 1914 -18 war they produced products such as fuses and chronometers for the military. Ernest Lipmann rebuilt the business after the war, and by 1925 they were producing their own movements again.

In 1931 the company became Lip SA d'Horlogerie, and they expanded the factory and installed the latest machine tools. They managed to keep their heads above water during the recession, and even to introduce new movements and technical improvements. One of their failures was an attempt to get the hide-bound French watch industry to use millimeters instead of lignes. Lip had used millimeters in the naming of their own calibers since the 1900s (e.g. the R25 is a 25mm round movement), but they were unable to overcome the inherent conservatism of the industry, and were obliged to give all measurement in their technical literature in lignes. On the other hand, they did manage to get their watchmakers to wear white instead of the traditional black smock.

In 1936, Fred Lipmann, grandson of the founder, became technical director. Amongst other things, he signed deals with the USSR to export technology and parts to enable Russia to create its own watch industry.

The Dueber-Hampden movements and equipment did not allow the Soviets to produce good quality watches, and so they looked for other ways to get better watch technology. In 1936, Fred Lipmann signed a deal which allowed the USSR to buy movements and watch parts, and then to buy Lip's technology. The USSR got modern, reliable watch technology, and Lip got the cash it needed to get over the financial problems caused by its rapid expansion.

Lip engineers and technicians supervised the installation of a factory at Penza near Moscow, and trained Soviet engineers. They also sold a large quantity of T18 (tonneau) and R43 (pocket watch)



T-18 movement which became the Zvezda

movements to feed the factories while they were getting up to speed. All told, the USSR produced some 10 million Lip-designed movements in the pre- and post-WWII periods. The Soviet produced T18 was called the Zvezda, the R43 was called the Zim and the R26 was called the Pobjeda. The watches Salyut used the R36 movement, which was also part of a deal between Lip and Russia.

The Soviet Union produced the Poljot between 1965 and 1973, and virtually all its parts are interchangeable with the Lip R25. Similarly, there is a striking resemblance between the Lip T15 and the Slava. It seems certain that Lip sold technology at around this time to the USSR. In 1969 Lip were invited to Russia to investigate bringing the Russian technology up to date, and a deal was signed in 1972 to allow Russia to get technical help from Lip. This cooperation continued until Lip's demise in 1975, and resulted in the design of a Franco-Russian quartz watch.

Lip himself continued to operate in France until finally, in February 1971, at the age of 65, Fred Lip stepped down as president of the company, ending over 100 years of control by the Lipmann family.

In the years that followed there were management changes, refinancing, and new publicity campaigns, but none of it helped, and in 1973 they went into pre-liquidation. However, the unions did not agree with the closing of the factory, and so began the spectacular union actions that were to mark the end of the company. Lip ceased production in 1976.

Lip R26 variant.

This movement was installed in the Soviet Unions most popular wristwatch. Called “Pobeda” meaning Victory (the name chosen by Stalin), it was first released in 1945 and went on to be manufactured across many of the new factories as well as the existing Moscow plants. In 1950 the assembly of Pobeda watches was switched to a conveyor belt automated system which not only increased the output, but also improved quality. By 1951 the annual total output of watches at 1MCHZ had reached half a million and by 1955, 1.1 million pieces. Pobeda models remain in production. However, the modern watches have different movements (Raketa 2609) than the original R26, and are re-issued as commemorative, anniversary watches. Back in Soviet days they were often given as prizes for achievements, or as gifts to lower level visitors.

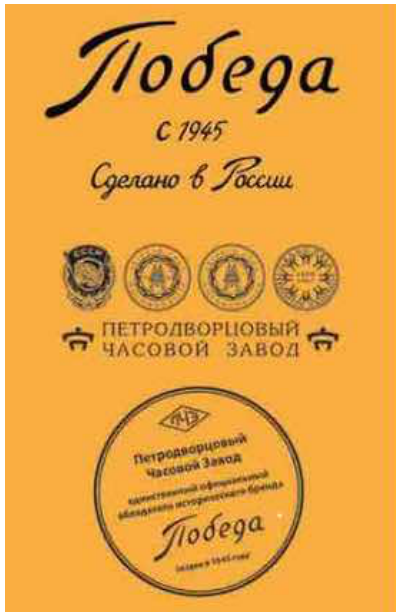
POBEDA production

- Penza Watch Factory (Пензенский Часовой Завод): for a few years from 1945
- First Moscow Watch Factory (First Moscow Watch Factory), 1946 to 1953
- Petrodvorets Watch Factory (Петродворцовый Часовой Завод): 1946 to current time
- Chistopol Watch Factory (Чистопольский часовой завод): 1949 to the c.1950
- Second Moscow Watch Factory (Second Moscow Watch Factory): 1953 to 1964
- Maslennikov Factory - ZIM (Maslennikov Plant): c.1951 to 2004

The Lip R43 was called “Zim”. In 1969 Lip were invited back to bring the Soviet technology up to date and later in 1972 a deal was agreed giving the Soviets fresh technical assistance. This co-operation lasted until 1975 when Lip went under. The pocket watch which effectively took over from the Type-1 was the “Molnija”. After the war the renowned Swiss watchmakers, Cortébert, were approached by Soviet Russia for assistance and technical advice. They purchased equipment that enabled them to copy the Cortébert calibre 616 movement as the “Molnija”. Production of this watch continued throughout the Soviet period.

