



NEW CHINA'S FIRST QUARTER-CENTURY

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NEW CHINA'S

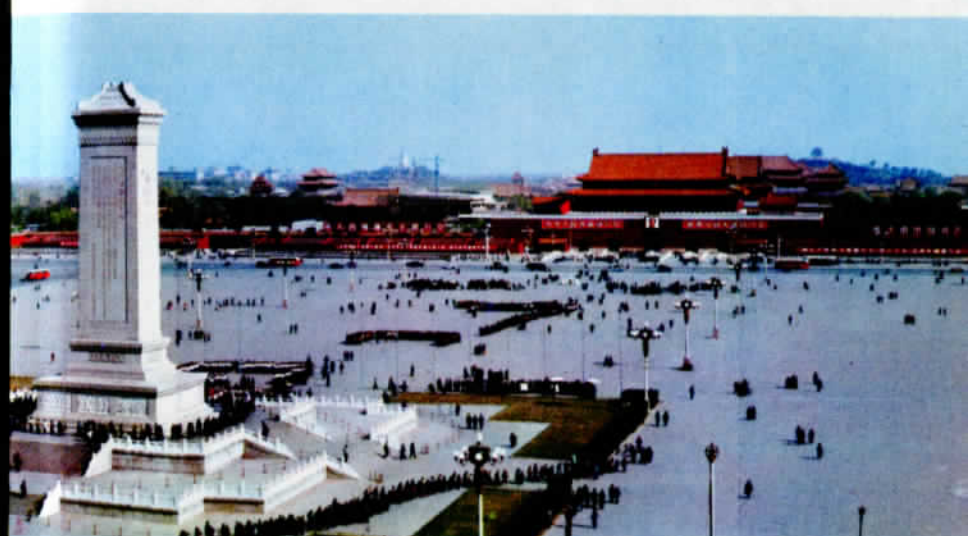
First Quarter-Century

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Editor's Note

A quarter of a century has already passed since the founding of the People's Republic of China in 1949. Under the wise leadership of the Chinese Communist Party and Chairman Mao Tsetung the Chinese people have succeeded brilliantly in every field, changing the old, poor and backward China into an initially prosperous socialist new China. How have these earth-shaking changes been effected? What effort have the industrious and brave Chinese people exerted in achieving their goals? To what extent have China's industry and agriculture advanced?

These are some of the questions about new China which are answered in this selection of reportage articles issued by the Hsinhua News Agency and from Chinese newspapers. We hope *New China's First Quarter-Century* will be of interest and use to our foreign friends.



Tien An Men Square.



New oilfield at Taching.



Ten young women of a Kwangsi production team rebuilt land so that its per-hectare yield increased from 2,250 to 16,500 kgs.

Researchers in geomechanics analysing torsional stress.





Medical workers successfully use Chinese herb medicine to produce general anaesthesia.

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Forward Along the Great Road Of Socialism

Editorial by "Renmin Ribao,"
"Hongqi" and "Jiefangjun Bao,"
October 1, 1974

TWENTY-FIVE years have elapsed since the founding of the great People's Republic of China. These have been years in which the people of all nationalities in our country have fought in unity under the leadership of our great leader Chairman Mao, years in which our country has forged ahead along the road of socialism.

In celebrating this glorious festival, we extend our warm greetings to the masses of workers, peasants and soldiers, revolutionary cadres and revolutionary intellectuals fighting on all fronts of socialist revolution and socialist construction, to patriotic personages, compatriots in Hong Kong and Macao and patriotic overseas Chinese and to the people of all nationalities throughout the country. We express our heartfelt thanks to the people all over the world and to friends in various countries for their support to our country's revolutionary cause and just struggle.

On the eve of the founding of the People's Republic of China 25 years ago, Chairman Mao solemnly proclaimed to the world: **The Chinese people comprising one quarter of humanity have now stood up!** This proclamation

expressed the firm confidence with which, as masters of their own destiny, the proletariat and the people of all nationalities of China looked forward to the future of their motherland. Earth-shaking changes have taken place in China in the past 25 years. Old China, poor and backward, has changed into socialist new China with the beginnings of prosperity. Under the guidance of Chairman Mao's proletarian revolutionary line and under the leadership of the Communist Party of China, we have in the main completed the socialist transformation of the ownership of the means of production and have carried out successive socialist revolutions, each time more deeply, on the political and ideological fronts. We have won big victories in the Great Proletarian Cultural Revolution in which the bourgeois headquarters of Liu Shao-chi and of Lin Biao have been smashed, Marxism-Leninism-Mao Tsetung Thought has permeated people's thinking, socialist new things have bloomed everywhere, and the dictatorship of the proletariat has been further consolidated. As we persevere in the principle of **maintaining independence and keeping the initiative in our own hands and relying on our own efforts**, our socialist construction is briskly advancing and an independent and fairly complete system of industry and of national economy as a whole based on socialist agriculture is taking shape. Imperialist and social-imperialist encirclement, blockade, aggression and subversion have all ended in ignominious defeat.

Chairman Mao points out: **Only socialism can save China.** The course we have traversed proves that the socialist system enjoys matchless superiority and immense vitality as compared with the capitalist system and

that, to build up, consolidate and develop the socialist system, it is imperative to unite the people of the whole country and persevere in continuing the revolution under the dictatorship of the proletariat over a long period of time.

To stick to the road of socialism or to restore capitalism — this is a struggle between the two classes, the proletariat and the bourgeoisie, and between the two lines, the Marxist and the revisionist. The four major inner-Party struggles between the two lines since the founding of the People's Republic of China all centred on the question of which road to take. The Party's basic line tells us that such struggles will continue for a long time to come. In the economic sphere, our basic victory in the transformation of the system of ownership has not ended the struggle between socialism and capitalism. In the political and ideological spheres, it will take a very long time to decide the issue in the struggle between socialism and capitalism. Chairman Mao points out: **Before a brand-new social system can be built on the site of the old, the site must be swept clean. Invariably, remnants of old ideas reflecting the old system remain in people's minds for a long time, and they do not easily give way.** We must continue to criticize the old system and old ideas, struggle against sabotage by class enemies at home and abroad and make constant efforts to perfect the socialist system in the course of practice.

The aim of the movement to criticize Lin Biao and Confucius initiated and led by Chairman Mao is precisely to occupy all spheres of the superstructure with Marxism, to consolidate the dictatorship of the proletariat, to prevent the restoration of capitalism and thus to make

certain that our socialist state will never change its political colour. We must continue to broaden and deepen the movement to criticize Lin Piao and Confucius for a long time. Organizations where mass investigations have been more or less completed should direct their main attention to study and criticism. We must read and study conscientiously and exert ourselves to digest works by Marx, Engels, Lenin and Stalin and by Chairman Mao, for this is the key to deepening the movement to criticize Lin Piao and Confucius. We must continue to criticize Lin Piao's counter-revolutionary revisionist line and, especially for the present, study Chairman Mao's military writings and criticize Lin Piao's bourgeois military line. By adhering to the principle of **making the past serve the present** and by applying the Marxist stand, viewpoint and method, we must criticize the doctrines of Confucius and Mencius and sum up the historical experience of the struggle between the Confucian and Legalist schools and of class struggle as a whole in order to serve the current class struggle and the struggle to oppose and prevent revisionism and to help consolidate the dictatorship of the proletariat. Attention should also be paid to training Marxist theoretical workers and enlarging their ranks in the course of struggle. In the movement to criticize Lin Piao and Confucius, we must further heighten our consciousness of the struggle between the two lines, push forward struggle-criticism-transformation on all fronts and further strengthen our adherence to the socialist orientation.

The socialist system under the dictatorship of the proletariat opens up broad avenues for developing production with greater, faster, better and more economical results. We must adhere to the principles, **dig tunnels deep, store**

grain everywhere, and never seek hegemony and grasp revolution, promote production and other work and preparedness against war, conscientiously sum up and spread the experience of the advanced units which have done well in revolution and production, and work hard to fulfil or overfulfil this year's national economic plan and the Fourth Five-Year Plan. We must rely wholeheartedly on the working class, consolidate the worker-peasant alliance, give full play to the socialist enthusiasm of the people in their hundreds of millions which has been generated in the movement to criticize Lin Piao and Confucius, and accelerate socialist construction. The working class, poor and lower-middle peasants and labouring people of all nationalities of our country have high aspirations, they have ability, and they will undoubtedly build our great motherland into a modern socialist country. The People's Liberation Army should thoroughly implement Chairman Mao's military line, carry forward our army's glorious tradition and make new contributions in defending our great socialist motherland.

The unification of our country, the unity of our people and the unity of our various nationalities — these are the basic guarantees of the sure triumph of our cause. Class enemies at home and abroad always try to undermine such unification and unity by every possible means, and we must sharpen our vigilance. It is imperative to strengthen the Party's centralized leadership and the great revolutionary unity of the whole Party, the whole army and the people of the whole country under the guidance of Chairman Mao's proletarian revolutionary line. We must learn to handle all problems from the dialectical approach of one dividing into two and earnestly

carry out the proletarian policies laid down by Chairman Mao, strictly distinguish between the two different types of contradictions and handle them correctly, unite over 95 per cent of the cadres and masses, **bring all positive factors into play, unite with everyone that can be united with, and do everything possible to turn negative factors into positive ones so as to serve the great cause of building a socialist society.**

As we celebrate National Day, we express deep solicitude for our compatriots in Taiwan Province, who are our kith and kin. We are determined to liberate Taiwan!

The international situation characterized by great disorder under heaven is developing in a direction favourable to the people of all countries. Bcsot with troubles internally and externally, the two hegemonic powers — the United States and the Soviet Union — find the going tougher and tougher. The struggles of the third world and the people of all countries are pushing the wheel of world history forward. In this excellent international situation, we should continue to carry out Chairman Mao's revolutionary line on foreign affairs, redouble our efforts to run China's affairs well and strive to make a greater contribution to mankind.

Under the leadership of the Party Central Committee headed by Chairman Mao, let us further enhance the excellent situation prevailing in our country and **unite to win still greater victories!**

A Stable Socialist Economy

OVER the past 25 years the Chinese people, under the leadership of Chairman Mao Tsetung and the Communist Party of China, have turned the poor and backward old China into a socialist new China with initial prosperity.

As a result of the fulfilment of three five-year plans and the construction for the first three and a half years of the Fourth Five-Year Plan, China has established a solid socialist economic base. With improved farming conditions, she has strengthened her ability to resist natural disasters. She is now able to increase agricultural production considerably in the face of minor natural disasters and keep the loss at a minimum in the face of major ones. Good harvests have been reaped for the last 12 consecutive years. The output of grain and industrial crops is enough to satisfy both the people's basic needs and those of developing industry. Industry is beginning to provide agriculture and other branches of the national economy with essential raw materials, fuel and technical equipment, satisfy the domestic market and expand its exports. The economy is now equitably distributed. A number of large key projects have been

built in the interior so that industry is no longer concentrated in the coastal areas. With stable prices and a thriving market, China has become a country without either internal or external debts. All this shows that an independent and fairly comprehensive industry and national economy with a socialist agriculture as base are taking shape.

