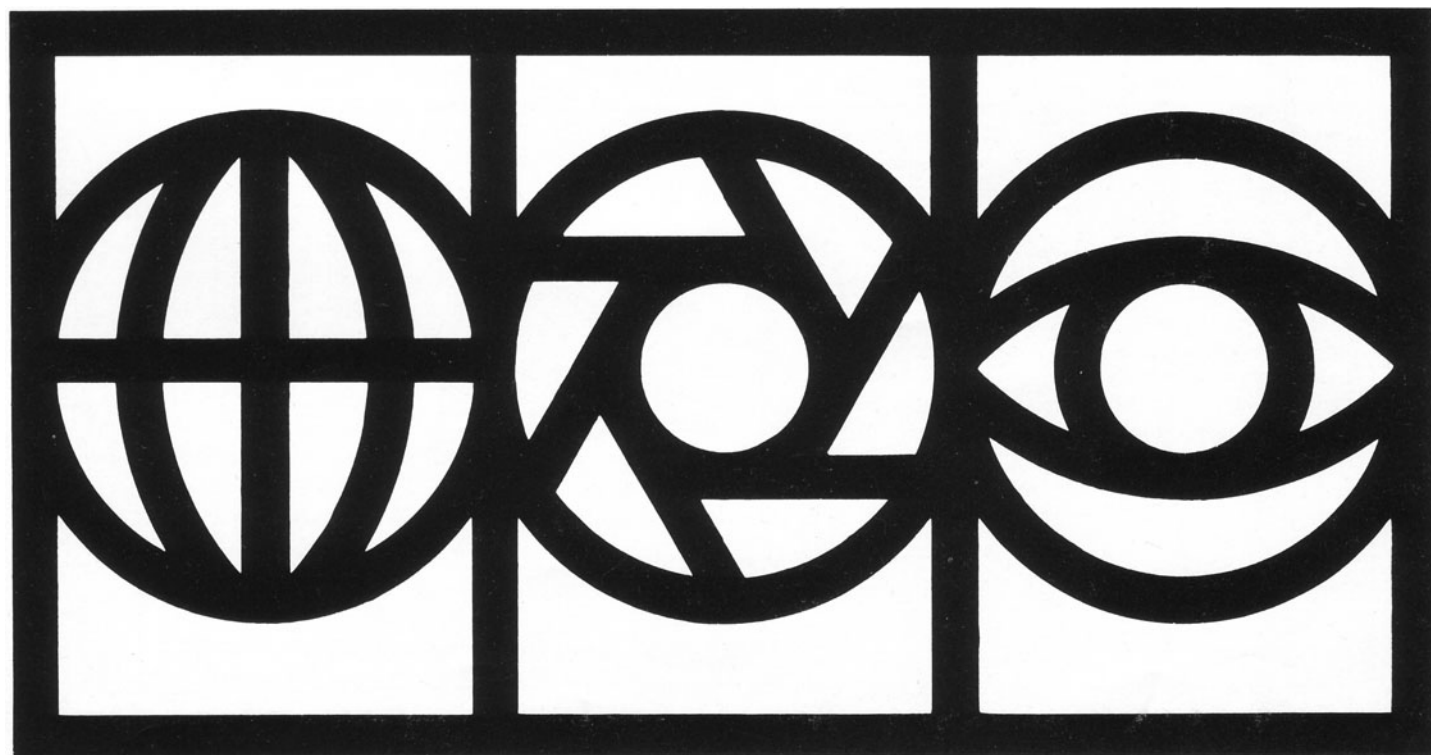
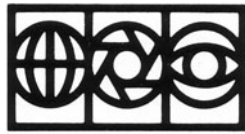


Reprinted from

History of Photography

an international quarterly





Purpose and Objectives

History of Photography is devoted to the publication of original findings and the assessment of their significance. It is addressed to readers with a serious interest in this field, to art historians and art teachers, photographers and collectors, librarians and archivists, teachers and students of journalism, and social historians. It will encourage the systematic preservation of photographic source material and will emphasize its value to sociology and art history. One of the principal purposes of the journal is to promote an understanding of the subtle relationships between photography and the other graphic arts.

Outline of Scope

The camera obscura and related instruments; discovery of photo-chemical processes; the invention of photography in its various forms; reaction of artists and lay public to the new invention; lives of notable inventors and practitioners; the spread of photographic knowledge and practice to distant lands; earliest uses of photography in exploration, education, science and war; professional studio practice in the 19th and early 20th century; relationship between photographic technique and photographic style; growth of photographic industry and literature; development of cameras; other technical inventions and discoveries related to photography; the photography of movement and origins of the cinema; influence of painting on photographic style; influence of photography on painting and sculpture; history of photo-mechanical reproduction; influence of photography on the development of the press; history of photo journalism; 19th and 20th century masters; the entry of photographic themes into fine literature; influence of photography on advertising; 20th century style trends; the preservation and restoration of old photographs; items of interest to photographic collectors; the teaching of photographic history.

History of Photography

an international quarterly

International Advisory Board

James W. Borcoman, National Gallery of Canada
Hans Brill, Royal College of Art, UK
Peter C. Bunnell, Princeton University, USA
John Cato, Gallery School of Photographic Art, Melbourne, Australia
Brian W. Coe, The Kodak Museum, UK
Than Deren Coke, University of New Mexico, USA
Robert Doherty, International Museum of Photography, USA
Anna Fárová, Prague
Hans Frank, Photomuseum Frank, Bad Ischl, Austria
Gisèle Freund, French Federation of the Association of Creative Photographers
Juliusz Garztecki, Union of Polish Art-Photographers
Nachum T. Gidal, The Hebrew University, Israel
Arthur T. Gill, The Royal Photographic Society, UK
Nada Grcevic, Association of Art-Historians, Yugoslavia
Sven Him, Helsinki City Library, Finland
Eikolt Hosoe, Tokyo College of Photography, Japan
Andre Jammes, Librairie Paul Jammes, Paris
Estelle Jussim Simmons College, Boston, USA
Fritz Kempe, Museum fur Kunst und Gewerbe, Hamburg, FR Germany
Rolf H. Krauss, Deutsche Gesellschaft fur Photographische Sektion Geschichte, Stuttgart, FR Germany
Hardwicke Knight, University of Otago, New Zealand
Boris Kossoy, Sao Paulo, Brazil
Robert E. Lassam, Fox Talbot Museum, Lacock Abbey, UK
Bernd Lohse, Leverkusen, FR Germany
Ellen Maas, Institut fur Modeschaffen, Frankfurt, FR Germany
Robert Meyer, Norwegian Society of the History of Photography
S. A. Morozov, Sov'etskoe Foto, Moscow
Beaumont Newhall, University of New Mexico, USA
Laurent Roosens, Sterckshof Museum, Belgium
Constantin Savulescu, Association of Art-Photographers, Romania
Aaron Scharf, The Open University, UK
Larnberto Vitali, Italy

Distribution

Japan

Kinokuniya Book-Store Co. Ltd, 17-7 Shinjuku 3-chome, Shinjuku-ku, Tokyo 160-91

USA and Canada

Light Impressions Corporation, P.O. Box 3012, Rochester, N.Y. 14614

UK and elsewhere

Taylor & Francis Ltd, 10-14 Macklin Street, London WC2B 5NF



Taylor & Francis LTD

10-14 Macklin Street, London WC2B 5NF

The Dzerzhinsky Commune:

Birth of the Soviet 35mm Camera Industry

by Oscar Fricke

The Soviet photographic industry was born in a manner very different from that in Western society. Pre-Revolutionary Russia did not have a domestic camera industry. The small Russian optics industry was dominated by foreigners, and all cameras, paper and accessories were imported¹. The Soviet camera industry emerged only during the late 1920s and early 1930s, a period of experiment and general social upheaval which followed the October 1917 Bolshevik Revolution and the ensuing civil war. The Union of Soviet Socialist Republics was officially created in 1923, Lenin died in 1924, and Stalin had begun his rise to power. The first Soviet cameras were produced during Stalin's push for the industrial and economic transformation of Russia.

The Soviet Union's first 35 mm camera was the FED², first produced by the F. E. Dzerzhinsky Labour Commune in Kharkov, then the capital of the Ukraine. Initially a colony for the rehabilitation of youth, the commune had been created as a memorial to Felix Edmundovich Dzerzhinsky, founder of the Soviet secret police. The person responsible for the unique path which the commune was to follow was its director, Anton Semyonovich Makarenko, who became famous, not in photography, but in Soviet education. In many ways the early history of the FED reflects in microcosm the changes the country was undergoing.

The original FED cameras were a limited number of straight Leica I (A) copies produced in 1932-33, the first of many Leica imitations. Thus FED is one of the oldest surviving names in 35 mm photographic equipment. When the production of FED Leica II (D) copies began in 1934, they marked a milestone in Soviet photography, becoming the first Soviet small-format camera to be mass-produced and only the second major Soviet camera of any type. Production of this model continued for over 20 years, during which time only small changes were made in the camera's appearance and mechanism. Ironically, the total production of FED and other Soviet Leica II copies greatly exceeded that of genuine Leitz Leica IIs, and may have even surpassed the output of screw-mount Leicas of all types³.

ALEXANDER RODCHENKO AND THE LEICA

When the original Leica was introduced to the world at the Leipzig Spring Fair of 1925, it changed the course of photography as perhaps no other camera had ever done before. The Russian public was introduced to the Leica by the May 1927 issue of *Sovetskoe Foto* [Soviet Photo]. With a β 5 Elmax lens, the Leica A then sold for 133 roubles and 40 copeks. By 1933, the photographic situation in the

Figure 1. One of the advantages of a miniature camera, as seen by 'Sovetskoe Foto' (May 1934).



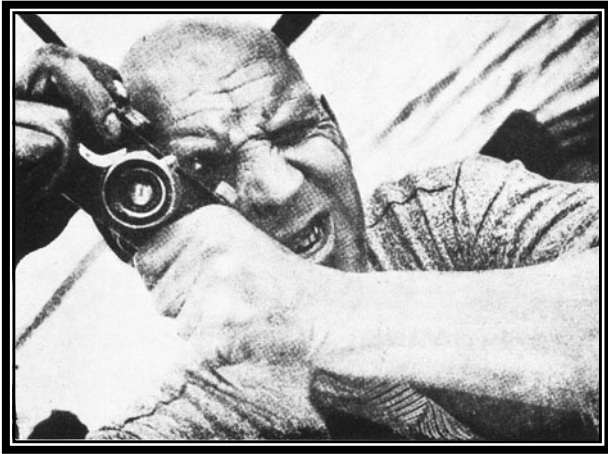


Figure 2. V. Kovrigin: Alexander Rodchenko on the Moscow-Volga Carnal (early 1930s). (From 'Sovetskoe Foto', April 1936.)

Soviet Union was such that the Russian correspondent for a British magazine wrote, 'Although no longer imported, the Leica is easily first in popularity. No film packs are made, and no rollfilm save cartridges for the Leica'⁴.

The popularity and success of the Leica in Russia was due in part to painter-turned-photographer Alexander Mikhailovich Rodchenko (1891-1956)⁵. During the late 1920s, Rodchenko was a photographer on the staff of *Novyi LEF* [New LEF], a magazine edited by the 'poet of the revolution', Vladimir Mayakovsky. LEF was an acronym for the literary group *Levyi Front Iskusstva* [Left Front in Art]. A series of Rodchenko's photographs appeared in the July 1928 issue with the caption, 'Taken with the Leica camera using cinema film'⁶. Photographs were not normally identified with the type of camera used, but in this case Rodchenko evidently wanted to make note of the revolutionary new camera and format.