I am not a Soviet watch collector per-se, my watch accumulation simply reflects my interest in the Hampden legacy. There are three exceptions however, my wafer thin Luch 2209 Vympel, a Zvezda Tank based on the Lip T-18 and a Poljot Strela derived from a Swiss Venus 150 movement.

Another major advance in the technology of watch production was facilitated by the reparations the USSR imposed on Germany following the war. The Glashütte factories



Above: Pobeda watch and catalogue.

lost almost all their machinery. This was relatively new equipment, allowing the Soviets to produce some of the most modern movements of the time and with a high class finish. All the famous watch manufacturing companies of the little town of Glashütte, such as Lange, Kurtz, Assmann, Muehle, UFAG, UROFA and many other small workshops were forced to join the 'Glashütte Uhren-Betriebe VEB'.

Walter Lange reported that the Soviet occupiers expropriated the firm in 1948. *"The little that was left after the war was taken away by the Soviets, I myself helped packing machines into boxes to be shipped to Russia. At Lange, we had to make sketches to teach the Russians how to make marine chronometers,"* he said.

The Soviets were not shy to buy and adapt technology from many other sources including the Venus 150 chronograph movement and various Valjoux ones.

The Type-1 is finally retired.

I have tried not drift off the Hampden trail too much, it is the Type-1 design movements that carries through the Hampden connection. Right up to the 1980s this movement has survived and is easily recognisable as a twin bridge Hampden pattern Size 16. The Type-1, or K-43 when placed into a case, was a 15j pocket watch for governmental use. A Type-17j version was issued to the Red Army, although this was later upgraded to a 15j version. By the end of the 1940's there was a gradual phasing out of the Type-1 movements, the legacy of the Hampden purchase in 1930. I have a Type-1 Pocket Watch from the Zlatoust Watch Factory made in the third quarter of 1958, possibly one of the last of the Type-1 pocket watches. The movement went on to be used in specialised clocks and watches,

but by the 80's had disappeared.

It is most likely that no part of the latter Type-1's were made on the original Canton machines. More likely on machines re-designed by the factories themselves.

There is a myth that American equipment was used to make the first watch in space, that of Yuri Gagarin. By the time his Sturmanskie watch was produced the 1MCHZ factory had been fully re-equipped. In any case the Canton machines were not suitable of producing such a modern watch. Had this have been the case I would have been very pleased to pronounce it.

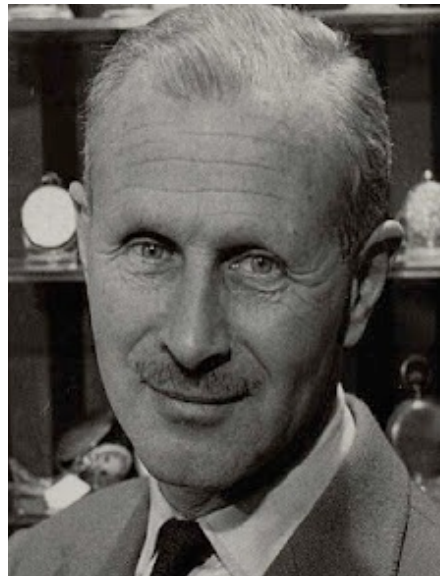
The final destination, or disposal, of the original watch making equipment from Canton is impossible to determine but it's reasonable to assume most of the equipment machines and tools ended their working lives in Zlatoust, Chistopol and the other satellite factories. Renowned American Horologist Prof. Henry Fried reported seeing Dueber-Hampden machines in a "Chinese factory" in the 1980's so we can reasonably assume the equipment was in a watch factory. But the fact is no Chinese watches have ever resembled Hampden or Type-1 movements in any shape or form and it would be wrong to imagine any machines he did see were playing a significant role in watch manufacture.

It is fair to say that the Hampden, size 16 model 5 pattern, Type-1 movement served the USSR for 50 years until the 1980's - not bad value for money and not bad for a bankrupt design.

And so a lineage, that had it's deepest roots back in Italy and travelled to the Ural's via Providence, Springfield, Canton USA and Moscow, finally came to an end.



Henry Fried



Fred Lipmann

Fakes & Frankens

Generally, original watches would have had some uniformity from factory to factory. Finding a watch today in original condition is going to be difficult and almost impossible to verify. But that's no different to any watch from anywhere. Repairs & refurbishments inevitably mean the use of donor parts. Likewise in manufacture, to believe the Soviet system was not capable of exchanging parts between factories, as an imperative to maintain production, is unrealistic.