Under the triple yoke of imperialism, feudalism and bureaucrat-capitalism, old China was extremely backward economically. Without enough grain and cotton to supply herself, she imported grain every year from the mid-19th century. She was plagued by perennial problems of inflation, rocketing commodity prices and shrinking markets. The labouring people lived in dire poverty. When new China was founded, industry, more than 70 per cent of which was light industry, accounted for only about 30 per cent of the total industrial and agricultural output value. Technical and production levels were very low. It was on this tattered basis that China proceeded with the stupendous task of building a socialist economy.

Proceeding from her actual conditions, China has developed her economy by making full use of her resources, relying on domestic accumulation and the wisdom and strength of the people and by undertaking construction self-reliantly.

After her founding in 1949, new China confiscated the enterprises run by imperialism and bureaucrat-capitalism, carried out land reform, democratic reform and a series of other revolutionary movements. This sparked the enthusiasm of the workers and peasants and spurred the rehabilitation and development of industry and agricul-

ture. In 1952 China outstripped all previous levels in the output of major industrial and agricultural products. The rehabilitation and development of the national economy smashed the blockade of the imperialists and provided the necessary prerequisites for planned socialist economic construction.

By 1956 China had basically brought about the socialist transformation of agriculture, handicrafts and capitalist industry and commerce. The radical changes in the relations of production gave an impetus to the development of the productive forces. With unprecedented enthusiasm, the peasants who had embarked on collectivization swung into construction of water control and other farmland improvement projects and succeeded in wresting high yields. The workers displayed their revolutionary spirit as the leading class of the state and constantly raised industrial production. China fulfilled or overfulfilled her targets under the First Five-Year Plan in 1957. It was the first time that the Chinese people had their own industries producing aircraft, motor vehicles, modern machine tools, power-generating equipment, metallurgical and mining equipment and other new products.

Under the guidance of the general line laid down by Chairman Mao — **going all out, aiming high and achieving greater, faster, better and more economical results in building socialism** — in 1958 a Great Leap Forward took place in China's national economy. People's communes were established in the countryside. Total industrial and agricultural output value that year was 55 per cent higher than in 1957. Continued advances in industry and

agriculture enabled the country to fulfil the major targets set for the Second Five-Year Plan two years ahead of schedule.

The Soviet revisionist Khrushchov renegade clique in 1960 perfidiously withdrew all its experts from China, tore up hundreds of agreements and contracts and stopped supplying important equipment in an attempt to sabotage China's socialist construction. Under Chairman Mao's leadership, the Chinese people, working with a will and self-reliantly, defeated the plot of Soviet revisionism to sabotage. China's industry, science and technology continued their progress independently.

The third and fourth five-year plans for developing China's national economy have been carried out in the heat of the Great Proletarian Cultural Revolution, which smashed the bourgeois headquarters of Liu Shao-chi and then of Lin Biao, consolidated the dictatorship of the proletariat and the socialist economic base, sparked the revolutionary zeal of the people and accelerated the development of the social productive forces. The national economy continued going forward at a fairly high speed. In 1970 China fulfilled or overfulfilled the major industrial and agricultural production targets for the Third Five-Year Plan. Total increase in China's grain output in the eight years from 1965 to 1973 was greater than in the 15 pre-Cultural Revolution years of 1950-65. Gross industrial output value in 1973 was more than double the 1965 figure.

Where do the resources, funds, equipment and personnel come from for China's socialist economic construction? The Chinese experience answers: from self-reliance.

China has built the Taching, Takang, Shengli and other oilfields, and modern oil refineries and petro-chemical complexes. She is self-sufficient in both variety and output of oil products and now exports oil and oil products from a surplus.

The people of the nine provinces south of the Yangtze River have located a great number of coalfields, opened many of them and produced large amounts of coal. This changed the long-standing situation in which coal had to be transported from the north to the south. China is now self-sufficient in ores for her iron and steel industry thanks to the opening of many new mines.

China relies mainly on herself for machinery. Not all existing equipment is up to date. However, with wisdom and creativeness the working class is able to make new machinery up to modern standards out of ordinary equipment. The performance of some old machines has been greatly raised after technical transformation. Twenty-five years' hard work has enabled the machine-building industry to supply the various branches of the national economy with complete sets of equipment.

China does not rely on foreign loans or increasing her people's burden to accumulate funds for socialist economic construction, but depends entirely on accumulation within socialist enterprises. With the enthusiasm of the people for socialism, it is possible to create great wealth. Mass movements for increasing production and practising economy have been carried out in state-owned enterprises to accumulate more funds.

Today, China's annual revenue is a dozen times what it was in the early years after the founding of the People's Republic. Her present annual investments in

industrial capital construction are several times her entire annual revenue in the early post-liberation years. The people also follow the policy of building the country through diligence and thrift, and apply this all the way from managing households to running enterprises and all other undertakings, in order to save all possible money for the construction of the country.

Part of China's engineers and technicians are trained in schools, but a still greater number are trained through practical experience in factories. The method of close co-operation among leading cadres, technicians and workers in production and construction has not only greatly accelerated the progress of science and technology but trained tens of thousands of experts of worker origin.

In her socialist economic construction China pays attention to co-operation and exchange with other countries on the basis of equality and mutual benefit. But she does not rely on others. Chinese experience shows that the economy of a given country can be developed at a fairly fast pace provided the country relies on itself. On the contrary, reliance on foreign countries would only bind the people hand and foot, slow down economic construction and detract from political and economic independence.

In her socialist economic construction, China has adhered to the general policy for developing the national economy formulated by Chairman Mao: **Take agriculture as the foundation and industry as the leading factor.** In planning, emphasis is placed on agriculture, light industry and heavy industry in that order, so that all three forge ahead.

Grain production in 1973 was more than double that of 1949, and there have been great increases in various industrial crops. Agriculture provides light industry with raw materials and markets and promotes its development, the total output value of light industry in 1973 was a dozen times that of 1949. Agriculture and light industry provide markets and funds for heavy industry, enabling it to grow faster. The rapid advance of heavy industry in turn provides a growing amount of technical equipment for the modernization of farming and the promotion of light industry. In this way industry is made to play its leading role in the national economy.

The successes in China's socialist economic construction are the fruit of the great effort of her hundreds of millions of people under the leadership of the Chinese Communist Party and the guidance of Chairman Mao's proletarian revolutionary line. In the two great revolutionary mass movements — **in industry, learn from Taching** and **in agriculture, learn from Tachai** — the workers and peasants of the country learn from the workers of the Taching Oilfield and the peasants of the Tachai Production Brigade. They work in the spirit of hard work and self-reliance, enabling China's national economy to develop fairly rapidly and steadily.

Tapping Mineral Resources In a Big Way

WITH an area of 9,600,000 square kilometres and a coastline 14,000 kilometres long, China possesses rich mineral resources in its vast territory and coastal sea. However, these natural resources, like those of many other countries of the third world, were for almost a century controlled and rapaciously exploited by the imperialists and colonialists. Old China was an attractive piece of meat scrambled for by several imperialist powers. In the middle of the 19th century, under the guise of "aid," "tourism" and "evangelism" the imperialists began sending their agents to China to survey the mineral resources with the aim of seizing them. Through unequal treaties imposed on the Ching dynastic government, several imperialist powers appropriated the mining rights in a dozen or so Chinese provinces. They paid Chinese labour miserable wages to open up the mines and ship out the ores they had plundered, while the manufactured goods and materials they sent back to China were sold to the Chinese people at very high prices, fleecing them doubly.

With the founding of new China the unequal treaties were abolished. One of the first things she did was to place all mineral resources in the country under state ownership and take into her own hands all surveying and exploitation of them.

There were only a little more than 200 geological technicians and some 800 workers engaged in geological prospecting work in old China. Today, all over the country, tens of thousands of technicians and hundreds of thousands of people are working in several hundred regional teams doing geological surveys, mineral prospecting, petroleum geological exploration, hydrogeological and engineering geological work and geophysical prospecting.

This army of geological workers use various kinds of equipment and apparatus to explore mineral deposits, carrying out the prospecting on land, in the sea and from the air. The core-drilling work done in 1973 alone was scores of times the total done in the more than 40 pre-liberation years.

China has also mobilized the broad masses of the people, including people's commune members, to explore and report local mineral deposits. This has done away with the myth that prospecting can be done only by experts and resulted in the discovery of tens of thousands of prospects and numerous mineral deposits. Some new mineral formations have been found, and the amount of reserves of over 100 varieties of minerals has been established. The discovery of many rich coal and oil fields gives the lie to the imperialists' assertions that China is "oil-poor" and that "coal is non-existent south of the Yangtze River." The verified deposits of iron,

manganese, copper, tungsten, aluminium, nickel, lead, zinc, sulphur, phosphorus, asbestos and many other important minerals are increasing. In old China, deposits of only 18 minerals were known and their reserves were greatly underestimated.

Although formerly it was thought that there was no rock salt in the southern province of Kiangsi, a prospecting team, acting on information provided by the people of nine counties, started to search for salt in a small basin. After interviewing 3,000 people, analyzing the water from scores of wells and springs and studying the formations of different rock layers, they located a salt deposit estimated to be big enough to meet the needs of the whole province for the next several thousand years.

Old China had not a single geological institute and only geology departments or courses in a few universities. After liberation, starting from 1953, a number of geological institutes and prospecting schools were set up in Hupeh and Hopei provinces and in Changchun and Chengtu cities. Geological departments were established in a number of science and engineering colleges. While thousands of geological prospectors were being trained in secondary schools and institutions of higher learning, great numbers of geological technicians with a good theoretical foundation and practical work experience were brought up on the job by veteran workers in the field. Today, many of the chief engineers, regular engineers and technicians in China's geological prospecting teams are people trained on the job.