In his Soviet biography, Rodchenko is described as the first Soviet photographer to use a Leica. He was unquestionably the best known. The impact of the Leica on his career was such that one chapter is devoted to his 'Leica photography' and a Leica is pictured on the book's cover. He used the compact new camera to its full advantage. His works included photo-montages, portraits and documentary photographs, including a series on street vendors in Moscow in the late 1920s, described by his biographer: 'His lens takes in the city, its crowds, its bustle, its lively street trade. Vendors cluster near the sidewalk. One of them is selling candy; a slight turn of the Leica and there is another, tempting you with fruit . . . but the photographer is more interested in the conversation between the vendor and the customer, to be more precise, their expressions, their gestures'⁷.

Much of his work explored the effects of converging lines and perspective, showing people, buildings and trees from unusual heights and angles. However, such experimentation was not deemed compatible with the developing concepts of 'socialist realism' and Rodchenko

was criticized for ignoring the ideological content of his photographs⁸. Nonetheless, he was a pioneer and innovator in Soviet photography and did much to introduce and popularize the new concepts of 35 mm photography. Rodchenko's work also appeared in *Sovetskoe Foto* and the large-format, illustrated monthly *USSR in Construction* as well as in other Russian magazines throughout the late 1920s and 1930s. He is one of the very few Soviet photographers to be represented in American print collections (Museum of Modern Art and Library of Congress).

Thus, shortly after its introduction, the Leica made its way to the Soviet Union and began to change the habits of Soviet photographers. Yet before too long its import was halted along with that of all other types of foreign equipment⁹, and the result was a strong demand for a domestic 'Leica-type' camera.

ANTON MAKARENKO

Anton Semyonovich Makarenko was a Ukrainian educator whose approach to education had an unexpected effect on the Soviet camera industry. Although virtually unknown in the United States, Makarenko is today revered in the Soviet Union as one of the most influential educators of the period between the 1917 Revolution and the Second World War. In the years before his death he also became a prolific writer, describing his experiences in novels, articles and stories, some of which have become Soviet classics. His seven-volume collected works have been published in Russian¹⁰ and in German translation¹¹. His best-known work is available in English as *The Road to Life*¹².

Makarenko, born in 1888, began his educational career as a teacher in 1905 in the small Ukrainian railway town of Kryukov¹³. That year also marked the Revolution of 1905, an event which strongly influenced his intellectual development. He entered the Poltava Teachers Institute in 1914 and, after graduating with honours in 1917, became the director of the school in Kryukov. Following the October 1917 Revolution, which he enthusiastically supported, Makarenko became outspoken in his views on the course of Soviet education. As a result, in 1920, the Ukrainian *Narkompros* [People's Commissariat of Education] offered him the chance to organize a colony for the rehabilitation of *besprizorniki*, children orphaned and made homeless by the recent years of civil war, famine and social disorganization. Abandoned and dressed in ragged clothes, the *besprizorniki* crowded in slums or roamed the countryside, making a living from crime and begging. Their number reached millions by the early 1920s, creating a serious social problem which lasted for more than a decade.

Makarenko accepted the challenge, and in September 1920 a small colony was established near Poltava on the main road to Kharkov. The colony was relocated twice and grew to 400 members by 1926. For seven years, Makarenko worked with the Gorky Colony, as it came to be called, gradually developing the ideas of collective discipline and labour education which he would later fully implement

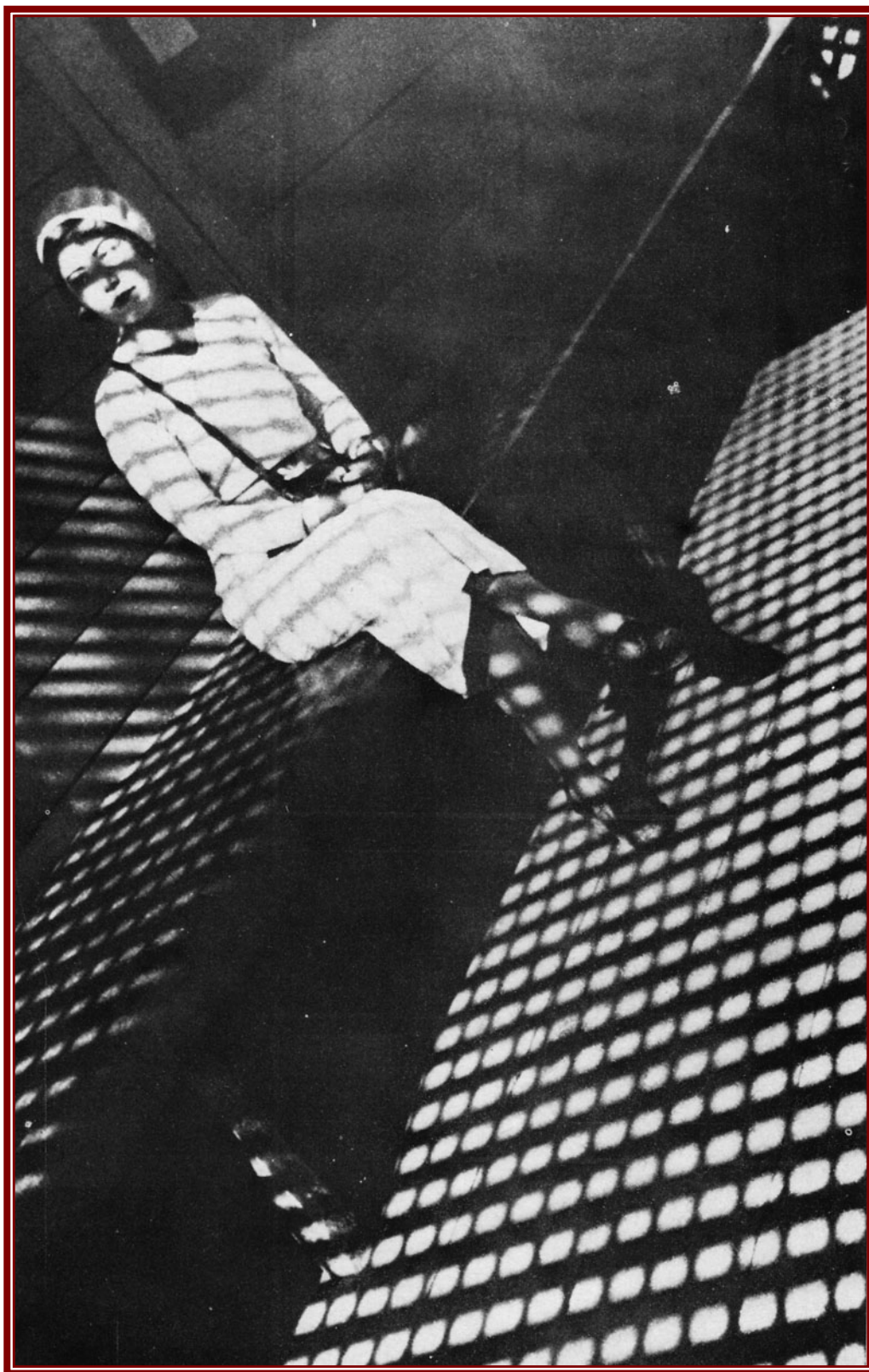


Figure 3. Alexander Rodchenko: 'Girl with a Leica', c. 1934. (From German Karginov, 'Aleksandr Rodchenko', Corvina, Budapest, 1975.)

at the Dzerzhinsky Commune. Discipline was provided by a quasi-military type of regimentation. Competition between work 'detachments', each with a 'commander' in charge, helped to create a

needed sense of pride, achievement and community. Labour education was the combination of formal secondary education with some form of

productive work, which at the Gorky Colony was mainly agricultural. Extension of the productive work concept eventually led to the production of the FED camera. Makarenko's success with the *besprizorniki* was a rare exception compared with the results of other institutions. These years of experiment at the Gorky Colony enabled Makarenko to develop the fundamentals of his educational methods.

The colony had adopted the name M. Gorky Colony [*Koloniya imeni M. Gor'kogo*] in honour of the Soviet writer Maxim Gorky. Makarenko deeply admired Gorky, and shared with him a great respect for people and a faith in man's vast creative potential. The two men developed a life-long correspondence, and Gorky encouraged Makarenko when he eventually began to write about his own experiences.

However, Makarenko's efforts at the Gorky Colony were not fully appreciated. In particular, Ukrainian education officials would have preferred a more permissive system without the military-style regimentation. Their mounting criticism eventually prompted him to resign, but not before he found himself welcome elsewhere. In June 1927, Makarenko was invited by the Ukrainian police to supervise the organization of the Dzerzhinsky Commune on the outskirts of Kharkov.

THE F. E. DZERZHINSKY LABOUR COMMUNE

The association of the FED camera with a youth colony is unlikely enough, but the fact that this colony was administered by the Soviet police is the most unusual feature of all. Felix Edmundovich Dzerzhinsky (1877-1926), whose initials the camera would bear, was the founder and first leader of the Soviet secret police, or *Cheka* as it was originally called, from the time of its inception in late 1917. The name *Cheka* came from the Russian initials of its formidable formal title, All-Russian Extraordinary Commission for Combating Counter-Revolution, Sabotage and Speculation. Frightening as the organization was, it apparently engaged in some activities which were not of a security-related nature at all. In 1920, the *Narkompros* proposed the creation of a State Council for the Defence of Children to deal with the *besprizorniki* problem¹⁴. Dzerzhinsky read the proposal and felt moved to put his personal energy and the energy of the *Cheka* into the problem. He told the Commissar of Education, 'I think that our apparatus is one of those which works most efficiently. Its branches are everywhere. People take notice of it. They are rather afraid of it . . .'¹⁵ Early in 1921, the All-Russian Central Executive Committee (VTsIK) established the Commission for the Improvement of the Life of Children, with Dzerzhinsky as its president. The announcement caused quite a stir, it seems, and even the *Narkompros* journal carried an article largely devoted to calming its readers.

In the years and famine that followed, the situation of the children in fact grew only worse, but Dzerzhinsky's gesture was remembered. When he died in 1926, the Ukrainian



Figure 4. Unknown photographer: Aston Semyonovich Makarenko, Soviet educator and writer, director of the Dzerzhinsky Commune, in 1936. (From 'Makarenko, His Life and Work', FLPH, Moscow, c. 1963.)

political police, now called the OGPU (Unified State Political Administration), decided to build a children's commune in his honour¹⁶. The F. E. Dzerzhinsky Labour Commune [*Trudkommuna imeni F. E. Dzerzhinskogo*] was officially opened on 29th December 1927. Under eight years of Makarenko's leadership, the institution won a great reputation, and received visitors from many countries.

From the start the Dzerzhinsky Commune differed from the Gorky Colony. Makarenko had already built and tested his educational system at the Gorky Colony, and was able to apply his methods more confidently at the Dzerzhinsky Commune. Here he had the full support of the authorities and was freed from the distractions of disapproving supervision. And unlike the Gorky Colony, which began its life in the dilapidated ruins of a former estate, the buildings and workshops of the Dzerzhinsky Commune were new, in fact lavish in comparison, having been built and in part furnished by contributions from local *Cheka* officers.

At first the commune had 150 members, boys and girls ranging from 13 to 17 years of age and including a nucleus of 50 former Gorky Colonists. The wards of the commune,



Figure 5. Russian 'besprizorniki' [homeless ones] in the 1920s. (From 'USSR in Construction', April 1934.)

or communards as they might be called, were still classed as *besprizorniki*, but now more in the Western sense of delinquents. Their number would grow to 600 by 1935.

Makarenko's methods combined productive work and secondary education in a Marxist system of polytechnical education which sought to eliminate the distinction between physical and mental labour. This was accomplished by dividing each day into two four-hour shifts, with one shift devoted to productive work and the other to classroom instruction.