Hampden movements were stamped with the serial number on the main components and this practice was repeated on early Type-1's.

Sometimes the more a watch is reconstructed from a myriad of parts combinations just proves the quality and durability of the Type-1 and the production system as a whole. The real problem is when such a watch is falsely accredited and a premium is asked. The definition of a Franken (enthusiasts word for a watch made up from different watches - from Frankenstein) is a watch cobbled together for the purposes of deception. This differs from a fake which may well have freshly made components, or could even be the complete watch, as in the "copy watch" version of a Rolex. The 191-ChS is a good example where there are original watches, genuine repaired watches, frankens, replicas and fakes.

Type-1 dials.

Dials are generally plain, especially true of wartime watches. Dials with pictures of tanks, planes, subs, hammer & sickle, Stalin or Lenin are tourist/fantasy fakes.

Other points about dials...

Some dials have a 12 hour chapter ring some have an extra 24 hour ring.

Reverse designs of black dials with white lettering were made for instances where that arrangement aided visibility or stealth.

There are serial numbers stamped into some dial, most likely for military issue. Radium was used to highlight numbers, hour spots and hands, in the dark. Most dials are metal (brass), painted and screen printed, however, there were some early paper covered dials.

On the excellent 'Russian Times' web site you'll find chronologically listed factory movement stamps.

In my experience factory logo's only appear on the dials of the first four factories to produce Type-1's and not on the other satellite factories (movements are different, they do all have distinct stamps). Many Type-1's do not have any dial markings at all. In addition I have not seen an authentic Type-1 with a 1st Moscow Watch Factory logo, or 2nd Moscow Factory logo.

My observations only.

- First State Watch Factory - 1ГЧЗ (1ый ГЧЗ).
- First Moscow Watch Factory - 1МЧЗ (1ый МЧЗ).

One way collectors ensure the watch is not a franken is to cross reference the logo on the dial with the movement stamp or style. However, there are exceptions, for example when the Second State Factory first started Type-1 production, they used movements supplied by the First State Factory.

The saucepan wristwatch cases from the two factories also had differences but are often swapped...

Authenticity is a minefield and subject to opinion.



*This watch illustrates what was once a genuine 1938 Type-1.
Described as WWII (which was 1941 to 1945 in the USSR).
Wrong... Hands - Dial - Crown - Lugs
It is what it is, a franken.*

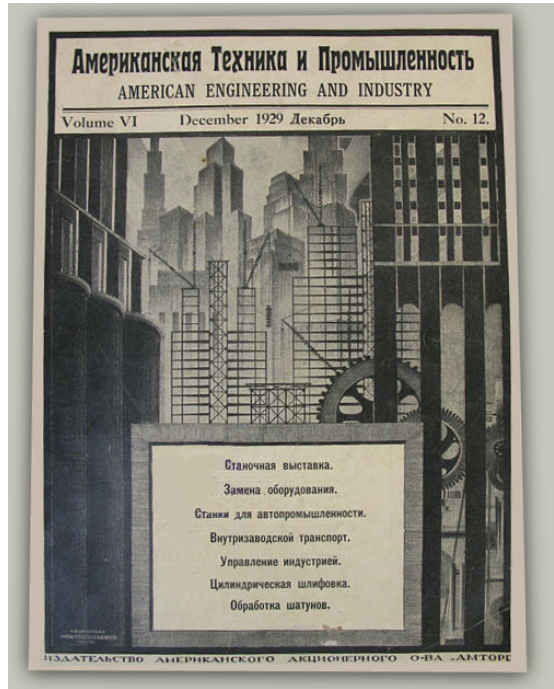
Amtorg

The Amtorg Trading Corporation was based at 165 Broadway, New York City, and after 1929 at 261 Fifth Avenue. Amtorg is an acronym of Американская торговая - American Trading. It was formed by the amalgamation of the Products Exchange Corp. (1919), Armand Hammer's Alamerico and Arcos-America Inc. (1923). The latter was the US office of the UK based All Russian Co-operative Society (ACROS).

Although Hammer's name is often linked with the Dueber and Ansonia purchases but he was not involved. Indeed, he played no part in the organisation and was simply a facilitator and participant in the many concessions given to business men to maximise the acquisition of foreign currency.

Hammer acquired many imperial treasures and impotered, amongst other things, 'Hammer Pencils'.

Alamerico: The Hammer family (actor Armie Hammer is the latest generation) held three concessions in the Soviet Union. One covered the Alapievsky asbestos deposits; the second, granted in July 1923, was a general trading concession and the third was the pencil and stationery concession. The Hammers had been trading with the USSR. under a Soviet trading license, since 1918; the concession gave them the right to establish an office in Moscow and represent a number of large American companies. Previous to the grant of the concession, Hammer had been described as the 'Soviet trade representative in the United States'. The Hammer trading concession represented thirty-eight large American companies. These had an aggregate capitalisation in excess of one billion dollars, and included Ingersoll-Rand, American Tool Works, Heald Machine, Ford Motor Company, US. Rubber, US. Machinery, and other companies of similar stature. Hammer also made contracts in the United States for the sale of Soviet raw materials. The right was granted to conduct operations independently of the government trade monopoly: quite a remarkable situation, given the vehemence with which the Soviets normally defended their monopoly on trading rights. The only limitation on Hammer operations was that imports into the Soviet Union could not exceed exports. It appears that the Hammer concession was represented within the USSR. by Soviet organisations.