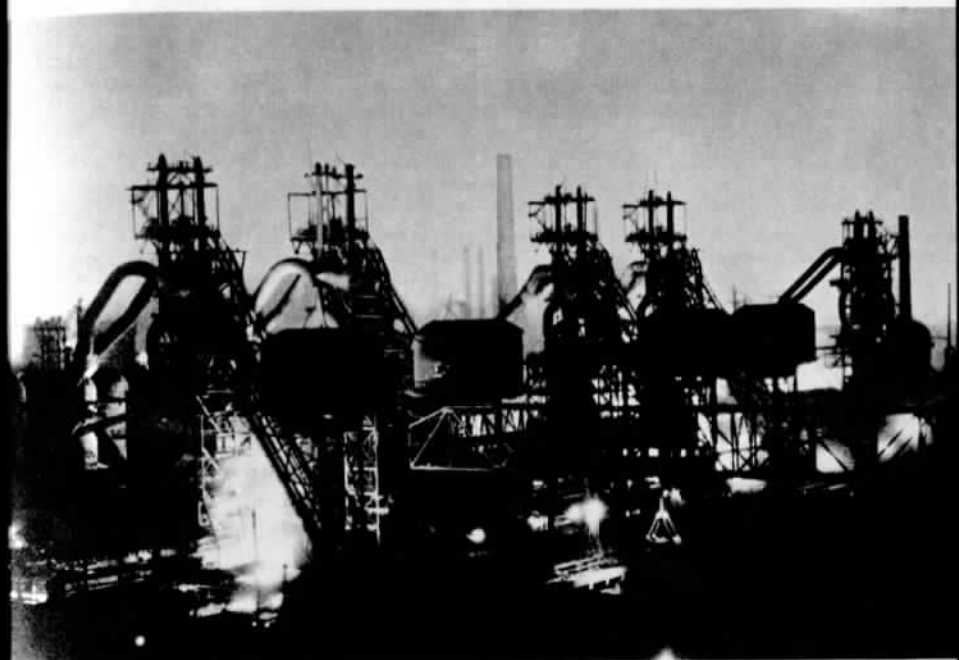
While making use of advanced expertise developed in other countries, geological prospecting, designing and

research organizations in China rely mainly on their own efforts to design and build all kinds of prospecting equipment and geological apparatus as well as to solve geological and prospecting problems.

Before liberation, all prospecting machinery and geological apparatus were imported. After the founding of the People's Republic a number of big and medium factories were set up. Privately-owned small iron works, foundries and machine repair shops, after being transformed into enterprises under joint state-private ownership and later into state-owned ones, were merged and expanded into factories specializing in producing prospecting equipment. Today, big, medium and small factories run by the central and local authorities and geological teams to manufacture and repair prospecting and geological equipment are in operation in all parts of the country.

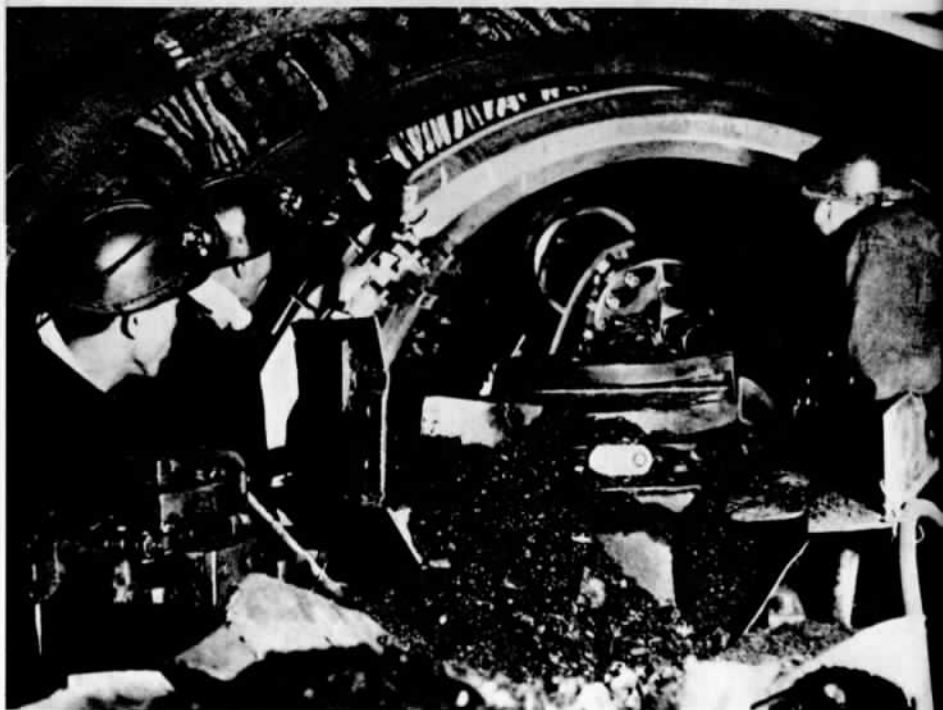
Under unified economic planning China has embarked on setting up medium and small mines while opening big ones so as to give full play to the initiative of the local authorities and the broad masses in tapping new mineral resources. A number of regional and county administrations and people's communes also engage in prospecting and mining. The ores they mine are mainly used locally to speed up agricultural development and in making articles of daily use to meet the people's needs. Surplus ores are turned over to the state. Output from the locally-run small coal mines in Honan Province, for example, now meets one-third of the province's coal requirements, and in the last few years the Pingmo Commune in the province has extracted more than 100,000 tons of bauxite for state-run factories. Today, not only

the regional authorities and mining departments in all parts of the country but also millions of ordinary people are engaged in a common effort to open up new mines in China to advance all-round development.



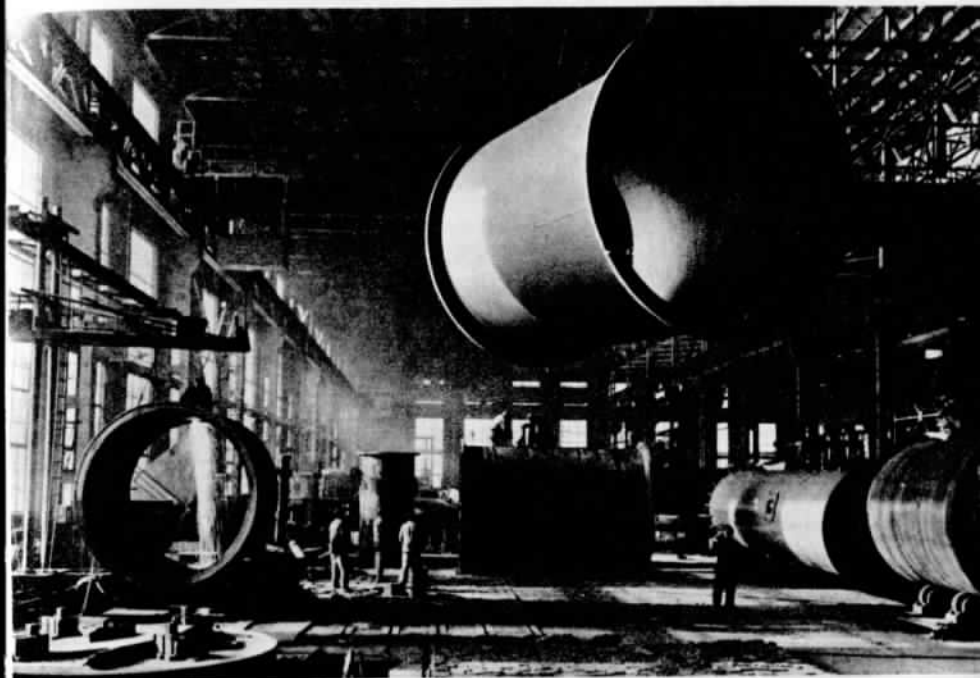
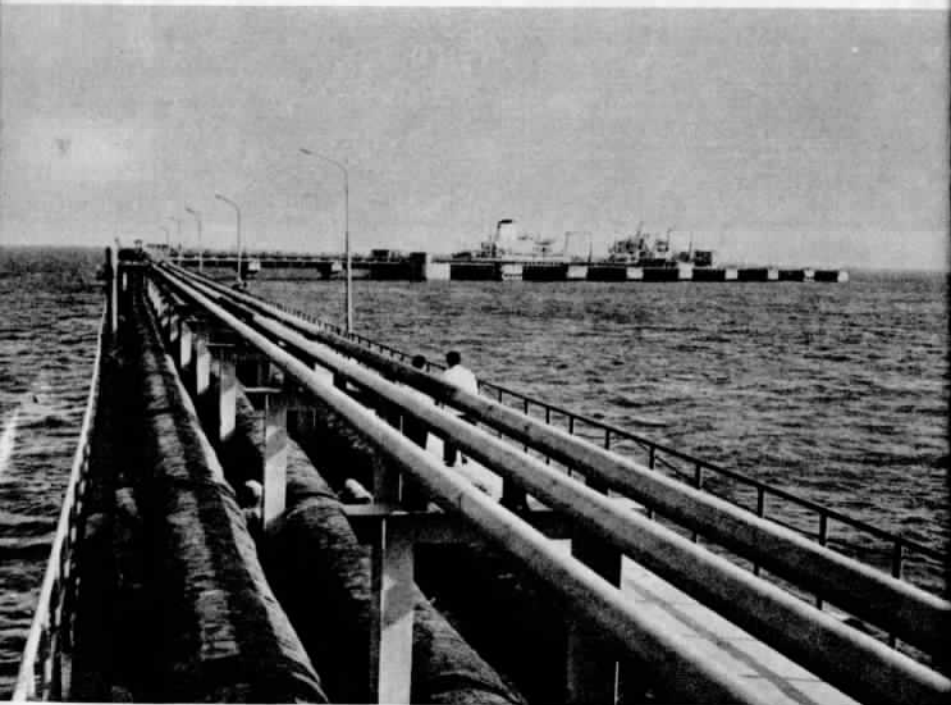
Anshan Iron and Steel Company — one of China's important steel centres.

Kailuan miners use machinery made by themselves.