Whereas agricultural labour had been the main emphasis of the Gorky Colony, more complex types of work were developed at the Dzerzhinsky Commune. Initially, the commune engaged in handicraft-type productions, with workshops for locksmithing, carpentry, shoemaking and sewing. The commune also had a small foundry. Production was started with the aid of outside craftsmen, but as commune members developed their own

skills, outside help was reduced to a minimum.

The products themselves, including clothes and crudely-made furniture, initially went to serve the commune's own needs, but orders were soon accepted from outside as well. In this way, the commune became a completely self-supporting institution, a source of considerable pride. By late 1929, the commune was making and selling various kinds of furniture and other products. The resulting income allowed the improvement of facilities and expansion of the carpentry shops. Production of desks and chairs soon reached the thousands. The value of the daily production rose steadily, and communards also received wages which rose as the skill and value of their work increased. The commune even had a marching band and a wide range of clubs, including drama, various sports, photography, and service-type clubs for improving conditions within the commune. There were also the *Komsomol* and Pioneer youth organizations.

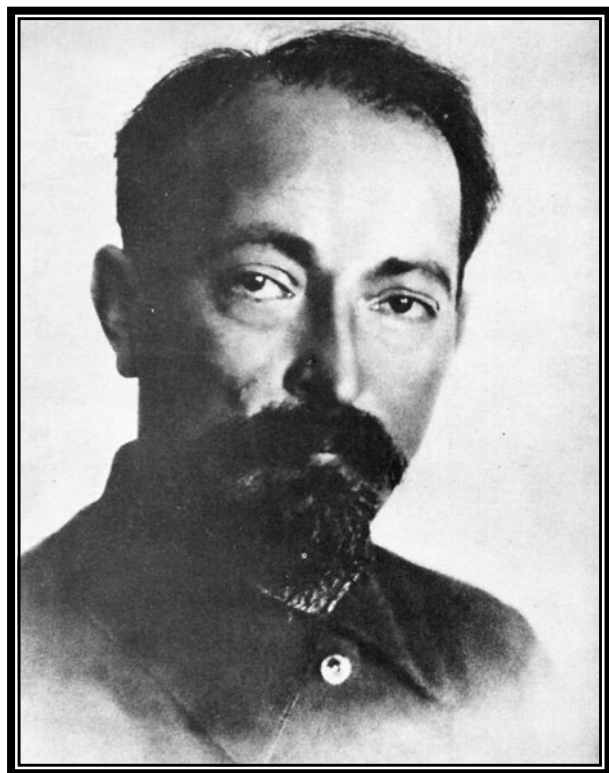


Figure 6. Unknown photographer: Felix Edmundovich Dzerzhinsky, founder of the Soviet secret police. (From 'USSR in Construction', April 1934.)

The Dzerzhinsky Commune had become a complex community and would soon undertake even greater challenges.

During this time the Soviet Union had begun to undergo great changes. Stalin consolidated his immense powers in the late 1920s and in 1928 launched the First Five-Year Plan. The first three Five-Year Plans would transform the USSR from an agricultural country with virtually unutilized resources into an industrial nation no longer requiring large imports to fill her economic needs.

It was the Soviet intention, as expounded by both Lenin and Stalin, to establish an autarkic economy completely independent of and isolated from the economy of the capitalist world¹⁷. The First Five-Year Plan sought to bring about the wholesale collectivization of agriculture together with rapid industrialization, including the construction of heavy industry, development of transportation and harnessing of new power sources. But to industrialize in such a short time, Russia had first to rely heavily on the technology of the West. Books, research, scientists, technicians and machinery enabled the Russians to obtain some of the most advanced industrial technology in the world, without having to pay the tremendous cost, in time and money, of experimentation and development¹⁸. In this scheme, international patent agreements and the fact that the Leica, for example, was of foreign design and manufacture would become largely incidental and irrelevant.

The forced collectivization of the peasants resulted in the dispossession of millions of people, and thousands

died. Forced labour employed on heavy construction projects also exacted its toll. Makarenko managed to survive this period while many other educators did not. Sudden shifts in policy often had fatal consequences.

It was also during this period, largely as a result of the drive towards industrialization and self-sufficiency, that the Soviet camera industry was born. In 1929 the first EFTE plate cameras were produced in limited numbers by the *Foto-Trud* co-operative in Moscow, and by late 1930 came the *Fotokor-1*¹⁹. A 9×12 cm folding plate camera produced by the State Optical Mechanical Works [*Gosudarstvennyi Optiko-Mekhanicheskii Zavod* or GOMZ] in Leningrad, the *Fotokor* became the first Soviet camera to be produced in large numbers. Close to one million were manufactured before the Second World War²⁰. It was designed along Western lines and featured a four-element 13.5 cm f/4.5 *Ortagoz* lens. Soviet camera production increased from zero in 1928-29 to 2973 in 1929-30 and 23 008 in 1931²¹.

The First Five-Year Plan covered virtually every phase of life in the Soviet Union, and also placed heavy emphasis on education. Schools were required to produce more technically-trained people to take part in the industrial fight²². The Dzerzhinsky Commune was affected in both its educational and its productive capacities. In September 1930 a *rabfak* [workers' faculty] of the Kharkov Engineering Institute was established at the commune to bring the worker-students up to normal university entrance standards. More importantly, the commune decided to construct its own full-fledged factory and begin a new industrial phase in its life. This undertaking would lay the groundwork and create the experience for the even more ambitious project soon to follow.

Using funds accumulated from the sale of their products, and with the aid of a state loan, a new two-storey building was erected for the manufacture of portable electric hand-drills. Planning began in early 1931, and the cornerstone was laid that May²³. The communards took an active part in the construction, and the building, designed to house the machinery for the manufacture and assembly of the drills as well as additional sleeping quarters, was completed in November. All aspects of planning and construction were carried on in co-operation with qualified engineers, designers and other specialists from outside the commune.

In January 1932, the new factory was festively dedicated and soon thereafter the first drills were completed. They were designated type FD-1 and were patterned after certain Austrian drills²⁴. The FD stood, of course, for Felix Dzerzhinsky. These drills were the very first electric hand-drills to be manufactured in the Soviet Union. In fact, one of the requirements in deciding what the commune would produce was that whatever it was to be, it should free the country from depending on its import.

To cope with the commune's new activities, the number of communards was increased to 300, now with an average age of between 15 and 20, and including 50 girls. By the end of 1932, the number reached 340, at which point there was, in addition, one adult for about every four communards²⁵.

Figure 7. K. Kuznetsov: Plaque commemorating the organization of the Dzerzhinsky Commune in the Ukrainian city of Kharkov in 1927. (From 'USSR in Construction', April 1934.



These adults directed the work; they included engineers, technicians, mechanics, instructors, managers, clerks and hired workers who did some of the difficult operations and machinery repairs. Communards participated in all aspects of the production and had the opportunity to learn several different skills.

The production of the electric drills proved to be a successful enterprise. In June 1932 it was decided to begin the design of several new models²⁶. These were based on Black & Decker models from the United States and were designated FD-2 and FD-3. A goal of 11 500 drills was set for 1933, mostly of the FD-1 type.

SOVIET LEICAS

Finally, in *The Road to Life* Makarenko wrote, 'In 1932 it was said in the commune: "We're going to make Leicas!" It was a Chekist who said it, a revolutionary and worker, not

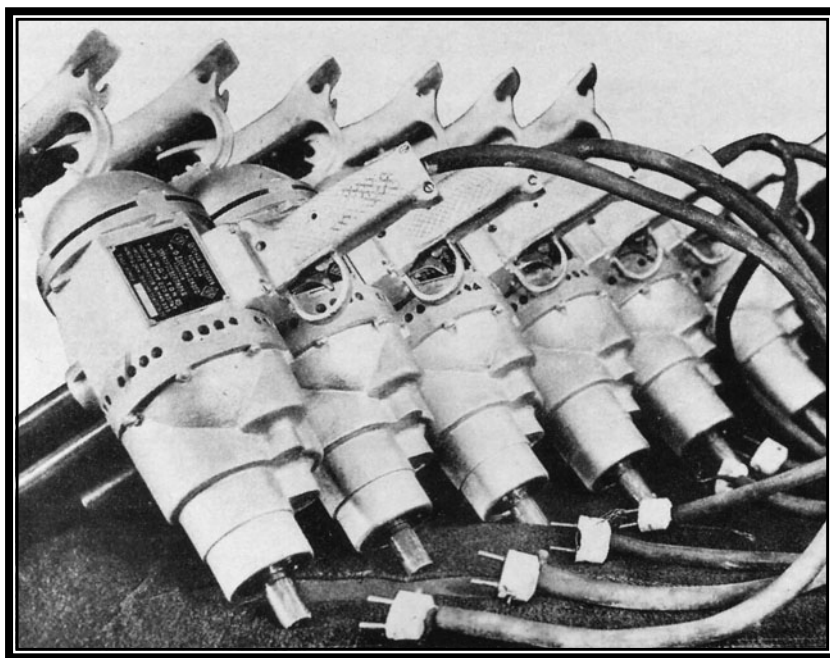
an engineer, optician or technical designer²⁷. In a chronology written for the fifth anniversary of the Dzerzhinsky Commune (celebrated on 29th December 1932), Makarenko was considerably more specific: on 2nd June 1932, planning for the production of Leica cameras was formally begun; on 21st June, a special experimental department for the manufacture of Leicas was established at the commune²⁸.

How exactly the commune decided upon the Leica may never be known, but the reason is quite clear. In 1936, Makarenko wrote, 'The manufacture of the products themselves, the FED camera and electric drills, is above all else a struggle towards the economic independence of our land²⁹. Feeling a need for the new camera, but not wanting to import it, the Russians took the only other alternative; they would make their own 'Soviet Leica'. On 26th October 1932, the first three Soviet Leicas were completed³⁰. The new cameras were first described in the



Figure 8. Fotokors being assembled in Leningrad in 1931. Early examples had imported Compur shutters as shown here. (From 'USSR in Construction', November 1931.)

Figure 9. K. Kuznetsov: The first Soviet-made electric hand-drills, first industrial product of the Dzerzhinsky Commune. (From 'USSR in Construction', April 1934.)