Presidents of Amtorg from 1924 to 1936.

- Isay Khurgin (1924–1925), died under suspicious circumstances in a boating accident in upstate New York.
- AV Prigarin (1925–1926)
- Saul Bron (1927–1930), executed during the Great Purge in 1938
- Pyotr Bogdanov (1930–1934), executed during the Great Purge in 1938
- Ivan Vasilyevich Boev (1934–1936), executed during the Great Purge in 1938.

For example, in the Northwestern oblast, the concession was represented by the Northwestern Trade Association, which institution carried out all the transactions of the Company. The concession was financed by the USSR.

Amtorg became the first Soviet trade delegation in the US when in May 1924 it was established to assist the USSR's import and export companies seeking to conduct legitimate trade. It would continue in this role throughout the Soviet era.

Amtorg's chief commissioner for the purchase of the Dueber-Hampden factory was Mr A. Vladiminsky. Although based in New York, he would spend much time in Canton negotiating with the Receiver Raymond Loichot.

Another major Amtorg contract was concluded with the American Architect Albert Kahn. Kahn was best known as the architect who designed many Detroit car plants, including Ford's. Around the time of the construction of IGCHZ Kahn had set up a factory design bureau in Moscow. It is most probable that IGCHZ was designed by Kahn's company as it meets all the criteria he established for model Soviet factories.



Саул Брон

Left: Saul Bron (25 January 1887, Odessa – 21 April 1938) was the third chairman of Amtorg. He was the first president of Amtorg whose command of English enabled him to negotiate without the aid of interpreters (he was also fluent in German and French). Bron was arrested on 25 October 1937. He was falsely accused of being a member of an anti-Soviet terrorist organisation on 21 April 1938 he was tried, sentenced to death and was executed the same day. Rehabilitated 1956.

An American worker in a Moscow Factory

S. Weinberg, New York USA.

The foreman came over to me and said that I was temporarily laid off. It was just 5:30 p.m. and the bell rang. I gathered my tools and packed them in my box. Then I went to see Mr. Dienstman, the owner of the Dial Watch Case Company. He explained that he was forced by the depression to cut down expenses but hoped in a short time to send for me again. While I was still in his office, he told the same story to the other workers who by this time had crowded around him. I looked at these fellow worker and they looked at me, each of us troubled by the same thought - unemployment. The menace under capitalism had reached out and scooped another handful for the army of the unemployed. Until now the highly skilled and specially privileged worker among us had not felt the struggle for existence.

We'd thought we could easily get another job. However, when I went to ask for work at the Sagamor Metal Goods Corporation, where I had previously earned sixty five dollars a week, the manager told me that he no longer paid high wages; but if I'd work for thirty dollars a week until times were better he could give me a steady job. I would not submit to that, rent alone was forty seven dollars a month. Would the landlord take less? So I told the Manager sorry no.

(Authors note: The story goes on to tell of his journey across Europe to Moscow and highlights the plight of workers and the desolation caused by capitalism. We pick up the story in Moscow)

The Soviet Watch Industry

There were no watches made in pre-war (pre-revolutionary) Russia. Only the bourgeois and middle classes were the possessors of pocket watches. Most of the Russian population never owned a watch. Many never learnt to tell the time. Some had never even seen a watch in their lives. What watches there were in the country were mainly old style makes from Switzerland, France and Germany. During the World War wrist watches were imported by the Russian war promoters for the exclusive use of military officers. Otherwise, modern style watches did not exist. In 1917, with the October Revolution, the proletariat inherited only a negligible amount of watches. Imports, also, were stopped altogether. It was only during the period of the New Economic Policy that watches again made their appearance in the Soviet Union. A concession was granted to a clock manufacturer in Moscow. He made a cheap wall clock of the chain and weight style. The quantity was very small and the quality poor.