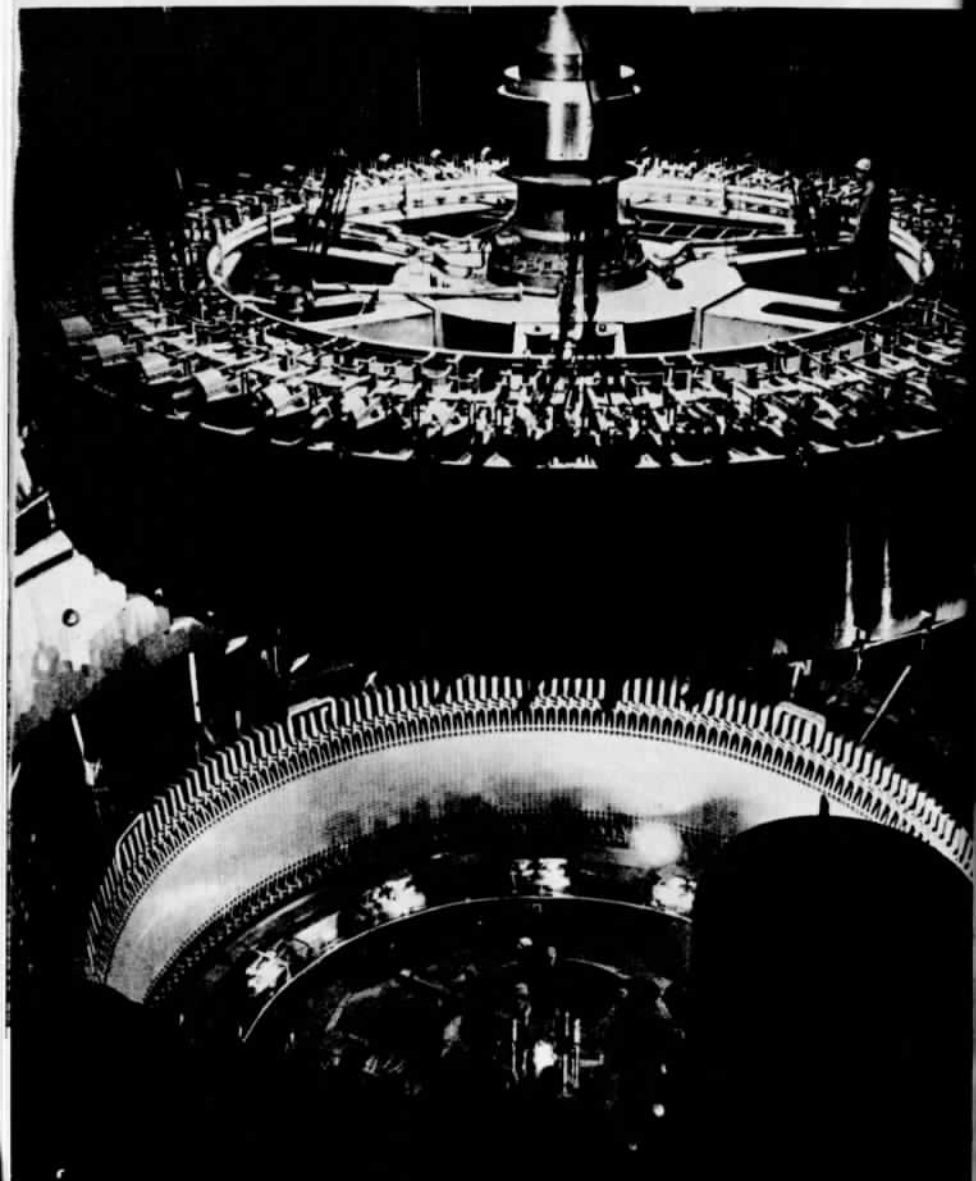
Night scene of the oil refinery at the Shengli Petro-chemical Works in Shantung Province.

New petroleum dock at Chinwangtao.



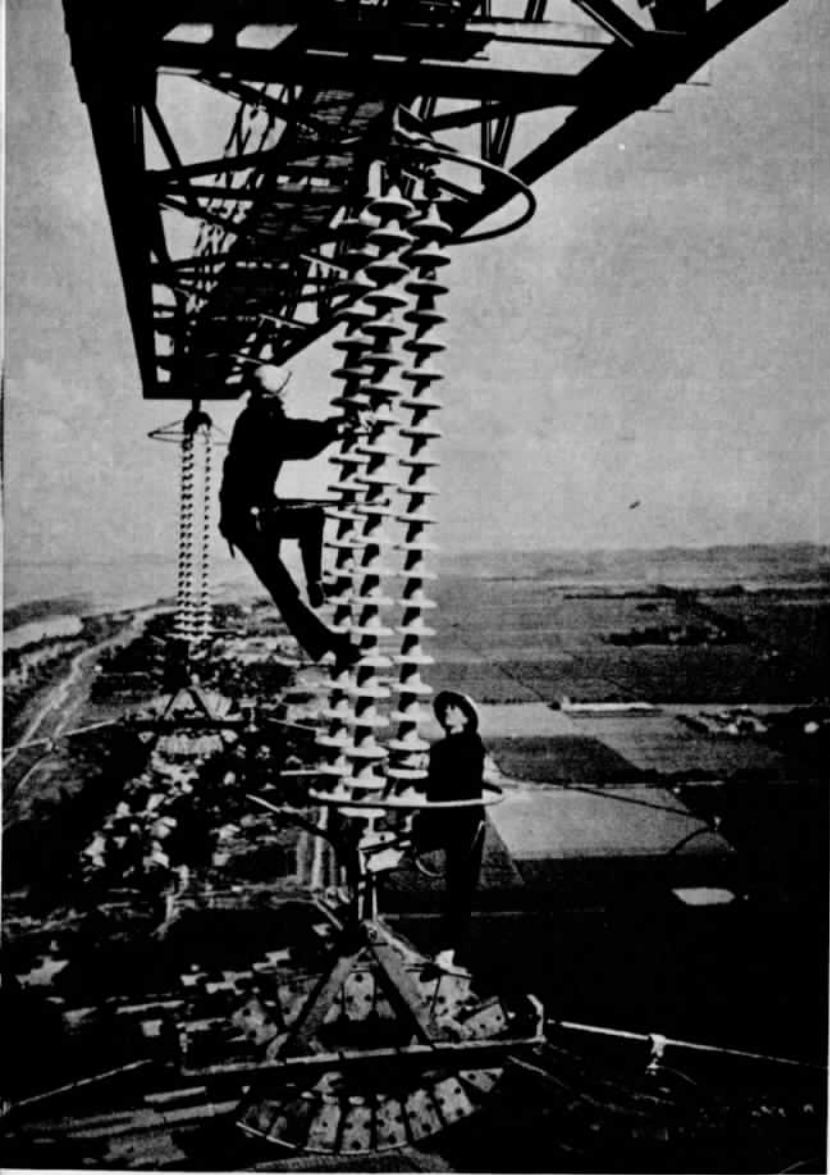
Shenyang Heavy Machinery Plant.

Installing a China-made 300,000-kw. hydraulic turbo-generator.



A workshop in the Peking Motor Vehicle Plant.

Workers assemble a new motor vehicle in the Peking Motor Vehicle Plant.



Wuhan Electricity Bureau workers carry out a live-wire inspection on an ultra high-tension transmission line.

Loyang Tractor Plant in Honan Province produces many tractors for the countryside.





Diesel engines for the countryside.

China-made "Sea Gull" DF camera
sells well both at home and abroad.

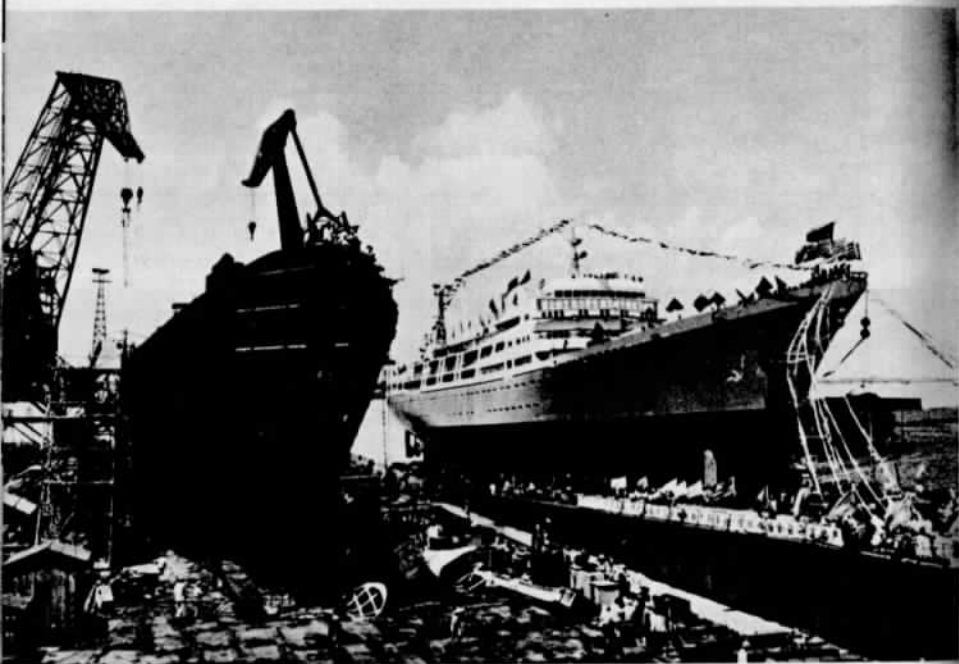




Tientsin Wristwatch Factory workers study ways to improve quality.

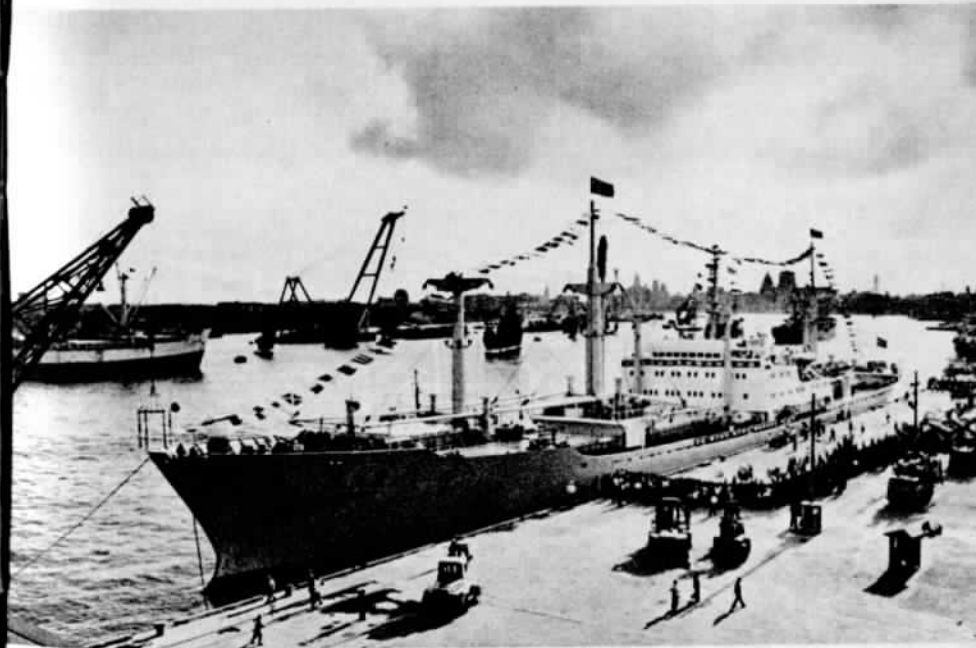
Local-made hydraulic turbo-generators in a small hydro-power station in Foshan, Kwangtung Province.