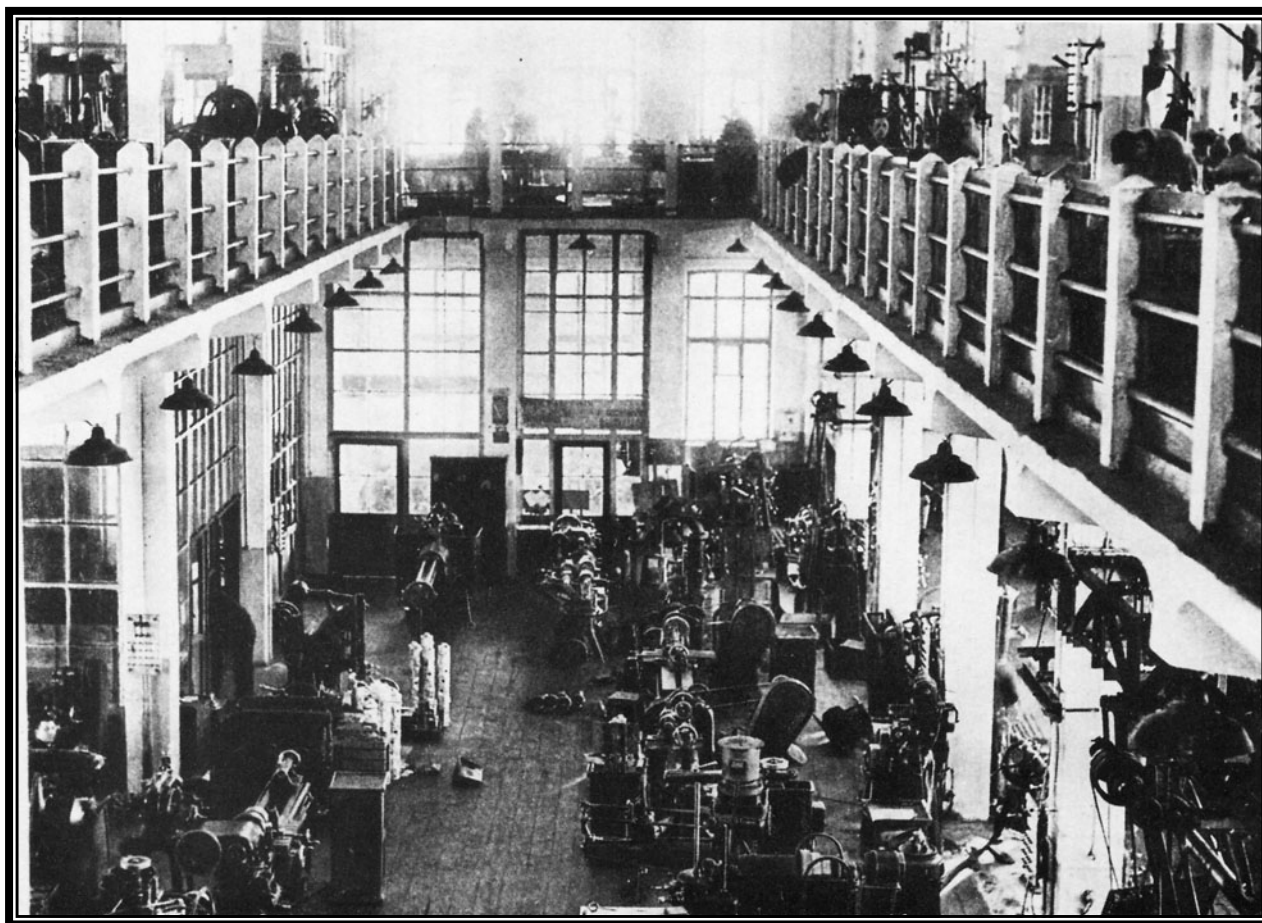


Figure 10. K. Kuznetsov: Drills were manufactured in this two-storey hall constructed in 1931. (From 'USSR in Construction', April 1934.)

5th November 1932 issue of the newspaper, *Izvestiya*. The fact that the achievement was worthy of mention in the official organ of the Soviet government shows the high degree of importance which must have been attached to the event. The cameras were exact duplicates of the Leica A, complete with accessory rangefinder. The Russians may not yet have known of the Leica II which had been introduced earlier the same year with built-in rangefinder coupled to the lens.

The cameras were referred to only as Soviet Leicas in the *Izvestiya* article, although the lens caps of the two cameras pictured were inscribed *FED-Khar'kov*. The quality of these new 'commune-produced Leicas' was praised; the writer enthusiastically claimed that 'the Leningrad Optical Institute, having examined the lenses, acknowledged their "higher quality in comparison with similar foreign-made lenses"'³¹. The 50 mm $f/3.5$ anastigmat lenses of these first cameras were made in Leningrad at the Experimental Factory of the All-Union Optical Industry Association (VOOMP) in co-operation with the State Optical Institute (GOI), also in Leningrad³².

The photographic world was introduced to the new FEDs, as they were soon called, by the pages of *Proletarskoe Foto* [Proletarian Photo]. An article in the January/February 1933 issue proclaimed, 'There is a Soviet Leica!'

Here, too, the new camera was praised. It was, after all, a remarkable achievement for the Soviets, and especially for the Dzerzhinsky Commune. Defects were pointed out also, with the confidence that they would soon be eliminated. The photos show a very familiar-looking camera, baseplate and top deck painted black, lens and infinity lock finished in metal.

An engineer familiar with the new camera urged all photographers to offer suggestions and help the commune in its new challenge. He wrote, 'The Leica is an indispensable camera for press photographers, photojournalists, tourists and scientists. Its versatility, compact size, ease of use, film capacity and light weight, combined with its optical qualities of lens speed, image sharpness, shutter speed and numerous other virtues promise the FED enormous popularity and a wide range of applications'³³.

The commune devoted 1933 to planning and preparing for camera production while the manufacture of electric drills continued at its normal pace. The challenge for the commune was a great one; to make a Leica would be much more demanding than making wooden chairs or even electric drills. With about 300 parts, tolerances to a micron and exacting optics, nothing like the Leica had ever been made in old Russia. New techniques had to

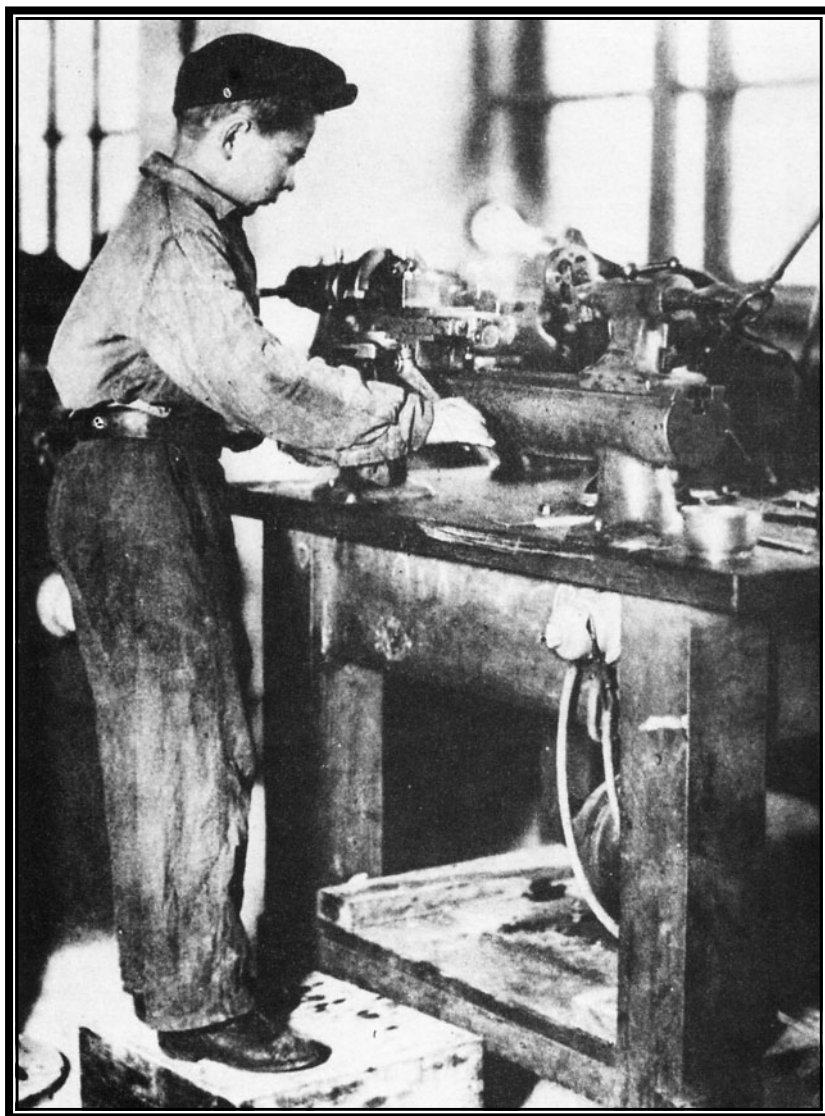


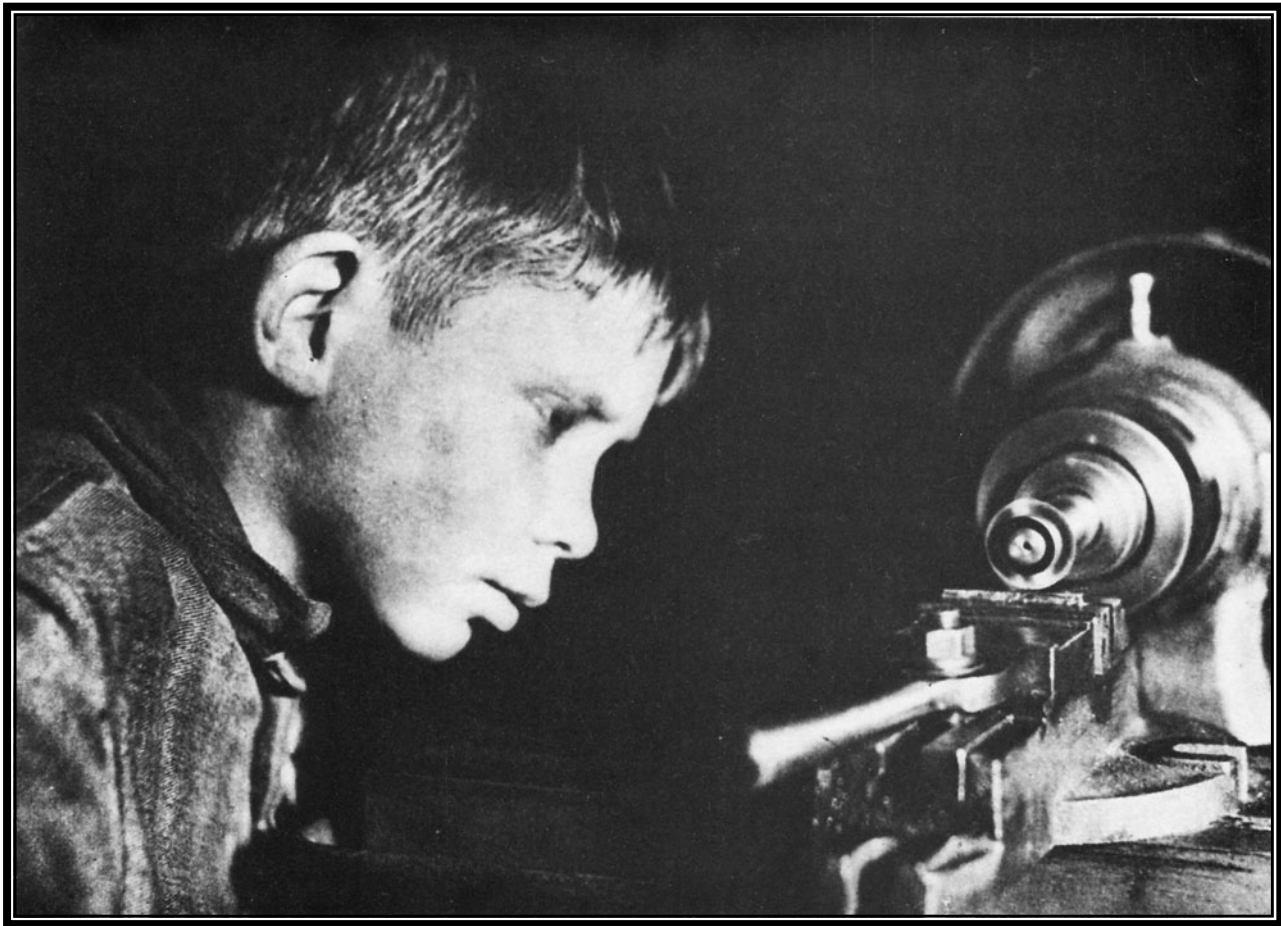
Figure 11(a) and 11(b). K. Kuznetsov: Young communards working in the Dzerzhinsky Commune machine shop in 1934. (From 'USSR in Construction', April 1934.)

be mastered and much new equipment had to be made. A detailed production and financial plan was drawn up with considerable help from the State Optical Institute. Construction was begun on a new building to house the factory, with a planned capacity of 30 000 cameras per year. The Leica A copies remained only a pilot production and by the end of 1933 a total of only 30 had been made³⁴.