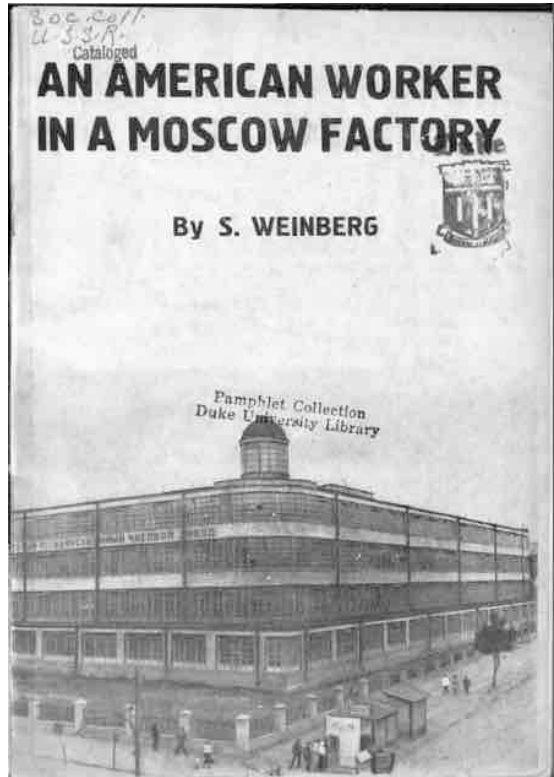
In the first Five-Year Plan provision was made for the establishment of two large factories, one to make watches and the other to specialise in clocks. A survey of the watch and clock factories for sale resulted, in 1928-29, in the purchase by Soviet commissions of

the Dueber Hamden (*sic*) Watch Company of Canton, Ohio, and of the Ansonia Clock Company of New York. The machines of these factories were then shipped to Moscow where two magnificent, modern, daylight buildings were being erected by the Watch Trust to house them.

The First State Watch Factory is on Voronzovskaya. The Second State Clock Factory was built adjoining the old concession factory on Leningrad Road. In October, 1930, the First Watch Factory began producing four types of watches - two pocket watches and two wrist watches. The Plan for 1931 was 70,000 watches, but only half that number were made. The plan for 1932 called for 70,000 watches and it was exceeded by 10 per cent. For 1933, the plan has been raised to 100,000 and all indications show that

more than this number will be produced. The factory employs 1,200 workers and employees who have learnt to produce watches of good quality. The watches were ordered by the government for railroad workers and other officials who must do their work on time. So now Soviet workers can become the proud possessors of well made, accurate timepieces of seven-jewel and fifteen-jewel types. These watches are made entirely of Soviet metal. Even the jewels which used to be imported are now made in the Soviet Union. Until recently the watch springs also were imported. But after persistent experiment we have now succeeded in freeing ourselves of foreign imports.

The Second State Factory manufactures clocks on a mass scale. It specialises in four types. A cheap, peasant chain-and-weight wall clock of which it plans to turn out three million this year; an alarm clock for which its planned figure is 500,000 for 1933; a standard table clock, 50,000 of which it will make in 1933 and an electric wall clock of which it plans to make 10,000 this year. This factory employs over 3,000 workers. These clocks are also made entirely of Soviet material by Soviet workers. Much has yet to be done to improve the quality of this production, but the workers are learning fast. The end of the second Five-Year Plan will undoubtedly see a great increase not only in output but also in quality. The Soviet watch industry as a whole is only at the beginning of its achievements. The demand for clocks and watches is infinitely greater than the supply. Therefore, in the second Five Year Plan provision is made for two additional factories. A commission was set to work locating and buying the plants abroad.



Meantime, the Watch Trust has opened a research laboratory, an institute which is now functioning at high pressure. This laboratory experiments with all kinds of chronological mechanisms or movements. It has three sectors. One sector experiments with watches. Another experiments with clocks and electric timepieces. The third experiments with other time measuring instruments, such as stop watches, counters, etc. This laboratory employs 150 specially trained workers, and according to mooted plans will presently be enlarged to employ a personnel of 750 highly skilled workers.

The institute has completed some very fine original electric clocks which have gone through the most severe tests and proved successful. All the designs are made with a view to confining production to Soviet metal and machinery.

Soviet engineers are looking to the automatic machine to do the precision work in the new factories. This will free the workers from eye strain and the very difficult operations which require the highest skill. It will raise production, reduce waste and lower costs.

Published by
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Duke University Library Pamphlet Collection
(Abridged extract)

American watchmaker trapped in the USSR since 1934

The man came to light when he suddenly reverted to speaking in his native English instead of the Russian he was forced to learn to survive his epic 82 year Soviet adventure.

Kenneth Edwards, (known locally as Kenneth Vladimirovich) now 100 years old, suffered a stroke over 10 years ago which left him unable to communicate with his Russian family and children. 'I am having to learn Russian all over again', he said in a halting American accent, in Zlatoust an industrial Ural Mountains outpost where he worked, for 60 years, at the Zlatoust (AGAT) Watch Factory.

At home in Zlatoust, his wife Zoya, 84, said 'I say something in Russian to him, and he replies in English,' 'I only understand what he wants to say by his intonation'.

He rarely used English after his wealthy, idealistic, father Willard moved the family from Alabama to the USSR, believing the future lay with Communism. This was in 1934, the year after Franklin D Roosevelt came to power and Kenneth was just 18 years old.