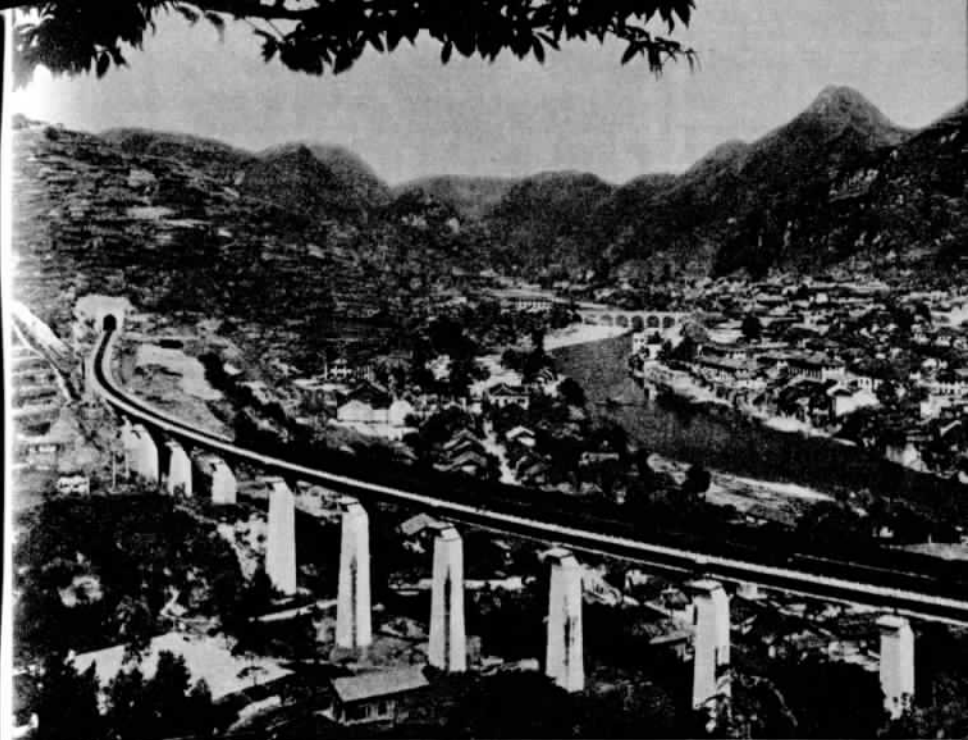
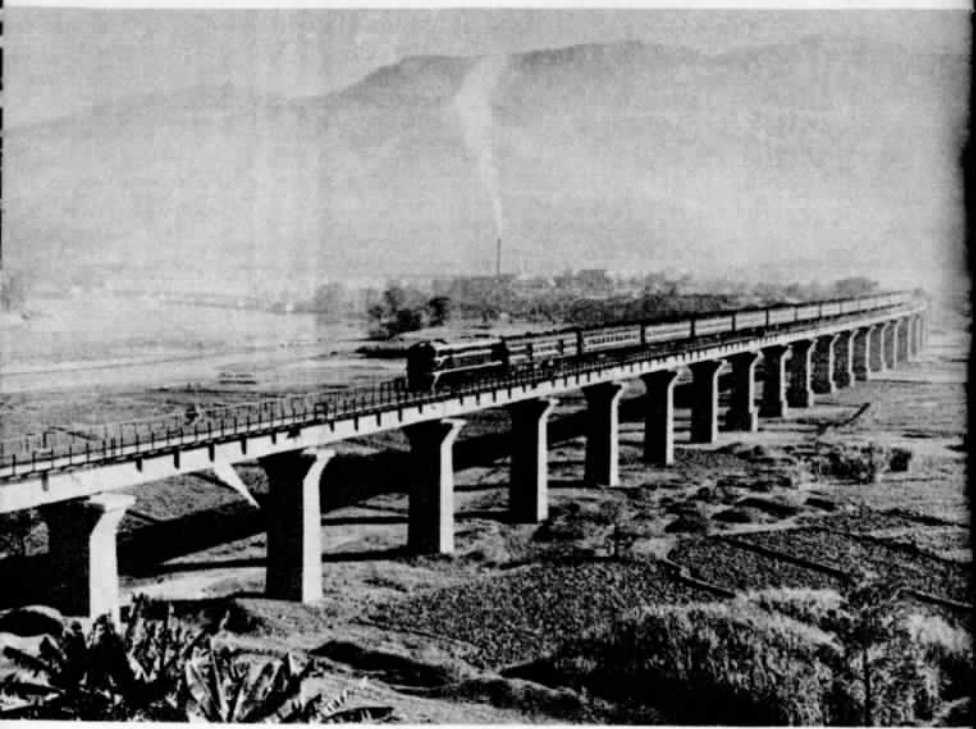


Hutung Shipyard in Shanghai builds large ships on small docks.

China-built and equipped 10,000-ton class freighter *Fengqing* returns from her long maiden voyage.



On the Chengtu-Kunming Railway, communication artery in China's southwest.

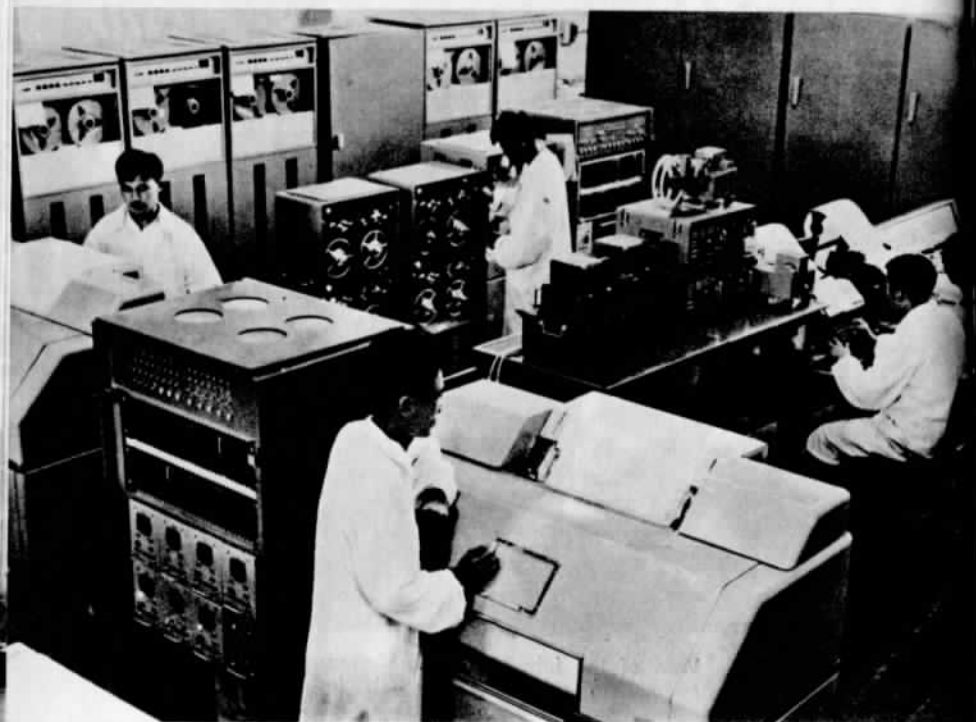


The Hunan-Kweichow Railway, a trunk line between central-south and southwest China.

Shanghai Harbour.



View of the laboratory where experimentation succeeded in producing synthetic insulin in China.



Successful trial production of integrated circuit electronic computer that does a million operations per second.

Producing Machinery Self-Reliantly

BUILDING machinery and equipment by self-reliance is an important factor accounting for the rapid growth of China's national economy.

In a quarter-century, new China has built a good number of big enterprises forming the backbone of her machine-building industry and tens of thousands of small and medium ones. In accordance with the requirements of the development of the national economy, the country has also built up industries making metallurgical, mining and power equipment, equipment for the petroleum and chemical industries, machinery for the textile and other light industries, motor vehicles, ships, tractors, machine tools and instruments and meters.

China's machine-building industry has developed an adequate base, with a fairly comprehensive range of trades, rational geographical distribution and much improved capability to produce whole sets of equipment. In fact, it has already supplied a large quantity of such equipment to the various departments of the national economy. In 1973 it made 5 and 5.5 times as much mining and metallurgical equipment respectively as it did in

1965, the year before the Great Proletarian Cultural Revolution. The outputs of motor vehicles, machine tools and petroleum and power equipment in 1973 were from 2.7 to over 7 times those of 1965.

Pre-liberation China, which depended mainly on imported machines, had practically no machine-building industry of her own. The few machinery plants could only do some repairs and produce such simple products as small motors and water pumps. This marked the colonial and semi-colonial character of old China's industry.

Agriculture is the foundation of China's national economy, and the fundamental way out for agriculture lies in mechanization. The farm machinery industry has made much headway since the Great Leap Forward in 1958, especially since the Cultural Revolution started in 1966.

Tractor plants and factories making motors and engines have been set up in more than 20 provinces, municipalities and autonomous regions. Except in some remote areas, most counties have their own farm machinery plants and repair works. In 1973 the outputs of tractors, walking tractors, pumping equipment, harvesting and threshing machines and farm and side-line produce processing machinery were from several to a dozen times the 1965 figures.

In the past few years, machine-building workers and technicians, working with the poor and lower-middle peasants in rural areas, produced a number of advanced farming and pumping machines adapted to local methods of cultivation and terrain. This further enlarged the mechanized acreage and the area under powered drainage and irrigation.

To supply the nation's basic industries with the equipment they need, China's machine-building departments stress the production of mining and metallurgical equipment for the iron and steel industry. They now design and make equipment of different types for excavation and drivage in mines, ore dressing, sintering, transportation, smelting and steel rolling, and provide complete installations for large and medium iron and non-ferrous metal mines as well as iron and steel complexes.

In the period from 1957 to 1973 the machine-building industry supplied a large amount of rolling equipment to China's major iron and steel enterprises in Anshan, Wuhan and Paotow and so helped increase the variety of rolled steel. China now makes over 1,000 kinds of steel in more than 20,000 specifications, providing the necessary varieties for making motor vehicles, tractors, heavy machinery, precision instruments and meters, for railways and other communications facilities and for the petroleum and chemical industries.

Since her founding new China has built numerous large and medium coal shafts and reconstructed a number of old mines with whole sets of new equipment. Most of the equipment used in both cases was made in China. In the 73 years between 1876 and 1948 only about 20 coal mines were operating in pre-liberation China.

After successfully trial producing the world's first 12,000-kilowatt steam turbine generating set with inner water-cooled rotor and stator in 1958, China went on to build a 125,000-kilowatt set in 1969, which was followed by a still larger one with a capacity of 200,000 kilowatts. With the steady flow of equipment into the power industry, electric power output has gone up every year,

and the country's power output in a few days at present is equivalent to the total for the whole of 1949. Not only has the power industry made tremendous advances in the coastal areas but a number of new power industry centres have been built in inland areas.

To develop the machine-building industry with greater, faster, better and more economical results and keep pace with the rapid growth of the national economy, machine-building plants in all parts of China follow the mass line and overcome engineering difficulties by boldly arousing the workers and technicians to make technical innovations. The machine-builders achieved a technological feat by evolving a process known as "ants gnawing on a bone." Its significance lies in pooling the workers' wisdom to manufacture heavy-duty machinery in the absence of large equipment by using a number of small machine tools to tackle a colossal workpiece. Large quantities of advanced heavy-duty machinery for the mining, metallurgical, petroleum and chemical industries were in this way turned out successfully.