The first 10 regular-production FEDs, numbered 31 to 40, were completed in January 1934³⁵. The lenses for these cameras, unlike the earlier ones, were also made in the commune's own facilities. The new FED was first pictured in *USSR in Construction* for April 1934, an issue devoted to 'The OGPU Labour Communes'. The caption to one page of photographs reads, 'These youngsters of the commune work at the new photographic apparatus factory, producing the most delicate and accurate articles—camera lenses and cameras of the "Leica" type'. Considering the date of this issue, the camera pictured must be a very early example. The new FEDs were now straight Leica II copies, except for the lack of an accessory clip. The example shown in *USSR in Construction* is noticeable for its slightly taller rangefinder housing and smooth('celluloid') covering on

the camera body. A surviving early FED (No. 279) has the same smooth covering, but the rest of the camera is finished in black paint, and the rangefinder housing is of normal proportions. It is reasonable to assume that among the first examples there must have been some experimentation.

Apparently the commune had difficulty finding a suitable finish for the camera's exposed metal parts. In a letter to Gorky in June 1934, Makarenko wrote, 'Incidentally, the "Leicas" ("FED" or "Fedka" as we call them) which our new factory now produces are not bad. Only the secret of the lacquer still eludes us. When we overcome this problem and the FED achieves a really elegant appearance, the communards dream that you will accept one from them; this is, after all, one of "our achievements" [i.e., including Gorky]'³⁶. An initial solution was to adopt an unusual burnished finish on the plated brass, actually almost galvanized in appearance. Such a finish is found on another early example (FED No. 922) which also has a more leather-like covering. One of these early cameras is shown in Makarenko's *Werke*³⁷. Camera No. 4049 is identical to No. 922. Both of these cameras bear numerous marks of hand-finishing on the part of the



communards, especially fine file-marks on the rangefinder housing.

These early production FEDs are characterized by their lack of accessory clip, 'notched' viewfinder window and large shutter-speed dial. Shutter speeds included six settings from 1/20 to 1/500, plus 'Z' (bulb). The top of the rangefinder housing carried the engraving *FED/Trudkommuna/im./F. E. Dzerzhinskogo/Khar'kov* [FED, F. E. Dzerzhinsky Labour Commune, Kharkov] and the lens was engraved *FED 1:3.5 F=50 m/m* in a style which remained virtually unchanged for the next 20 years. The aperture scale included six settings from $f3.5$ to $f18$. Total production for 1934 was about 4000 cameras³⁸.

PIONEER AND FAG

By this time, the VOOMP Experimental Factory [*VOOMP Opytnyi Zavod*], which had made the lenses for the original FEDs, had decided to make their own Soviet Leicas³⁹. Their first cameras, made in 1933, were exact replicas of the Leica A, as were the first FEDs, but these cameras received little attention, and probably only a few were made. In 1934, however, the factory began a somewhat more serious production of Leica II copies, which now received the name *Pioner* [Pioneer]. Their 50 mm $f3.5$ lenses, probably identical to the FED lens, were engraved *VOOMP Opytnyi z-d 1:3.5 F=50 mm*. The production of 300 cameras was reported for 1934 with

a goal of 5000 set for 1935. However, the project was evidently discontinued, and it is unlikely that more than a few hundred were made.

Concurrently with the FED and Pioneer, yet a third factory began the production of Soviet Leicas. The *Geodeziya Zavod* [Geodesy Factory] in Moscow distributed the first 50 examples of its Leica II copy in early 1934⁴⁰. The only observable difference between this camera (as pictured in *Sovetskoe Foto*) and Leica/FED/Pioneer was its rectangular viewfinder window with a screw on either side. Baseplates and top decks of the first examples were reported to be nickel-plated, with chrome planned for later models. The lens, produced by VOOMP in Leningrad, appears to have been engraved *VOOMP Z-d Geodeziya 1:3.5 F=50 mm*.

In mid 1934, it was hoped that total production of the *Geodeziya* Leica would reach 300 for that year and 1500 for 1935. By early 1935, the introduction of a model with detachable back was reported⁴¹. The *Geodeziya* designers had hoped to incorporate various improvements into their camera, including combined viewfinder/rangefinder, but like the Pioneer, the project was apparently dropped in favour of the FED before more than a few hundred cameras were manufactured. Since *geodeziya* is the Russian word for geodesy or large-scale surveying, it seems that the factory normally produced surveying instruments. Initially their camera had no name, so *Sovetskoe Foto* readers were

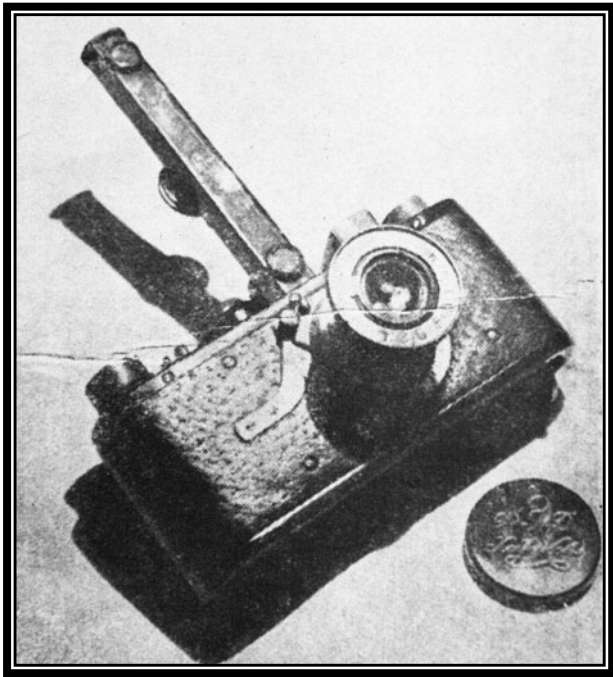


Figure 12. 'The first Soviet Leica-FED' was the caption to this photograph in *'Proletarskoe Foto'*, January/February 1933.

invited to 'give a militant Soviet name to a Soviet camera'⁴². The result was the acronym 'FAG'⁴³, but what it stood for has not been ascertained.

At least some news of the Pioneer and FAG cameras penetrated outside the Soviet Union; both were reported in the March 1935 issue of the Polish journal *Fotograf Polski*, although no surviving examples are known to exist.

THE NKVD

In July 1934, the police functions of the Soviet state were transferred from the OGPU to the People's Commissariat of Internal Affairs (NKVD). The administration of the Dzerzhinsky Commune was thus also transferred to the NKVD (although still with Makarenko in charge). This change is reflected in the second version of the FED, which appeared in early 1935 and carried the new engraving *FED/Trudkommuna/NKVD-USSR/im./F.E.Dzerzhinskogo/Khar'kov* [FED, F. E. Dzerzhinsky Labour Commune of the NKVD of the Ukrainian SSR, Kharkov]. The camera also acquired a more professional satin chrome finish, an accessory clip, smaller shutter speed dial and rectangular viewfinder frame. By late 1935, the top of the viewfinder frame was made flush with the top of the rangefinder housing (on the front of the camera), becoming the most distinctive feature of all succeeding Soviet Leica II copies; it was virtually the only detail which differed from the genuine Leica.

1935 was an important year for the Dzerzhinsky Commune. As a combined education and labour institution it was near its peak. The commune had grown to 600 members and its productive capacity was at an all-time

high. Virtually all aspects of camera production were undertaken by the commune itself. However, this growth also brought problems as economic and educational considerations began to compete with one another. The commune was beginning to outgrow its original function as a rehabilitative organization. In particular, the Leica was a system camera and as yet the FED was not. Demand for the FED was high and already Russian photographers were beginning to clamour for needed accessories such as enlargers, developing tanks, slide projectors and additional lenses. This demand eventually resulted in a basic change in the commune's organization. The significant event of 1935 came in July when Makarenko's directorship of the Dzerzhinsky Commune was suddenly terminated after eight years of intense and dedicated work. The occasion was a sad one for both Makarenko and the commune. He was appointed, instead, as Assistant Director of Labour Colonies for the NKVD in Kiev. In January 1937, Makarenko moved to Moscow where he devoted himself entirely to writing and lecturing until his death on 1st April 1939.

The Dzerzhinsky Commune retained its original form for about another two years after the departure of Makarenko⁴⁴. During this period the commune continued to grow, reaching 750 members with an additional 400 hired workers⁴⁵. Sometime in 1937, after Makarenko had left his post in Kiev, the school and production activities of the commune were separated, and the factory was turned over to direct administration by the NKVD. NKVD economic activities, generally in the form of various forced labour enterprises, amounted to 1.2% of total Soviet production by 1941⁴⁶, and FED production was specifically listed among the activities⁴⁷. However, it is unlikely that forced labour was employed at the Dzerzhinsky Commune. The commune was a model institution and under Makarenko had developed a very fine reputation, one which the authorities probably wanted to keep.

The changeover in the commune's administration coincided with a decree of the *Narkompros* of 4th March 1937, which ordered the abolition of labour education and liquidation of all school shops in the Soviet Union⁴⁸. While the decree did not directly affect the Dzerzhinsky Commune (which was not under the administration of the *Narkompros*), it was an indication of the changing sentiments concerning labour and education which were developing at that time.

Meanwhile, work continued. FED production totalled 12 000 in 1935 and 15 000 in 1936⁴⁹, when production of the 25 000th camera was celebrated⁵⁰. The first accessories appeared by late 1937, initially including developing tanks, photoelectric exposure meters, loupes for examining negatives, film cassettes and mechanical and hydraulic self-timers. The list grew to some 18 items by 1938, many of which were direct copies of their Leitz counterparts. In the September 1937 issue of *Sovetskoe Foto* a Leica is shown with an accessory folding-frame sports viewfinder. The caption stated, 'An analogous viewfinder is presently being developed at the factory of the Dzerzhinsky Labour

Figure 13. K. Kuznetsov: Two members of the commune's new camera factory and one of the first production cameras. (From 'USSR in Construction', April 1934.)



Commune'. And in fact a FED was illustrated in the November issue with this 'analogous' FED item. It is in connection with accessories that the factory received some of its strongest criticism from *Sovetskoe Foto*⁵¹. Apparently, of the 18 items announced, only four were actually produced in 1938. Other complaints included, interestingly enough, low quality, high prices and lack of relevant manuals.

By 1938, four accessory lenses were being produced in addition to the standard 50 mm $f3.5$ Elmar-type. These included a 28 mm $f4.5$ wide-angle, a 50 mm $f2$ fast lens, a 100 mm $f6.3$ long-focus lens, and a so-called reproduction lens for close-up work, which was actually the basic $f3.5$ lens elements in a longer close-focusing mount.

While under the administration of the NKVD,

the Dzerzhinsky Commune did something which is perhaps unique in the annals of camera history; it copied the Leica in name as well as form. The FED was already a physical copy of the Leica, but some of the cameras were also engraved with the familiar 'Leica' trademark, and some $f3.5$ lenses were engraved 'Leitz Elmar'. Whatever the motivation, this strange practice persisted over several years, during which an apparently sizeable number of cameras was made. Beyond any shortcomings in workmanship, the give-away features of these cameras was the distinctive FED viewfinder window. The earliest known 'counterfeit Leica' was manufactured in 1936, while the most common year seems to be 1938.

In 1937, preparations began on the development of



Figure 14. FED No. 279 (1934), from the first year of production.

the two new FED models. The first was the FED-B, to be introduced in 1938⁵². It was identical to the standard FED, except for a top-shutter speed of 1/1000 and a separate slow-speed dial on the front of the camera body for the additional speeds between 1/20 and one second. The FED-B would have been a duplicate of the Leica IIIa (G), but the project was dropped and never reached the production stage. Only 40 examples were built experimentally in 1937, after which they were no longer mentioned in the literature.