Kenneth's parents and siblings found a way to escape back to the U.S., but he was stuck because his father had insisted his eldest son should give up his American citizenship and hold only a Soviet passport. Willard himself fled as early as 1935 realising his hopes of teaching in 'progressive' schools under Stalin was fantasy. The commissar who recruited him was later shot as an enemy of the people, during Stalins infamous purges. Detroit-born Marjorie, Kenneth's younger sister, managed to get a job with the U.S. embassy during the Second World War and found a way to flee back to America at the end of hostilities. But she could not secure her beloved brother's release.



Willard H. Edwards was a wealthy Chicago socialite who became a socialist. He taught at the Organic School in Alabama but after the depression emigrated to the USSR in 1934. He returned to the US a year later but left his eldest son and daughter behind.

Early on he joined as a mechanic at the 1st State Watch Factory-Kirov, whose equipment had ironically been purchased from the United States in 1930. In late 1941 during the siege of Moscow, he along with the complete factory was evacuated to Zlatoust.

Kenneth lived through the Great Patriotic War (WWII), as a watch factory worker. Asked at the time if he had regrets, Kenneth said: 'Those are very hard questions. 'I went to school. I learned a trade. I went to the institute. 'I met my wife here, we had two children. Of course, we had many difficulties.'

His return to speaking English instead of his word perfect Russian had stunned local doctors. In 1992, when he had a reunion in Moscow with his sister Marjorie, he had trouble speaking to her because he had forgotten much of his English. He told her: 'I have a Russian wife and Russian children. I speak only in Russian. I think only in Russian.' Among his neighbours, he is admired. 'He never drank or smoked and he swam each day until he was 90,' said one. Locals say he has managed to retain a respect for both the U.S. and Russia.



Bottom Left: Kenneth on a field trip to the Organic School in Fairhope where his parents taught. He has a King snake around his neck.

Top Left: Kenneth with his wife seated to his left.

Above: Kenneth in Zlatoust 2011. In 2016 he became the only 100 year old resident.

Russia, an awakening horological giant

Timely Topics

Published for the Employees of the Hamilton Watch Co., Lancaster, Pa. USA.
November - 1957

In October one year ago an interesting report on the very rapidly expanding horological industry in the USSR was released. A party of British horologists returned in September, 1956, from a tour of Moscow and Penza watch and clock factories and submitted a report on their findings. This was the first time any Western observers had been admitted to the Russian factories; in fact, it was the first time ANY Westerners had even been in the town of Penza for many, many years.

The British group was a guest of the Russian Government and, in particular, of the Minister of Instrument Production and Means of Automation. Through the report by these curious and observant horologists has come the only news available on the progress and production of horological instruments in this scientifically vigorous country. At the Twentieth Communist Party Congress, Bulganin stated the aim of the Soviet leaders as being, "To overtake and outstrip the most developed capitalist countries in per capita production. In achieving this aim automation will play a leading part." As you will note by reading further, the Russian push of its watch and clock industry is a vivid example of this.

Horological Progress

The manufacture of watches in Russia was of no consequence at all until 1930, when the country's first Five-Year Plan was adopted. Just a few years earlier, in 1927, Russia had purchased the Dueber-Hampden Company in Ohio, and shortly after moved it to the



Soviet Union. In 1940 Russia began her first watch manufacturing using mass production methods. World War II followed, and development work was stopped-the factories being turned over to the development of fuzes. However, through rapid progress in the post-war years, the industry today has become very large- to the extent of production of over 5.5 million watches in 1954, and close to 7 million in 1956. The combined output of clocks and watches is now running at a level of about 24 million units a year, with expectations of 32 million by 1960. However, several new factories and extensions were already under construction or in the planning stage in the fall of 1956, so these might put the production up to at least 50 million a year by the close of the next Five-Year Plan.

One factory, 500 miles southeast of Moscow, employs 7,800 people and is making 70,000 16/17 jewelled watches a week - ladies watches only. It is the largest such factory known anywhere in the world and is still expanding. In the Moscow area are two factories each known to employ about 5,000 people and to produce over 3 million 15/17 jewelled lever watches a year between them. One of these plants also produces chronometers, deck watches, marine clocks and miniature alarms with 11 jewel lever movements. In Leningrad there is reported to be a factory producing jewels for watches, clocks and instruments at the rate of 2 million a week.

At present, Russia's horological industry probably rates as the second largest in the world, its output ranking below only that of Switzerland. And if this rate of development is maintained, it is very possible that in a few years she can have the LARGEST watch and clockmaking industry in the world.

Standard Of The Product

Unlike other watch and clock producing countries, Russia is interested only in the production of 15/17 jewelled lever watches; therefore she probably turns out a higher average standard of watch than any other nation. Even in the manufacture of miniature alarms (which run for one day on a winding) the movements are all-jewelled. The British delegation observed that no pin pallets are made at all. Some time ago, they reported, a pin-pallet wrist watch was put on the Soviet market but it was not successful and apparently "would not sell" even to a timepiece- hungry population. The number of styles in watches is limited and they are mainly simple and unsophisticated. It must be realised that her industry is in competition with no one, for she allows no importation of any watches or clocks. It is interesting to note that the Russian timepieces sell in the shops for as much as 10 to 14 times their actual factory production cost. The high profits that are made go to the national exchequer.