The mass line in building new equipment also finds expression in encouraging the workers to tap the potential of existing enterprises to the full. Mutual co-ordination and a rational division of labour are practised among the various engineering trades so as to bring all positive factors into play in a concentrated effort to build particular kinds of equipment. A case in point was the building of mining and metallurgical equipment in Kiangsu Province at a time when no heavy machinery plant could be found locally. In the Cultural Revolution, the province organized co-operation among a dozen trades involving over 200 enterprises to build whole sets

of mining and metallurgical equipment for the Nanking Steel Mill. As a result, 30,000 tons of mining and metallurgical equipment were produced in three years and a rolling mill with rolls 650 millimetres in diameter was completed in a year.

In designing new machines China relies on "three-in-one" combinations of technicians, workers and cadres, and of designers, users and manufacturers. By summing up correct ideas from all quarters and drawing on the advanced experience in different lines to make major improvements on the blueprints, this practice makes it possible to work out designs which meet the needs of users and facilitate serial production while saving material and labour power, cutting the cost and improving the quality of products. Many important machines and up-to-date products turned out in recent years were designed and made through such "three-in-one" combinations. Among these are huge blast furnaces and converters, large jig boring machines, grinding machines, numerically-controlled machine tools, whole tolerance single-side meshing gear detectors, down-the-hole drills and pumps of giant sizes.

Why China Builds Small Industrial Enterprises

THE rapid growth of small and medium industrial enterprises in China's urban and rural areas shows the great success of the Chinese government's policy of "walking on two legs" in industrial construction, that is, the policy of building big, medium and small enterprises simultaneously. The significance of building small enterprises is shown most clearly by the important role they play today in the national economy.

In 1973 small nitrogenous fertilizer plants were producing 54 per cent of China's synthetic ammonia, production of which has increased by wide margins over the past few years. Small cement works turned out more than half of her cement. Small hydro-electric power stations provided electricity for many remote regions for the first time in history.

Nearly 1,000 small nitrogenous fertilizer plants had been set up by the end of 1973. A number of new plants are expected to be completed before the end of 1974.

Eighty per cent of China's counties have established their own small cement works, which total 2,800. Since

1970 the yearly increase of cement output has averaged 3 million tons.

Fifty thousand small hydro-electric power stations scattered in the vast countryside have an aggregate generating capacity surpassing the country's total at the time of liberation in 1949. These small power stations have brought many remote villages and hilly areas into the modern world electricity-wise.

Small iron and steel works have sprung up, turning out over three times as much steel in 1973 as in 1966 and over four times as much iron.

These facts show that a solid foundation of socialist industry is being laid in China—state-funded big and medium modern enterprises supplemented by small enterprises.

Early in the spring of 1957 Chairman Mao said about economic construction in China: **We must build up a number of large-scale modern enterprises step by step to form the mainstay of our industry, without which we shall not be able to turn our country into a strong modern industrial power within the coming decades. But the majority of our enterprises should not be built on such a scale; we should set up more small and medium enterprises.**

An essential part of the policy of "walking on two legs" instead of hobbling along on one is to have the local people's government at all levels and the people's communes initiate the building of small enterprises by their own efforts while the state builds large and medium modern enterprises. Experience has proved that the policy has speeded up industrialization in China.

Construction of large-scale modern enterprises can only be undertaken by the state, as larger investment, concentrated resources, modern communications facilities, fairly complex equipment and technology and a longer building period are required. Socialist China is a developing country and the economic base she took over from old China was extremely weak. Funds and equipment are limited, so that only a certain number of big enterprises can be established in a given period of time in accordance with the main needs of the national economy.

Compared with the big enterprises, the small ones require much less investment and simpler equipment and take a shorter time to build. They can be set up by provinces and municipalities, administrative regions and counties, and even by the people's communes and neighbourhood communities. The numerous small enterprises built so far have, in general, an investment somewhere between tens of thousands of yuan and several hundred thousand yuan each. They were built in a matter of a few months, at most a year. These small plants can turn out advanced products as big modern plants do.

In Changchow, a small city near Shanghai, a small plant formerly producing copper mesh has succeeded in making an integrated circuit computer capable of doing 120,000 operations per second.

A small neighbourhood plant in Shanghai with 170 workers recently built a high-efficiency four-operation cold header capable of turning out 300 screw nuts of three-four mm. diameter per minute.

Many small plants now manufacture products equal in quality to those by big plants. It is the people who play the decisive role, not the equipment.

Many of China's small enterprises have grown into medium modern enterprises after a few years' expansion. Some have become industrial centres of considerable scale.

The widespread building of small enterprises has helped to improve the geographical distribution of industry in China. All provinces, municipalities and autonomous regions today have established both heavy and light industries and both basic and processing industries, which meet in certain degree the local needs for industrial and agricultural development and the people's daily necessities. Formerly China's industries were mainly concentrated in the big coastal cities.

Small machinery plants, chemical fertilizer plants, cement works, iron and steel mills and coal pits have been set up now in more than half of China's counties. The rest, with less favourable conditions, have built one to four such small enterprises. In the Tibet Autonomous Region around 200 industrial enterprises have been set up.

Scattered mining resources, farm produce and sideline products are fully utilized in the expansion of small enterprises, which in turn play an important role in local economic development and the people's livelihood.

Hunan Province, by mobilizing the people's communes and production brigades to tap local resources, has opened many small coal pits with a small amount of investment. They turn out more than 3 million tons of coal a year, equal to the capacity of three pairs of modern shafts. This not only satisfies the local peasants' needs but also supports country-wide industrial construction.

Peking—from Consumer City to Industrial Centre

SINCE liberation Peking has become not only the country's political and cultural centre but is beginning to be a socialist industrial base. The 1973 gross industrial output value was 111 times that of 1949, more than the national total in 1949.

Though Peking's modern industry is 102 years old counting from the establishment of the Mentoukou Coal Mine in 1872, its progress was extremely slow in the first 77 years. At the time of liberation it was still a backward, consumer city swarming with parasitic bureaucrat, comprador, landlord and feudal class elements. Even thumb-tacks, drinking glasses and tooth-paste had to be provided by other cities or foreign countries. Most of the factories and mines were handicraft shops using simple tools such as picks, bellows and treadle looms.

After liberation, under the guidance of Chairman Mao's revolutionary line and supported by the whole country, Peking workers set up a fairly complete industrial system through hard work. Now the city has a million industrial workers, one-fourth of its urban population. The ancient city walls were demolished

and the urban area was expanded. Factories have gone up on land once occupied by foul ditches and grave mounds, and also in the hilly outlying areas. Many old Peking residents say that the city has changed beyond recognition.

Peking, a city with a history of many centuries, has only in the quarter-century since liberation undergone radical changes in its industry.

Before liberation Peking produced no steel and only a little pig iron. Now its annual steel output is ten times the national total of 1949, and it produces high-grade alloy steel in such form as wire of less than a hair's breadth, and steel tape thinner than paper.

A city that could not make air valve tubes for bicycles before liberation, Peking now produces many kinds of large, precision and automatic machines, such as the 30,000-ton oil-hydraulic press and hob relieving grinding machine with a tolerance of less than three-thousandth of a millimetre.

Twenty-five years ago Peking could not make even the simplest electronic tube radio sets. Now its products include whole sets of high-power transmitters for radio stations and integrated circuit electronic computers that can do a million calculations per second.

In the past, Peking's chemical industry did no more than process a few kinds of sugar-coated pills and saltpetre by hand for firecrackers. Now it produces acids and alkalis and has developed coking- and petrochemical industries. Its annual output of petroleum surpasses the national total in 50 pre-liberation years.

Peking under the rule of the Kuomintang reactionaries could only produce coarse cloth, inferior-quality soap

and other light industrial goods. Now more than 80 per cent of the manufactured goods for daily use on the market are made locally.

More than 400 varieties of products made in Peking, including motor vehicles, machine tools, cameras, refrigerators and pianos, are being exported to at least 90 countries and regions.

Peking's rapid industrial progress results from Chairman Mao's proletarian revolutionary line winning against the revisionist line pushed by Liu Shao-chi and Lin Biao. In the past 25 years there have been four great leaps in Peking's industrial development, each proving that **the correctness or incorrectness of the ideological and political line decides everything**. In 1952, workers and other sections of the people launched the movements against the "three evils" (corruption, waste and bureaucracy) and the "five evils" committed by capitalists (bribery of government workers, tax evasion, theft of state property, cheating on government contracts, and stealing economic information for private speculation). After the masses repulsed the desperate attacks of the bourgeoisie the total value of the city's industrial output rose in 1952 to more than four times the 1949 figure. In 1956 the socialist transformation of capitalist industry and commerce, handicrafts and agriculture was carried out and the old relations of production were changed. The total industrial output value rose again in the year to more than twice that of 1952. In 1958, after the struggle against the bourgeois Rightists and guided by the Party's general line for building socialism, the Great Leap Forward began and the city's total industrial output value more than doubled that of 1956.

The fourth rise in industry was most prominent. Due to the two bourgeois headquarters with Liu Shao-chi and Lin Biao as their chieftains being smashed in the Cultural Revolution Chairman Mao's revolutionary line has been carried out in a more penetrating way, resulting in further marked development of the city's industry. Over two-thirds of the present industrial production capacity was achieved during the Cultural Revolution. The total industrial output value in 1973 was three times that of 1965, the year preceding the Cultural Revolution. In 1974, spurred by the movement to criticize Lin Biao and Confucius, Peking's industrial production again showed considerable increase.

The revisionist line pushed by Liu Shao-chi before the Cultural Revolution imposed serious handicaps on the city's industrial construction. In its iron and steel industry, for example, it had to bring in iron ore from as far south as Hainan Island and have its steel bloomed in other parts of the country. Not until the Cultural Revolution began was this lopsided situation changed. The workers and staff members concentrated their efforts in building iron mines and strengthening the industrial system with complete sets of equipment. In a few years' time the city became self-sufficient in iron ore and expanded its blooming and steel rolling capacities. Now steel output is over four times that before the Cultural Revolution. The output of iron ore, pig iron and rolled steel has also increased by a wide margin, the latter being now in more than 10,000 specifications.

Other industries have also made much progress during the Cultural Revolution. The outputs of electric generators, motor vehicles, machine tools, mining and chemical

equipment, walking tractors, chemical fertilizer, pesticides, wristwatches, transistor radios, dacron and other products were several to dozens of times the quantities produced before the Cultural Revolution. Quality has improved and there are more varieties. The city now produces over 200 types of machine tools as against only 20 in 1965 and over 600 electronic products as against 80.

Since the start of the Cultural Revolution the Peking workers, determined to catch up with and surpass advanced world levels, have succeeded in more than 100,000 items of technical innovations. Recently they succeeded in trial producing a great many new products, including a 40-cutter digit-controlled horizontal boring and milling machine with automatic change of cutters, a laser-controlled grating scratching 1,800 lines on one square mm. of glass and a colour television rebroadcast van.

The people, and the people alone, are the motive force in the making of world history. It was under the Party's leadership, by persisting in the socialist revolution and so bringing the masses' socialist initiative into full play that Peking achieved such great success in its industry. The working people, though proud of these achievements, are still not content with them and are continuing their march forward.