A second new model, however, did reach the production stage, and was indeed introduced in 1938. This was the FED-S (Cyrillic letter 'С', which corresponds to the English letter 'S'). The sole deviations from the standard FED were an additional top speed of 1/1000 and the faster *f*/2 lens as standard equipment. Innovations were very slow in coming. It is apparent that the FED-S was produced in smaller quantities than the standard model. This model also appeared in Leica guise, with its *f*/2 FED lens engraved instead 'Leitz Summar'. The focusing mount of this 'Summar', however, was quite different from that of the real 50 mm *f*/2 Summar.

Some styling changes were made in the FED's appearance in 1938, reflecting changes which had been made on the Leica several years earlier. Early in the year the platform under the shutter-speed dial was changed from a rounded contour to one more cornered in shape and at the end of the year the stud on the camera's side (for engaging the baseplate) was enlarged.

To satisfy the demand for a comprehensive manual for the FED and for 35 mm photography, the first edition of *Kamera FED* was published in 1938 with a second edition following in 1942⁵³. The work covered many aspects of 35 mm photography and FED equipment, and must have been greatly welcomed by Russian photographers. Apparently the author found some of his inspiration in the *Leica Manual*, if not for its scope, then at least for its illustrations. Cross-sectional views of the FED in *Kamera FED* are identical to those of the Leica in the first editions of the *Leica Manual*. At least they show how close the two cameras really were.

Other Soviet cameras also began to appear by this time, chiefly products of the GOMZ factory in Leningrad, which was the major pre-war Soviet camera factory.

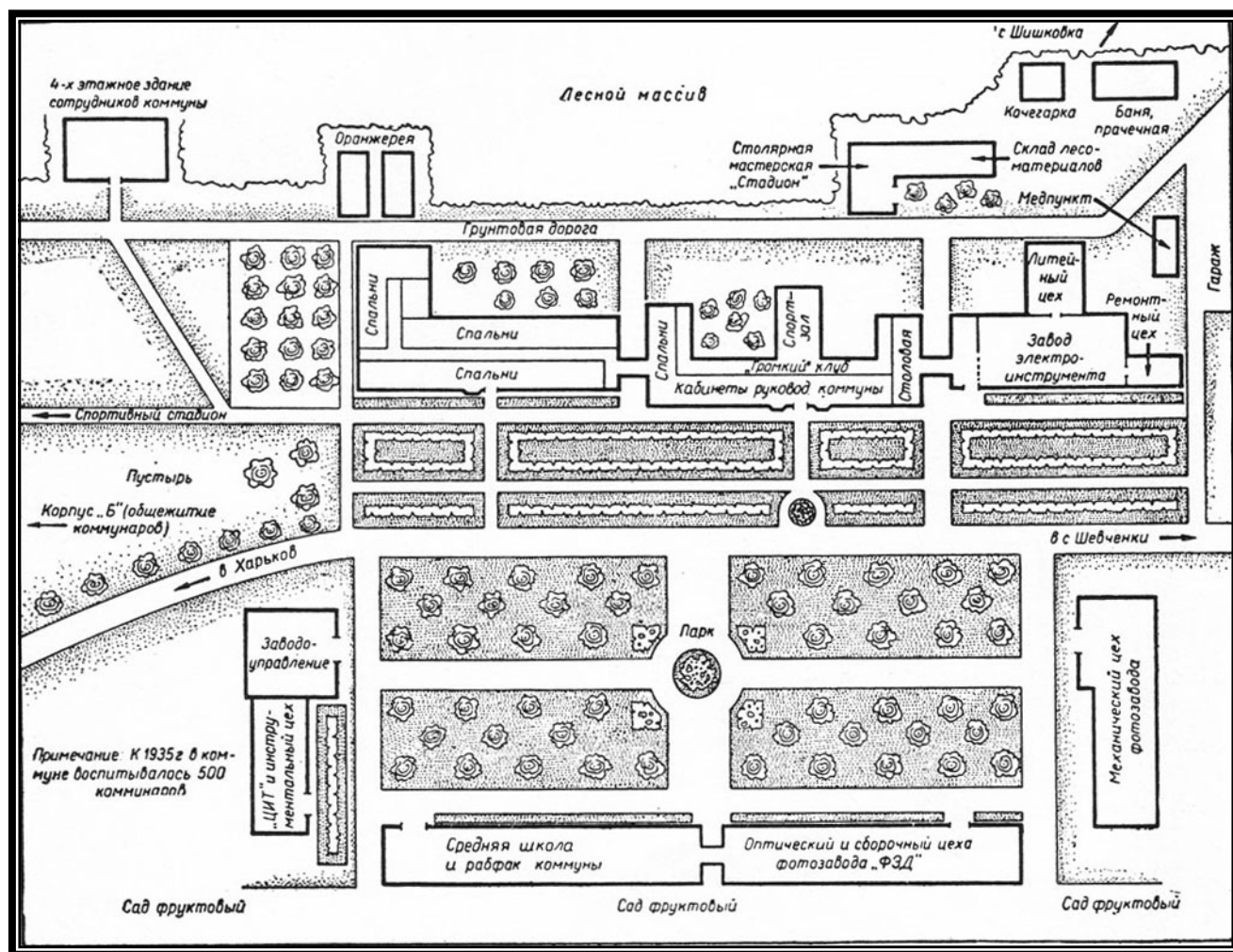


Figure 15. Map of the Dzerzhinsky Commune in 1935. Cameras were manufactured in the two buildings at lower right. (From A. S. Makarenko, 'Marsh 30 Goda' [The March of the Year 1930], Prosveshchenie, Moscow, 1967.)

The 6×9 cm *Turist*, 6.5×9 cm *Reporter* and large-format (13×18 cm and 18×24 cm) FK appeared in the mid-to-late 1930s in addition to the Fotokor. Of special interest is the 35 mm *Sport* single-lens reflex, introduced in 1936⁵⁴. Even though it was produced for only a few years, this camera represents one of the world's first 35 mm SLRs, appearing at about the same time as the Kine Exacta in Germany. The *Sport* had a focal plane shutter, and accepted cassettes capable of holding enough film for 50 exposures. Shutter speeds ranged from 1/25 to 1/500 plus 'B'. The lens was a 50 mm f3.5 Industar-10 in bayonet mount (even though there were no other bayonet lenses available). The standard FED lens was also an Industar-10, although that designation appears in print only. Since the FED Industar-10 was evidently an Elmar copy, it follows that the *Sport*'s Industar-10 must have been an Elmar-type lens as well. Other Russian cameras to appear in appreciable quantities before the war included the plastic 35 mm cameras *Liliput*, *Malyutka* and *Smena*. It is also worth noting that while in the United States, Kodak 35 mm film boxes were labelled 'For Retina, Contax and Leica cameras', Russian 35 mm film boxes were similarly labelled 'For FED, Leica and Contax'⁵⁵.

FROM COMMUNE TO KOMBINAT

The FED factory was renamed the F. E. Dzerzhinsky *Kombinat* of the (central) NKVD of the USSR in early 1939⁵⁶. *Kombinat* is a term (roughly equivalent to the English term 'combine') used in the Soviet Union and other Eastern European countries to denote a large industrial complex usually combining several establishments, each responsible for a consecutive step in the production process. Whereas 'commune' was a hold-over from the days of Makarenko, *kombinat* better described the factory's new size and capabilities. The camera also reflected this change with a new engraving on the rangefinder housing, *FED/NKVD-SSSR/Khar'kovskii Kombinat/im./F.E.Dzerzhinskogo*.

Production of the 100 000th FED was celebrated in mid 1939. *Sovetskoe Foto* wrote, 'One-hundred-thousand Soviet amateur and professional photographers and reporters who once eyed with envy the few owners of the compact Leica now have Soviet Leicas of their own. With pride and joy for the progress of our photo industry, the Soviet photo public reacts to the news that the

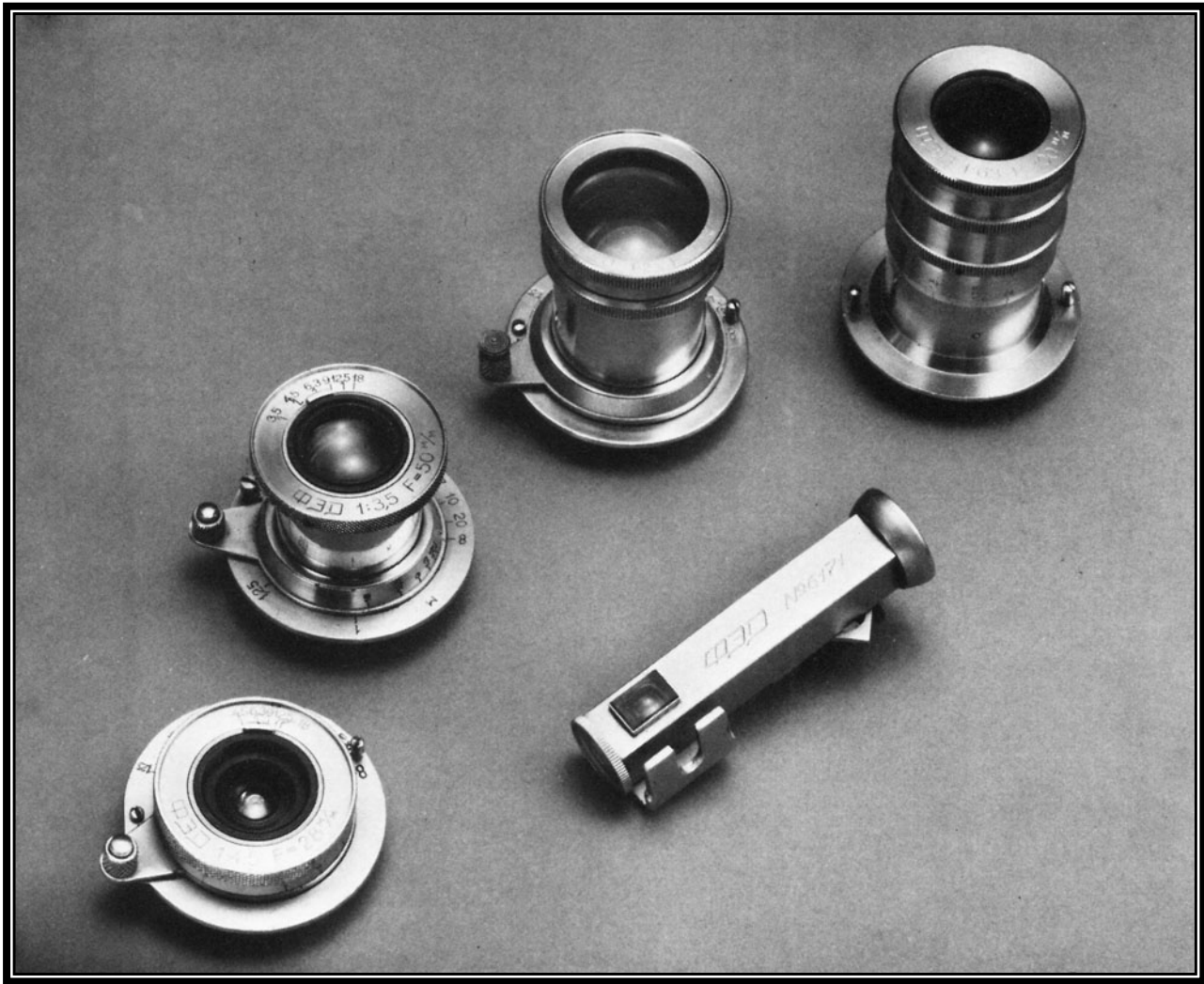


Figure 16. FED 28 mm, 50 mm (f3.5 and f2) and 100 mm lenses. The FED right-angle finder was a duplicate of its Leitz counterpart.

100 000th FED has left the factory's final quality control section⁵⁷. But, as before, the factory was also strongly criticized, basically for failing to respond to the needs of the Soviet photographer; specialized accessories and innovations in camera and lens design were sorely missed.