A Central Control

The control of the whole industry, from the technical point of view, is carried on by the Horological Research Institute in Moscow. It was set up in 1946 to coordinate the design of watches and clocks, the design and building of machinery and to help solve a 11 technical, material and production difficulties of the industry. The Institute, which employs over 300 qualified technicians, receives unlimited funds from the government, and through a representative in each factory any problem the plant may have is handled by this technical group regardless of the cost. Because of this central controlling

organisation the industry is always ready to design and develop any horological instrument which might be needed by the Soviet Union.

Probable Reasons For High Productivity And Quality

The following reasons for Russia's tremendous progress in the industry were submitted in the British report:

- No foreign imports, thus no competition.
- Workers were only recently allowed to change jobs: to do so even now means loss of certain benefits.
- A very high standard of labor in the industry. This may be partly due to the fact that Russian women do much of the heavy work mining, road-building, pneumatic drill operating, etc., so when there's an opportunity for clean, precision work such as the horological industry offers, they try extra hard to do their best. Thus the industry attracts a very high class of labor.
- Rigid discipline is imposed on the workers and they accept it willingly.
- Unity of purpose through central direction. plus the encouragement and drive of management and political pressure, exhortation and propaganda.
- Complete freedom from labor problems and disputes such as strikes. There is no word in the Russian language for "strike."
- Criticism by fellow workers for any form of slackness on the job.
- Wages set mainly on an incentive basis.
- Watch component quality is high, proving the skill of toolmakers and machine setters.
- Production is held to a very few types of movements and complete watch designs.
- Unlimited capital is available.
- High profits which go into the national treasury.

Export

Right now Russia is still meeting her own unsatisfied horological demands within her own boundaries, and exports do not amount to more than 2 per cent of her total production. However, her technical advance in the field is so evident that it cannot be ignored. She is striving for the highest quality and her industry is backed by a strong research organisation. Undoubtedly the world market will one day be the target for Soviet horological domination.

The Herman London Appendix

(in collaboration with Vladimir Graizer)

Introduction

23 former Dueber-Hampden employees went to Moscow under contract to Amtorg to instruct on the use of their old factory equipment. Contemporary reports in the US said they all eventually returned.

On the contrary one of the Americans, Herman London, did not return. As his family will testify he remained and died there 44 years later.

Just how valuable was this multilingual, precision engineer, watchmaker with Hampden experience? For example, in the early period at 1GCHZ the Soviets re-engineered the basic Hampden movement into Stopwatches and Chronographs. Similar work had been instigated in Canton and it's inconceivable to think Herman wasn't given a role in these developments in Moscow.

Did he remain in the USSR, as his family believe, because of Soviet skulduggery? Or perhaps the initial opportunities were more stimulating than he could have ever imagined or experienced in the US. Did this make him naïve?

What did the city of Canton or the US government do when he failed to return? Did they abandon him and his family, thinking he only had himself to blame?

Herman London wasn't a man with a political or ideological bone in his body. Just like his contemporary Wolf Pruss he was a watchmaker first and last.

The story

Haim Lundin was born on October 18th 1892, in Neswizh Belarus, at that time it was part of the Imperial Russian Empire. Haim came from a religious Jewish family, his father was a Rabbi. The family was very poor and Haim had five siblings. In 1903 aged just 11 he was packed off to Minsk to work as an apprentice watchmaker eventually becoming a watchmaker in his own right.

He emigrated to the US in 1913 and settled in the Brooklyn area of New York. Upon his arrival he became known as Herman London. This may have been by choice, or more probably because of the practice of the port authorities to anglicise the names of immigrants with heavy accents and document them as such for expediency.

Once in the US he quickly learned English, having previously self-educated himself to

be fluent in Russian, French and German. Herman's yearning for learning was so intense that he attended night school and became a qualified precision instruments technician. Throughout he had continued his work as a watchmaker and in the end was capable not only of repairing all types of watches but also capable of making any part of the watches mechanism.

Herman and Lena Atkins, an American citizen, set up home in 1923. Lena was a widow when she met Herman and already had a daughter, born in Cleveland, OH., in 1919. Herman and Lena would have a child of their own in 1924 and marry in Canton in 1929, just before going to Moscow.

According to his contract with Amtorg, he had been employed as the Job Boss of the Leaf Cutting Line of the Pinion Department at the Dueber-Hampden Watch Works in Canton OH. The watch works had gone bankrupt in 1927 but in 1929 the equipment was purchased by Amtorg on behalf of the Soviet Government and was shipped to Moscow. Herman, along with 22 other former managers and job bosses accepted 12 month contracts offered by Amtorg to work at the new First State Watch Factory (1GCHZ) in Moscow.