Transformation and Expansion of Shanghai's Industry

SHANGHAI, China's leading industrial city, has become a fairly comprehensive industrial, scientific and technical base as a result of its transformation and development in the past quarter-century.

Industrial production and construction have grown rapidly. Gross industrial output value in 1973 was 17 times that in 1949, the year of its liberation, and double the amount for 1965, the year before the Cultural Revolution. Heavy industry accounted for more than 54 per cent of the total industrial output value in 1973, as against 13.6 per cent in 1949. Steel output has increased each year. Now, Shanghai's steel output in half a day equals the whole of 1949's. It produces more than 1,200 varieties of steel in nearly 20,000 specifications. The machine-building industry has turned out a 300,000-kw. steam turbo-generating unit with inner water-cooled stator and rotor, large precision thread-grinding machines, 10,000-ton class cargo-passenger vessels as well as whole plants each with an annual output of 1.1 million tons of iron, 1.2 million tons of steel, 700,000 tons of medium plate and sheet steel, or 2.5

million tons of oil. In the corresponding period, the amount of raw and other materials available to industry has rapidly increased. Over 40 new industries have been added, including new-type metals, tractors, motor vehicles, chemical fertilizer, pesticides, petro-chemicals, heavy machinery, precision machine tools, power equipment, wristwatches, cameras, television sets, chemical fibres and electronic elements and equipment.

Although old Shanghai's industry dated back more than a century, it grew slowly and had a strong colonial economic nature. Major enterprises for the supply of electricity, coal gas, tap water and transportation were controlled by the imperialists. The main equipment, raw and other materials and fuel for industry were imported. Its so-called heavy industry was for the assembly and repair of machines imported from imperialist countries. It had practically no independent machine manufacturing. The chief textile and light industries, though with a fairly good start, were still using the same old machines and backward technique. Working conditions were very poor. In collusion with the Kuomintang reactionaries, the imperialists plundered resources, exploited cheap labour power and dumped their surplus on the market. National industry was on the brink of bankruptcy. At that time Shanghai's yearly gross industrial output value was less than what is produced in 20 days at present.

The great changes in Shanghai's industrial map took place along with the sustained deep-going socialist revolution.

The establishment of proletarian political power in 1949 ousted the imperialist economic forces, confiscated

bureaucrat-capitalist enterprises and set up a state economy in which the means of production are owned by the state. In accordance with the general line for the transition period formulated by Chairman Mao, the policy of using, restricting and transforming capitalist industry and commerce was adopted. Capitalist-owned undertakings were brought under socialist state ownership step by step. Measures included their acting as sales agents for the government, producing goods for the state under state plan and joint state-private ownership. Handicrafts and other individual economic units were organized into co-operatives. In this way the socialist transformation of ownership of the means of production was in the main completed and the semi-colonial and semi-feudal nature of old Shanghai's economy was changed.

Profound socialist revolutionary movements have been launched on the political and ideological fronts in the wake of this transformation. After the great rectification campaign and the anti-Rightist struggle were crowned with success, Shanghai launched its Great Leap Forward in 1958 under the guidance of the Party's general line of **going all out, aiming high and achieving greater, faster, better and more economical results in building socialism.** Total industrial output value jumped 50 per cent above the previous year and was 5.7 times that in 1949. The Cultural Revolution roused to new heights the socialist enthusiasm and initiative of the broad masses of workers and there has been a new forward leap in industrial production. Shanghai's gross industrial output for the Third Five-Year Plan period (1966-70) was 68 per cent over that for the five years before the Cultural Revolution. The current movement to criticize Lin Biao and Confucius

has further consolidated and developed the achievements of the Cultural Revolution and promoted the expansion of production. In 1973 the city's gross industrial output value was double that in 1965, before the Cultural Revolution, while in the first three quarters of 1974 it increased considerably over 1973.

Since liberation, in line with the principle of "full utilization and rational development," the old industrial base of Shanghai has merged a number of enterprises, transformed part of the over-concentrated and lopsidedly-developed trades and turned them into new departments urgently needed by the state. It has also moved some plants to aid new industrial centres in other parts of the country. Most of Shanghai's meters and instruments, electronics, plastics and chemical fibres factories have grown from light industrial plants and textile mills. Quite a number of factories making heavy mining machinery and metallurgical equipment began with the merging of small plants. This reduced state investment while transforming the existing industrial base and making full use of production potential.

All plants rely on the initiative and enthusiasm of the workers, cadres and technicians for technical transformation of equipment in old enterprises. Equipment is remodelled, technological processes and techniques are improved and new equipment and materials devised. A number of industries have adopted electronics, fluidic system, laser, chipless metal working and other advanced technologies and techniques. The metallurgical industry uses the oxygen steel-making process, continuous ingot casting, vacuum metallurgy, precision rolling and continuous drawing. Cotton mills have replaced the old

spindles with new high-speed spindles and raised cotton yarn output per 1,000 spindle-hours to 43 kilogrammes from the early post-liberation figure of 18 kilogrammes.

Shanghai uses socialist co-ordination as an important means by which to develop its industry. An example is its remodelling of the city's 1,000 old high-coal-consumption boilers dating back to the 20s and 30s. A few specialists behind closed doors mapped out a plan prior to the Cultural Revolution for remodelling these boilers over a ten-year period. In 1969 the Shanghai Municipal Revolutionary Committee mobilized the masses to break the barrier between different trades and organized specialized plants to produce key equipment and other plants to make parts and accessories. Two hundred thousand people worked in co-operation and made 1,000 coal-saving boilers in only 80 days.

In order to develop the medical apparatus industry, more than 300 units co-operated in 1972 to trial produce 89 kinds of precision medical apparatus of fairly high quality. New techniques such as supersonics, laser, electronics and isotopes are used in making new products. This has created a new productive force that can do what a single trade cannot. Many important achievements gained in Shanghai were due to the co-operation of other units including those in other parts of the country. Shanghai develops its industry not by building a host of new plants, but mainly by making the most efficient use of the existing foundation to enlarge production capacity and accumulate funds. The city's investment in capital construction from 1949 to 1973 accounted for only 6.7 per cent of its total accumulation for the state.

In its industrial development, Shanghai has received aid from the whole country. In turn it supplies state socialist construction with large quantities of industrial goods, technical forces and accumulated funds. Since liberation it has sent a large amount of machinery and equipment and other products to various parts of the country, transferred several hundred plants to other places and sent out nearly a million skilled workers and technicians. In addition, it has trained a large body of technical personnel for other parts of China.

How China Achieves Self-Sufficiency in Grain

IN a quarter-century China has been turned from a country of perpetual grain shortage into one with enough to eat.

China's grain output in 1973 exceeded 250 million tons, more than double that of 1949. Though its population is now close to 800 million, the amount of grain per person has increased by more than 100 kgs compared with 1949, the year of liberation.

State grain reserves have been built up. The production teams under the people's communes and many peasant households also have their own reserves.

Hunger and poverty haunted the working people in old China, when farm production sagged under the ruthless exploitation and oppression by the reactionary rulers. Millions died of starvation in a year of crop failure. Food remained a problem that was not and could not possibly be solved at that time.

Imperialist prophets once insolently alleged that new China would not be able to solve that problem either. The social-imperialists, too, slanderously described the

Chinese people as "living on wild herbs." Their shameless assertions, however, have been refuted by the fact of China's increasing farm production.

New China led by Chairman Mao and the Chinese Communist Party is a country of which the people are the masters. Chairman Mao's proletarian revolutionary line, the superiority of the socialist system and the collective strength of the more than 50,000 people's communes have made it possible for China to solve the grain problem step by step.

China's fundamental policy in solving this problem is to rely on the collective strength of the masses and increase farm production by making full use of domestic agricultural resources. Hundreds of millions of peasants have been mobilized in a battle to remake nature and develop agriculture according to the vastly different conditions of different areas.

One important task under this gigantic plan is to change the conditions in the traditionally disaster-ridden, low-yield and grain-deficient areas. How this was done can be seen in the example of the provinces of Hopei, Shantung and Honan and the northern parts of Kiangsu and Anhwei provinces on the Yellow River, the Huai and the Haiho, all rivers notorious in Chinese history for the damage they did to the life and property of the people. Relying on their own strength, the millions of people in these areas worked hard to improve soil, harness rivers, sink wells and build other projects and finally achieved self-sufficiency in grain. Hopei, Honan and Shantung garnered twice as much, or even more, grain in 1973 as in 1949 and all three provinces delivered surplus grain to the state as agricultural tax.

The long-time dependence of the northern areas on grain supply from the south is coming to an end — a fact of great significance to the country in solving her food problem.

The Tachai Production Brigade in the Taihang Mountains, over 1,000 metres above sea level, is a national pacesetter in agriculture. It provides an example of the dauntless heroism of the peasants in the fight to rearrange China's rural landscape under the guidance of Mao Tsetung Thought. Keeping to the socialist road and working collectively, the Tachai peasants levelled hill-tops to enlarge farmland, quarried stone to build embankments and turned hill slopes into terraced fields. Most of the farmland there now gives high and stable yields. The brigade reaps more than 7.5 tons of grain per hectare as against some 0.75 ton before.

A mass movement to emulate Tachai has swept rural China since Chairman Mao issued the call: **In agriculture, learn from Tachai.** Water conservancy and other farm improvement projects were built throughout the country. Alongside the big ones financed by the state, myriads of smaller ones have been completed by people's communes and production brigades.

China's irrigated area has increased enormously as a result. Rivers that used to cause serious floods have in the main been brought under control and made to benefit farming. Total forest area in the country is now more than double that at the time of liberation.

Large tracts of desert, alkaline, swampy and arid land have been transformed into fertile fields. Many counties have increased their farm output by 100 per cent or more within a short space of time.

Where the natural conditions are more favourable, particularly in the Yangtze River valley, the commune members have worked for still higher output by farming more scientifically and tapping production potential. Relying on the strength of the collective economy and with help from the state, they have systematically increased irrigation facilities and the supply of fertilizer, improved soil and stepped up farm mechanization. They have built a number of agricultural bases that give stable high yields and provide the state with large quantities of marketable grain irrespective of drought or water-logging. Among these are the Yangtze Delta in east China and the Pearl River Delta in the south. These bases have played an important role in feeding the population and meeting the needs of national construction. There are now more than 200 counties and municipalities in China each of which provides the state with 50,000 to 350,000 tons of marketable grain annually.

Efforts have been made to increase unit yield through intensive farming and all-round implementation of the Eight-Point Charter for Agriculture (soil improvement, water control, rational application of fertilizer, improved seed strains, rational close planting, plant protection, field management and improvement of farm implements). In many areas, the people's communes have improved the cropping system according to local conditions, introduced a set of scientific methods for all kinds of farm work from levelling the land to harvesting, and increased multiple cropping and inter-planting acreage. Most of the areas in north China now reap two crops a year instead of the previous one, while triple-cropping acreage is increasing yearly in the south. A general rise in unit yield has been recorded in all parts of China.