The pre-war Soviet camera industry reached its peak in 1939. A total of 478 600 cameras of all types was produced in that year, a figure which would not be reached again until 1953⁵⁸. The 1941 State Economic Plan called for the NKVD production of 40 000 FEDs⁵⁹, an increase of 24% over the 1940 production of 32 300⁶⁰. However, the plan was cut short by the war. Total pre-war FED production reached approximately 175 000 cameras.

WAR AND RECONSTRUCTION

On 22nd June 1941, Germany invaded the Soviet Union, initiating a conflict which eventually claimed the lives of some 20 million Russians and destroyed thousands of towns and villages. The Ukraine, situated in the west and rich in both agriculture and industry, suffered most of all.

As German forces advanced, Soviet forces evacuated many industrial enterprises to safety beyond the Urals, while demolition teams destroyed much of what could not be moved. Retreating German forces in turn followed a 'scorched-earth' policy, so that by the end of the war destruction of Ukrainian industry was virtually complete. Kharkov, an important communications centre, changed hands no less than four times during the course of the war. The city first fell to the Germans on 25th October 1941. The Russians tried to reclaim it in May 1942, but failed. They tried again in February 1943 and this time succeeded, but only after retreating German air and ground forces had systematically destroyed the entire city. The Germans retook Kharkov only a month later and abandoned it for the last time on 22nd August 1943. The FED camera factory and the buildings of the former Dzerzhinsky Commune were also totally destroyed⁶¹. FED production probably ceased with the first takeover of 1941.

The Soviet camera industry as a whole came to a halt during the war, but with the return of peace in 1945, it began slowly to rebuild. Official Soviet figures for camera



Figure 17. 'Counterfeit Leica' No. 8734 (1938), actually a FED-S and FED f2 lens with Leitz engravings. Almost indistinguishable from the genuine item.

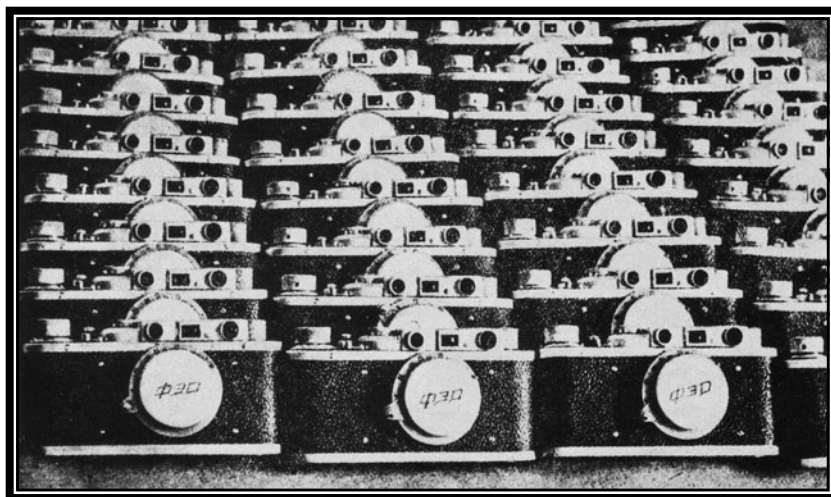


Figure 18. This photograph marked the production of the 80 000th FED in late 1938. (From 'Sovetskoe Foto', January 1939.)



Figure 19. FED No. 150803 (1941), the version most often encountered by collectors.

production show a total of ten cameras for 1945, increasing to 5700 for 1946 and 91 500 for 1947⁶². The former commune school buildings were being rebuilt by this time⁶³, and probably the FED factory also. The entire post-war period is difficult to research, as there was no Soviet photographic magazine between 1941 and 1957, and books do not provide the same detailed coverage. Information on individual factories is seldom published today.

In any case, the FED was the only pre-war Soviet camera to reappear unchanged after the war, and it did so sometime after 1946. (To a very small extent, the FK may have also reappeared.) The rangefinder housing now carried the engraving *Zavod/im./F. E. Dzerzhinskogo* [F. E. Dzerzhinsky Factory] below *FED*. A more attractive FED logo was soon adopted and in the last version the factory name was finally dropped. The lens remained the 50 mm *f*3.5 FED (Industar-10) with the same engravings as 1934, except for a minimum aperture of *f*16 instead of *f*18. Production of the accessory lenses was not resumed after the war⁶⁴. Shutter speeds were changed to a more geometric progression between 1/25 and 1/500 (plus 'B' instead of 'Z'

for bulb). The NKVD was reorganized into the MVD (Ministry of Internal Affairs) in 1946, and it seems that after the war the factory no longer retained any of its official ties with the secret police.

Brief mention should be made of one other Russian Leica II copy which accompanied the post-war FED. Introduced about 1948, it was called *Zorkii* (and referred to in English as *Zorki*), a Russian word meaning 'sharpsighted'. Although virtually identical with the FED, the *Zorki* was actually manufactured by the Krasnogorsk Mechanical Works [*Krasnogorskii Mekhanicheskii Zavod* or *KMZ*] in Krasnogorsk, outside Moscow. Why the two factories were producing the same type camera is not clear. The *KMZ* is today a considerably larger enterprise than the Dzerzhinsky Factory, producing a wide range of sophisticated optical instruments and other camera models (including *Zenit* 35 mm SLRs)⁶⁵. The *Zorki*'s main physical difference from the FED was its Industar-22 lens, a coated anastigmat only slightly different from the FED and Elmar lenses. Unlike FEDs, at least some *Zorkis* were destined for export and carried dual Russian/English engravings.

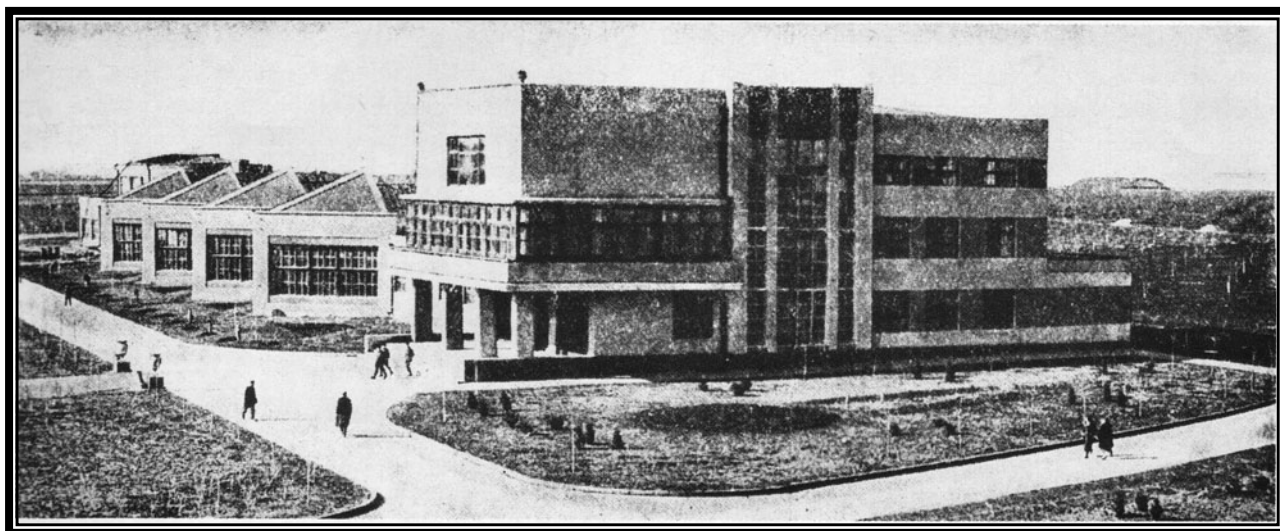


Figure 20. Dzerzhinsky Commune factory building as shown in 'Sovetskoe Foto', January 1939.

Figure 21. FED No. 563638 (1955), from the last year of production. Of better quality, but basically unchanged from its predecessor of 21 years earlier.



Both Zorki and FED Leica II copies were last produced in 1955.

A succession of FED (and Zorki) models followed the original models, gradually departing from the Leica II design, but clearly retaining their Leica heritage. The FED-2 appeared by 1955⁶⁶ with such new features as removeable back, combined rangefinder/viewfinder, long (67 mm) rangefinder base, self-timer and flash synchronization.

The world-wide trend toward the 35 mm single-lens reflex has greatly reduced the number of 35 mm interchangeable-lens rangefinder cameras on the market, and the current FED-4L is among the few still available. It is not a very sophisticated camera by Western standards, and its chief virtue is perhaps its extremely low price. However, even among Russian cameras it is often passed up in favour of the Zorki-4K or Contax-like Kievs. Once a pioneering enterprise, the FED factory today probably contributes only a small part to the sizeable Soviet camera industry⁶⁷.

In 1936, Anton Makarenko wrote, 'and perhaps the

FED is even better known than the F. E. Dzerzhinsky Commune'⁶⁸. Indeed, 40 years later the initials and the camera are almost all that remain. Camera historians recognize the original FED as one of Russia's contributions to the world's collection of Leica imitations, and little more⁶⁹. But behind that simple name there is a story unexpected and sometimes amazing. For the FED was much more than just another Leica copy; it was a unique product of the social, economic and photographic history of the Soviet Union.

ACKNOWLEDGEMENT

This article is based on a lecture originally presented at the annual meeting of the Leica Historical Society of America, held in New Orleans, Louisiana, 8th October 1977. Photographs from *USSR in Construction* are reprinted with permission of Sovfoto (New York). Cameras and lenses shown are from the collection of Rolf Fricke and the author•