On March 8 they had docked in Europe and headed on to Paris, then later to Berlin. In Berlin the Gostrest Tochmekh engineer Percy Dreyer defected. He had travelled to Canton from Moscow with Alexander Breytburd to supervise packing the equipment. At that time, the American party were unable to understand why Dreyer should choose to remain in Germany and leave his family behind.

Originally, Herman had a 12 month contract with Amtorg but returned home from work one day and announced that he had signed an extension, much to the consternation of Lena. His contract finally ended in November 1931 at which time the London family prepared to leave Moscow and return to the US. Out of the blue he was told that the Soviet authorities did not recognise him as a foreigner. They confiscated his US documents effectively denying him permission to leave the country. Then they issued him with an internal Soviet passport, which precluded him from leaving the USSR. The Soviet authorities had taken advantage of the fact that Herman only had a Green Card and re-entry permit to the US. He had never applied for US citizenship, not thinking it was that important and therefore had no US Passport.

At that time there was no US Embassy in Moscow, and no proper procedure in the Soviet Union for an appeal. Herman was naïve in assuming that the Soviet Union would respect the agreement with Amtorg, or honour his American travel document. Indeed, it was a common practice for the Soviets to only respect agreements which were beneficial for them. As a consequence London was trapped in Moscow. Lena was a US citizen and both children were born in the US and so were also American citizens. The Soviets realised no hold could be extended over them, so Lena and the children were free to leave. However, that scenario was inconceivable, although she did return to the US briefly. Lena never stopped trying to get his status overturned. From the outset of his time at 1GCHZ his ability to speak Russian, German, French, English and Yiddish would have been very valuable, especially when combined with his watchmaking and precision engineering skills. Many foreign watchmakers were recruited to fill the skills shortage and good technical communication would be paramount. It is not clear how compliant he was in remaining behind. He had immense satisfaction from his work and was well treated in Soviet terms. Also back home in the US the depression was

well underway and there was little chance of work.

Later his significance may have diminished. In 1936 he was inexplicably fired and all the initial enthusiasm turned to anxiety. Shortly after he had the good fortune to be offered a job at the Second State Watch Factory (2GCHZ) also based in Moscow. The factory director Solomon Neufeld was also Jewish and from Belarus. He and London first met in Paris in 1930, on route to Moscow. Neufeld also served as Director of 1GCHZ during London's time there. But Hermans new employment did not last long. Neufeld was arrested in 1937, a victim of Stalins purges. He was executed and his wife spent 18 years in a Gulag. With Neufeld gone London decided to leave his job at 2GCHZ.

During his time at 1GCHZ Herman became friends with Wolf Pruss, they had much in common. The families were also close especially the watchmakers daughters Dora and Esther. It was a further blow to Herman when he learned Pruss, who had been moved on to other things, had also been executed on trumped-up charges similar to Neufeld.

When the watchmaking equipment was being packed in Canton, in 1930, Samual Zubkoff(v) was hired by Amtorg to help Breytburt and Dreyer. Zubkoff had emigrated to America from Russia like Herman London. Samual and his wife Zina also considered themselves Americans and they travelled to Moscow, with the 23 Canton watchmakers, expecting to return at the end of their contract. They were billeted in the same building as Sue Killen and Alfred Fravel. The London and Zubkoff families became friends. Like Herman London, Zubkoff was also offered an extension to his contract. Like London, he clearly didn't return to the US as by 1938 he was working as head of quality control at 2GCHZ. He too was arrested for spying and executed that year.

Herman London and his family were also likely candidates for the purges and lived in a constant state of fear throughout that period.

After leaving 2GCHZ he found what work he could until the outbreak of the Great Patriotic War (WWII) in which he served in the military as an auxillary. He returned to his family in 1945 to be told his son Phillip had been killed in action.

Herman applied for jobs at the First and Second Moscow Watch factories, but was refused. According to Soviet laws people who had served in the Army during the War were entitled to be reinstated at their former place of work. But no matter where he applied, he was refused. Finally, he agreed to work at an Artel, repairing watches. He disliked this, but had no choice and continued in that way until his retirement.

Herman retired in 1961 at the age of 69. The main reason for retiring was a tremor, his hands were shaking. Despite working for all his life and going through 4 years of war Herman received a very low pension of just 65 rubles (1961: 1 Ruble = \$1.1).

Haim Lundin, aka Herman London, passed away on July 4th, 1974 at the age of 81.

Dedicated to Eleanor Graizer and Esther London. Without their memories of Haim Lundin aka Herman London, this appendix to the Hampden story could not exist.

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About the Author

Alan Garratt is an Englishman who for many years worked for a company also called Hampden, but with no connection to the watch concern. They were involved in the Rubber Industry which inevitably led him to Ohio and the Akron, Cleveland and Cincinnati areas. At this time he was unaware of the watch company, but one day he had cause to search Hampden on Google. The results opened up this fascinating new world to him and him into researching and gathering as much information about Hampden & Soviet watches as possible.