REFERENCES AND NOTES

- FRANK STARR, *Soviet Photography*, USIA, Office of Research, Washington (1976), pp. 1, 41-42; A. M. Bakhrakh and A. I. Stozharov, *Soviet Journal of Optical Technology*, Vol. 35, No. 6 (November/December 1968), pp. 767-773.
- Several Soviet still cameras using 35 mm cinema film were designed in the late 1920s, notably the *Foto-Goz* in Leningrad, but none were successfully produced. See A. A. SYROV, *Put' Fotoapparata* [Development of the Camera], Iskusstvo, Moscow (1954), pp. 85-93.
- Leitz Wetzlar serial number records indicate that about 53 000 examples of the original Leica II or D (with coupled rangefinder, but no slow speeds) were produced, and approximately 800 000 of all screw-mount Leicas. Total production of Soviet Leica II copies, pre-war and post-war, may have approached one million.
- LARS MOËN, *Photograms of the Year 1933*, Illiffe & Sons, London (1934), p. 24.
- A number of important writings by and about Rodchenko have appeared recently for the first time in English, together with 34 of his photographs and a brief bibliography, in *Creative Camera International Yearbook 1978*, Coo Press, London (1977), pp. 189-233.
- Novyi LEF*, No. 7 (1928: reprinted by Mouton, The Hague, 1970), facing pp. 16, 17, 32 and 33.
- L. F. VOLKOV-LANNIT, *Aleksandr Rodchenko Risuet, Fotografiuet, Sport* [Alexander Rodchenko Draws, Photographs, Argues], Iskusstvo, Moscow (1968), p. 115.
- FRANK STARR, reference 1, pp. 13, 19-20.
- LARS MOËN, reference 4.
- A. S. MAKARENKO, *Sochineniya v Semi Tomakh* [Works in Seven Volumes], 2nd edition, Akademiya Pedagogicheskikh Nauk RSFSR, Moscow (1957-1958).
- A. S. MAKARENKO, *Werke*, seven volumes plus supplementary volume, Volk and Wissen, East Berlin (1957-1962). English quotes in the article were taken from this German translation (of the 2nd Russian edition), and were also checked against the original Russian for accuracy.
- A. S. MAKARENKO, *The Road to Life*, Progress, Moscow (1973). Originally published 1933-1935 as *Pedagogicheskaya Poema* [An Epic of Education].
- Details of Makarenko's life and work are found in W. L. GOODMAN, *Anton Simeonovich Makarenko: Russian Teacher*, Routledge & Kegan Paul, London (1949); FREDERIC LILGE, *Anton Semyonovich Makarenko: An Analysis of his Educational Ideas in the Context of Soviet Society*, University of California Press, Berkeley (1958); JAMES BOWEN, *Soviet Education: Anton Makarenko and the Years of Experiment*, University of Wisconsin Press, Madison (1962); and *Makarenko, his Life and Work: Articles, Talks and Reminiscences*, Foreign Languages Publishing House, Moscow (no date, c. 1963). The German language literature is extensive; see, for example, GÖTZ HILLIG (editor), *Makarenko in Deutschland 1927-1967*, Georg Westermann, Braunschweig (1968).
- SHEILA FITZPATRICK, *The Commissariat of Enlightenment*, Cambridge University Press, Cambridge (1970), pp. 230-231.
- A. LUNACHARSKII, *Pravda* (22nd July 1926), p.2; quoted in SHEILA FITZPATRICK, reference 14, p. 231.
- A. S. MAKARENKO, 'Das ist unsere Geschichte' (August 1934), *Werke*, Vol. 2 (1964), pp. 455-458.
- See G. A. SMITH, *Soviet Foreign Trade: Organization, Operations, and Policy 1918-1971*, Praeger, New York (1973), pp. 24-26.
- See WM. L. BLACKWELL, *The Industrialization of Russia: An Historical Perspective*, Thos. Y. Crowell, New York (1970), pp. 98-131.
- A. V. FOMIN, *Obshchii Kurs Fotografii* [General Course in Photography], Legkaya Industriya, Moscow (1974), p.11; A. A. SYROV, reference 2, pp. 78-81.
- A. SYROV, *Pervye Russkie Fotoapparaty* [The First Russian Cameras], Goskinoizdat, Moscow (1951), pp. 9-10.
- Sotsialisticheskoe Stroitel'stvo SSSR: Statisticheskii Ezhegodnik* [Socialist Construction in the USSR: Statistical Year-book], Moscow (1936), p. 168.
- JAMES BOWEN, reference 13, p. 144.
- A. S. MAKARENKO, 'Umgeblätterte Seiten' (1933), *Werke*, Vol.2 (1964), pp. 471-474.
- A. G. TER-GEWONDJIAN, *Pädagogik*, Vol. 13, No. 1 (1958), pp. 20-37.
- Ibid.*

26. A. S. MAKARENKO, reference 23, pp. 475-476.
27. A. S. MAKARENKO, reference 12, Vol. 2, p. 451; 'Ein Pädagogisches Poem: Der Weg ins Leben', *Werke*, Vol. 1 (1959), p. 680.
28. A. S. MAKARENKO, reference 23, pp. 475-476.
29. A. S. MAKARENKO, 'Die Sache der Partei' (September 1936), *Werke*, Vol. 7 (1963), p. 420.
30. A. S. MAKARENKO, reference 23, p. 476.
31. E. REGISTAN, *Izvestiya* (5th November 1932), p. 4.
32. I. CHERNYI, *Proletarskoe Foto*, No. 2 (March/April 1933), pp.38-40. *Sovetskoe Foto* was published under this title for most of 1931-1933.
33. A. A. Shapiro, *Proletarskoe Foto*, No. 1 (January/February 1933), p. 20.
34. *Sovetskoe Foto*, No. 1 (January/February 1934), p. 37.
35. R. SAMSONOV, *Sovetskoe Foto*, No. 1(January 1934), pp. 45-46.
36. A. S. MAKARENKO, 'Briefwechsel mit Gorki' (1925-1935), *Werke*, Vol. 7 (1963), p. 387.
37. A. S. MAKARENKO, 'Fotografien aus der Dzierzynski Kommune', *Werke*, Vol. 2 (1964), p. 560.
38. D. BUNIMOVICH, *Sovetskoe Foto*, No. 11 (November 1937), pp. 19-23.
39. M. KLEINERMAN, *Sovetskoe Foto*, No. 2 (March/April 1934), p. 37; DM. CHERNOV, *Sovetskoe Foto*, No. 7 (October 1934), pp. 44-45.
40. S., SVIDEL', *Sovetskoe Foto*, No. 6 (September 1934), p. 32.
41. *Sovetskoe Foto*, No. 2 (February 1935), p. 46.
42. S., SVIDEL', reference 40.
43. D. Z. BUNIMOVICH, *Kamera FED*, Goskinoizdat, Moscow (1942), p. 4.
44. A. S. MAKARENKO, 'Die Erziehung in Familie und Schule', (February 1939), *Werke*, Vol. 4 (1957), p. 531.
45. YA. KHALIP, *Sovetskoe Foto*, No. 2 (February 1936), p. 21.
46. ROBERT CONQUEST, *The Soviet Police System*, Frederick A. Praeger, New York (1968), p. 85.
47. *Sobranie Postanovlenii i Rasporyazhenii Pravitel'stva SSSR* [Collection of Decrees and Orders of the Government of the USSR], No. 33: 202, Moscow (1938; reprinted by Auxilibris, Montabaur, Germany, 1960-1962), p. 461. This decree called for an increase in the NKVD production of a number of goods, including FED cameras.
48. *Sbornik Prikazov i Rasporyazhenii po Narkompros RSFSR* [Collection of Orders and Decrees of the Narkompros of the RSFSR], No. 393: 7, Moscow (1st April 1937); discussed in MAURICE J. SHORE, *Soviet Education: Its Psychology and Philosophy*, Philosophical Library, New York (1947), pp. 192-194.
49. D. BUNIMOVICH, reference 38.
50. *Sovetskoe Foto*, No. 11 (November 1936), p. 4.
51. R. SAMSONOV, reference 35.
52. D. BUNIMOVICH, reference 38.
53. D. Z. BUNIMOVICH, *Kamera FED*, Iskustvo, Moscow (1938); 2nd edition, reference 43.
54. D. BUNIMOVICH, *Sovetskoe Foto*, No. 7 (July 1936), pp. 41-42.
55. D. Z. BUNIMOVICH, reference 43, p. 49.
56. D. BUNIMOVICH, *Sovetskoe Foto*, No. 8 (August 1939), pp. 10-12.
57. *Ibid.*
58. *Promyshlennost' SSSR: Statisticheskii Sbornik* [Industry of the USSR: Statistical Handbook], Statistika, Moscow (1964), p. 409.
59. *Gosudarstvennyi Plan Razvitiya Narodnogo Khozyaistva SSSR na 1941 god* [State Plan for the Development of the National Economy of the USSR in 1941], Moscow (1941: reprinted by Universal Press, Baltimore, no date, c. 1951), p. 172. Although the plan did not specify FEDs by name, they were the only cameras produced by the NKVD.
60. *Narodne Hospodarstvo Ukrains'koi RSR: Statystychnyi Zbirnyk* [National Economy of the Ukrainian SSR: Statistical Handbook, Derzhstatvydav, Kiev (1957), p.85. FEDs are not specified by name here either, but the FED factory was the only major pre-war Ukrainian camera factory.
61. A. A. SYROV, reference 2, pp. 97, 100; W. J. Gmurman and G. S. MAKARENKO, Notes to 'Ein Pädagogisches Poem', in A. S. MAKARENKO, *Werke*, Vol. 1 (1959), p. 786.
62. *Promyshlennost' SSSR*, reference 58.
63. W. J. GMURMAN and G. S. MAKARENKO, reference 61; W. L. GOODMAN, reference 13, p. 68.
64. V. V. PUS'KOV (editor), *Kratkii Fotograficheskii Spravochnik* [Short Photographic Manual], Iskustvo, Moscow (1953), pp. 61-62.
65. L. A. VORONIN, F. B. ZLOTNIKOV and P. G. GRODINSKIY, *Soviet Journal of Optical Technology*, Vol. 34, No. 6 (November/December 1967), pp. 754-759; V. N. VERTSNER, M. G. IVANOV, V. I. KREOPALOV and N. M. MODEL, *Sov. J. Opt. Tech.*, Vol. 37, No. 4 (April 1970), pp. 274-275.
66. A. V. SOKOLOV, P. A. NOGIN and I. P. KHIRIPIN, *Fotoapparaty, Optika i Opredelenie Vyderzhki* [Cameras, Optics and Exposure Determination], Iskustvo, Moscow (1955), p. 41.
67. At least five factories, in Kharkov, Kiev, Krasnogorsk, Minsk and Leningrad, produced a total of 3 245 000 still cameras in the USSR in 1976 (*The USSR in Figures for 1976: Statistical Handbook*, Statistika, Moscow, 1977, p. 111.)
68. A. S. MAKARENKO, 'Ein herrliches Denkmal' (July 1936), *Werke*, Vol. 5 (1964), p. 360.
69. The USSR was by no means the only country to produce topics of the Leica. In fact, near exact copies have been manufactured in virtually every major industrial nation, including the United States.

The Dzerzhinsky Commune

Correspondence from Oscar Fricke

In my recent article on the Dzerzhinsky Commune¹, I included a cartoon (Figure 1 in that article) which had accompanied an article on miniature cameras in the May 1927 (not May 1934 as incorrectly stated in the caption issue of *Sovetskoe Foto*. I have since been alerted that the cartoon was originally part of an early Leica advertisement which had appeared in the No. 4 (February) 1927 issue of *Photographische Rundschau and Mitteilungen*². Thus, even as the FED was copied from the Leica, this early cartoon was copied from a Leitz advertisement.

On a related point, I may have been too strong in stating that the making of 'counterfeit Leicas' was the work of the commune (p. 147 of the article). While it has been assumed by collectors that such counterfeiting was actually done when the cameras were manufactured, this has no substantiation. It is evident that many counterfeit Leicas were created by outsiders, either in the Soviet Union or in other parts of the world. This is suggested by a re-evaluation of a number of such cameras. First, the actual counterfeit engravings seem to vary widely in both style and quality. Second, the chrome finish on the engraved parts of these cameras also varies, and is often discernibly different from the finish on unengraved parts and on normal FEDs. Crude forgeries have also been encountered. The variations and different finishes suggest that these cameras were re-engraved and refinished at perhaps many different locations, the work of individual 'craftsmen' seeking to transform FEDs into more prestigious and expensive 'Leicas' to pass on to the unwary. So the existence of the FED did lead to the appearance of some counterfeit Leicas, but the counterfeiters were anonymous, and probably diverse.

(Also, the date in footnote 35 should be January 1939, not January 1934.) •

REFERENCES

1. OSCAR FRICKE, The Dzerzhinsky Commune: Birth of the Soviet 35 mm Camera Industry, *History of Photography*, Vol. 3 (April 1979), pp. 135-155.
2. Other similar cartoon advertisements appeared in *Photographische Rundschau and Mitteilungen* during 1927, each emphasizing the Leica's then unique size and portability. The series of eight cartoon advertisements was reprinted in 1974 by photo-Historical Reprints.

From 'Photographische Rundschau and Mitteilungen', No. 4 (February 1927).



Wer so auf Reisen sich begibt,
der macht sich oftmals unbeliebt



Klug sei, Jüngling du, und weise,
Nur mit **Leica** geh auf Reise!

LEITZ-Kinofilm-Camera »LEICA«
mit Schlitzverschluss und Leitz-Anastigmat „Elmar“ F:3,5.
Klein, leicht, handlich.
Momentane Aufnahmebereitschaft.
Bis 36 Aufnahmen ohne Neuladen der Kassette.
Bilder jeden Formates einfach und schnell im Leica-Vergrößerungs-Apparat.
Fordern Sie kostenlos Werbematerial Nr. 1511.
Ernst Leitz, Optische Werke, Wetzlar