Quite a few counties and municipalities in the south have surpassed 10.5 tons in per-hectare grain yield.

Guided by the policy of **taking agriculture as the foundation and industry as the leading factor**, Party organizations throughout the country and people of all trades and professions are lending a hand to agricultural production. Cadres at various levels often go to the countryside to take part in physical labour and help solve problems arising from the development of agriculture.

There has been a fairly rapid increase in the supply of farm machinery, chemical fertilizer, pesticides, etc. Compared with 1965, China's output of tractors increased six times in 1973 while that of internal combustion engines for irrigation and drainage increased more than seven times. Output of chemical fertilizer, electricity for rural consumption and pesticides, too, has risen by a big margin. This has provided better conditions for farming.

The state has also increased its financial support for agriculture. Its investment in agriculture in 1973 was nearly double that of 1958. On the other hand, agricultural tax is fixed irrespective of the increase in production and therefore accounts for only five per cent of farm output as against some 12 per cent in the early post-liberation years. The state also follows a price policy that greatly benefits the peasants. On many occasions it has raised the purchasing prices for farm and side-line products and lowered the prices of manufactured goods for rural use.

Chairman Mao has said: **Revolution plus production can solve the problem of feeding the population.** Since

liberation China has carried out a series of social revolutions in the countryside, ranging from land reform and the establishment of mutual-aid teams, agricultural producers' co-operatives and then people's communes. This has ensured the advance of the countryside along the socialist road. Guided by Chairman Mao's proletarian revolutionary line, the masses of Chinese peasants have persisted in criticizing revisionism and capitalist tendencies and gradually consolidated the positions of socialism in the countryside and developed farm production. Total increase in grain output during the eight years between 1965 and 1973 surpassed that of the 15 years (1950-65) before the Great Proletarian Cultural Revolution.

Socialist China is a developing country. It has not yet attained a high level in agricultural production. But the potential is great. Today, the Chinese people are working with even greater revolutionary vigour for the further development of agriculture.

Why China Has No Inflation

CHINA'S finances and currency have remained stable ever since the founding of the People's Republic in 1949, thanks to vigorous economic development and a flourishing home market. The galloping inflation and soaring commodity prices created by the reactionary Kuomintang government ended once and for all in the first few years after new China was born.

Before liberation the reactionary Kuomintang government issued an unlimited amount of banknotes, causing devaluation of the currency and sending commodity prices soaring. Between 1937 and 1949 Kuomintang-issued banknotes inflated 140,000 million fold and commodity prices rose 8,500,000 million fold. The bureaucrat-capitalist class at the time took advantage of the inflation to fleece the people and reap fabulous profits while the exploited, labouring masses suffered.

With the establishment of the socialist system, the currency ceased to be a means of exploiting the labouring people but instead became a tool to advance their well-being. China's Renminbi (RMB) serves to help the country with socialist revolution and construction,

expand the exchange of goods between town and countryside, consolidate the worker-peasant alliance and improve the life of the people step by step. The stability of Renminbi is determined by its socialist function.

No sooner had countrywide liberation been achieved than the state took a series of measures to replace the old currency with Renminbi, ban the circulation of foreign currencies and strictly prohibit speculation. All this eliminated the pernicious influence of old China's long-standing inflation and established an independent, unified and stable socialist monetary system and financial set-up. Thanks to the construction carried out in several Five-Year Plan periods under the guidance of Chairman Mao's principle of **building our country independently and with the initiative in our own hands, through self-reliance, hard struggle, diligence and thrift**, China's socialist economic base has been strengthened continually and her finance daily consolidated, providing a solid foundation for the stability of Renminbi.

Because of the state policy of maintaining the value of the currency, the purchasing power of Renminbi has long remained the same, without any fluctuation.

Renminbi's value is kept stable while the currencies of the capitalist countries are in a state of constant fluctuation. To carry out the principle of equality and mutual benefit in China's economic dealings with other countries, Renminbi has been used in quoting prices and settling accounts since 1968. A growing number of countries and regions now use Renminbi to quote prices and settle accounts in trade and other economic dealings with China.

China's agriculture has constantly improved over the past 25 years. Grain output has increased to well over 250 million tons from 110 million tons in the early post-liberation period. Output of cotton, edible oils, sugar, bast fibres, tobacco, tea and other industrial crops has risen considerably. Both light and heavy industries have made big headway on the basis of the all-round development of agriculture. Food, clothing and other consumer goods have increased by large margins. Meat, fish, poultry, vegetables, fruit, cloth, paper, sugar, cigarettes, medicines, bicycles and sewing machines have increased anywhere from several to a dozen fold compared with the early post-liberation period. Reserves have increased a great deal, especially those of grain, cotton and other major commodities, and these provide a reliable material foundation for the stability of Renminbi.

Since China practises socialist public ownership of the means of production, most commodities are in the hands of the state. The products of state-owned enterprises belong to the state; the agricultural and side-line products of the rural communes and production brigades, other than those put aside for their own use, are all purchased by the state at reasonable prices. Renminbi is issued by the state in a planned way and has the powerful backing of commodities. This ensures that the currency in circulation conforms with the commodity supply and keeps Renminbi's value stable.

Commodity prices are decided by the state. The state consistently lets commodities flow into the market at stable prices, ensuring smoothness of production and construction and stability of the people's life. The prices of such daily necessities as grain, cotton cloth, table salt

and coal have remained stable over the past 25 years. Those of medicines and stationery have been considerably reduced. To narrow the scissors difference between the prices of industrial and agricultural products left over from the old society, the state, on many occasions, raised the purchase prices of agricultural and side-line produce in a planned way and lowered the sales prices of chemical fertilizer, pesticides, diesel oil and other means of agricultural production. This enabled the peasants to increase their cash income and buy more manufactured goods with the same amount of money.

In socialist construction, China has kept to Chairman Mao's principle to **develop the economy and ensure supplies** and the policy of guaranteeing a balanced budget and monetary and financial stability. In issuing banknotes, China sees that this is done to keep pace with developed production and expanded circulation of commodities and does not permit the issuing of banknotes to increase revenue. Inflation is fundamentally avoided.

China achieves balance of revenue and expenditure in the state budget by bringing into full play the function of the planned socialist economy. China's revenue comes mainly from accumulation by the socialist enterprises, and expenditure is mainly for developing the socialist economy. The fundamental way to increase income is to rely on the industriousness and creativeness of the masses in developing production and accumulating funds. In the allocation and use of funds for construction, China's consistent policy is to build the country through diligence and thrift. Strict economy is practised, waste opposed and a minimum of money is spent to get the maximum results. State revenue has increased enormously in the

past 25 years on the basis of the continuous growth of industrial and agricultural production. This has ensured the supply of funds for large-scale economic construction and kept state revenue and expenditure in balance. In special circumstances, such as when natural disasters occur, adjustment is carried out in a planned way by increasing production, practising economy and relying on the state's reserves to ensure the balance. The method of issuing more banknotes is never used.

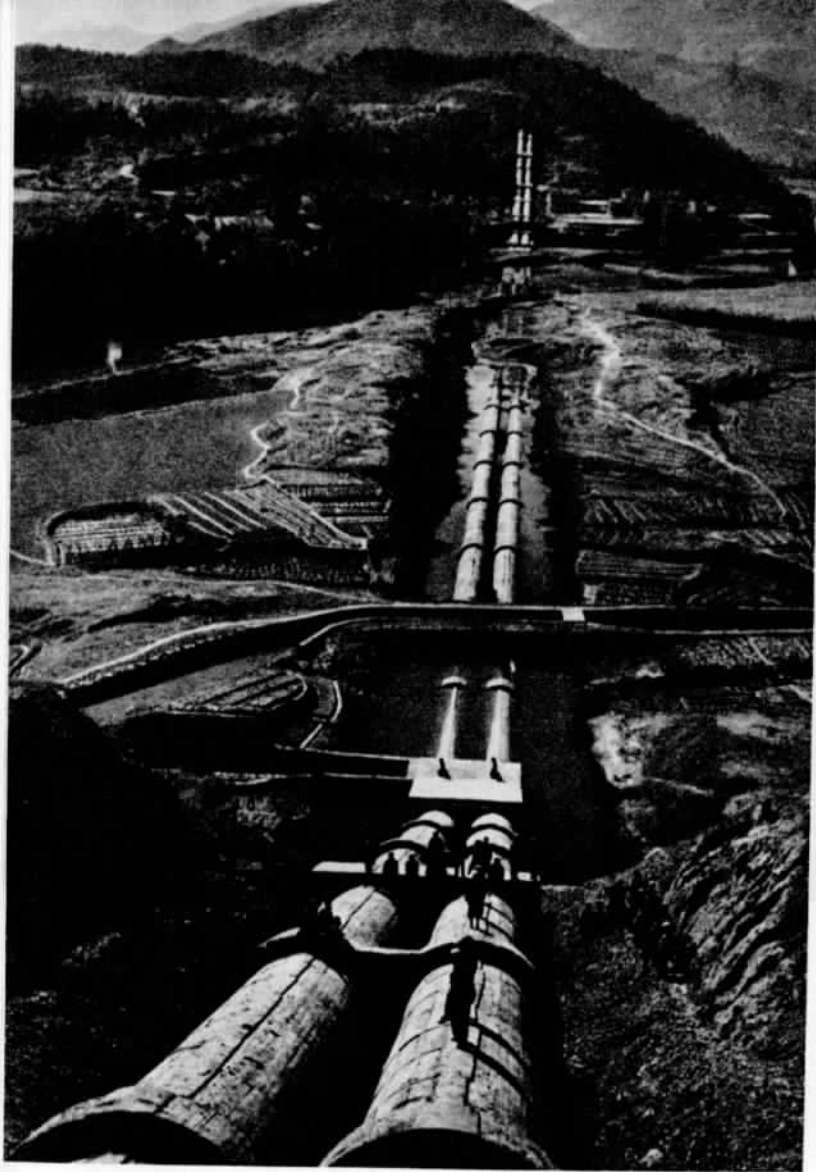
Another important reason for Renminbi's lasting stability is the state's centralized and unified management of the issuance of currency. Regulation of the release and recovery of currency is carried out in a planned way to keep it in normal circulation.

Eighty per cent of China's annual cash release is for payment of wages and purchase of farm and side-line produce. The release and recovery of this portion of the currency is arranged according to plan and kept in balance. The number of new workers and staff members to be recruited, the amount of wages and the supply of commodities are all planned. In determining the total amount of wages, the state takes into consideration its economic and financial capability beforehand and arranges the supply of commodities accordingly. In this way the currency released for wages is recovered through sales of consumer goods by the state-owned commercial departments. Similarly, to ensure the recovery of the currency that is released in the countryside through the purchase of farm and side-line produce and distribution of state appropriations and bank loans for agriculture, the state makes corresponding arrangements beforehand for the supply of consumer goods and means of agricultural production.

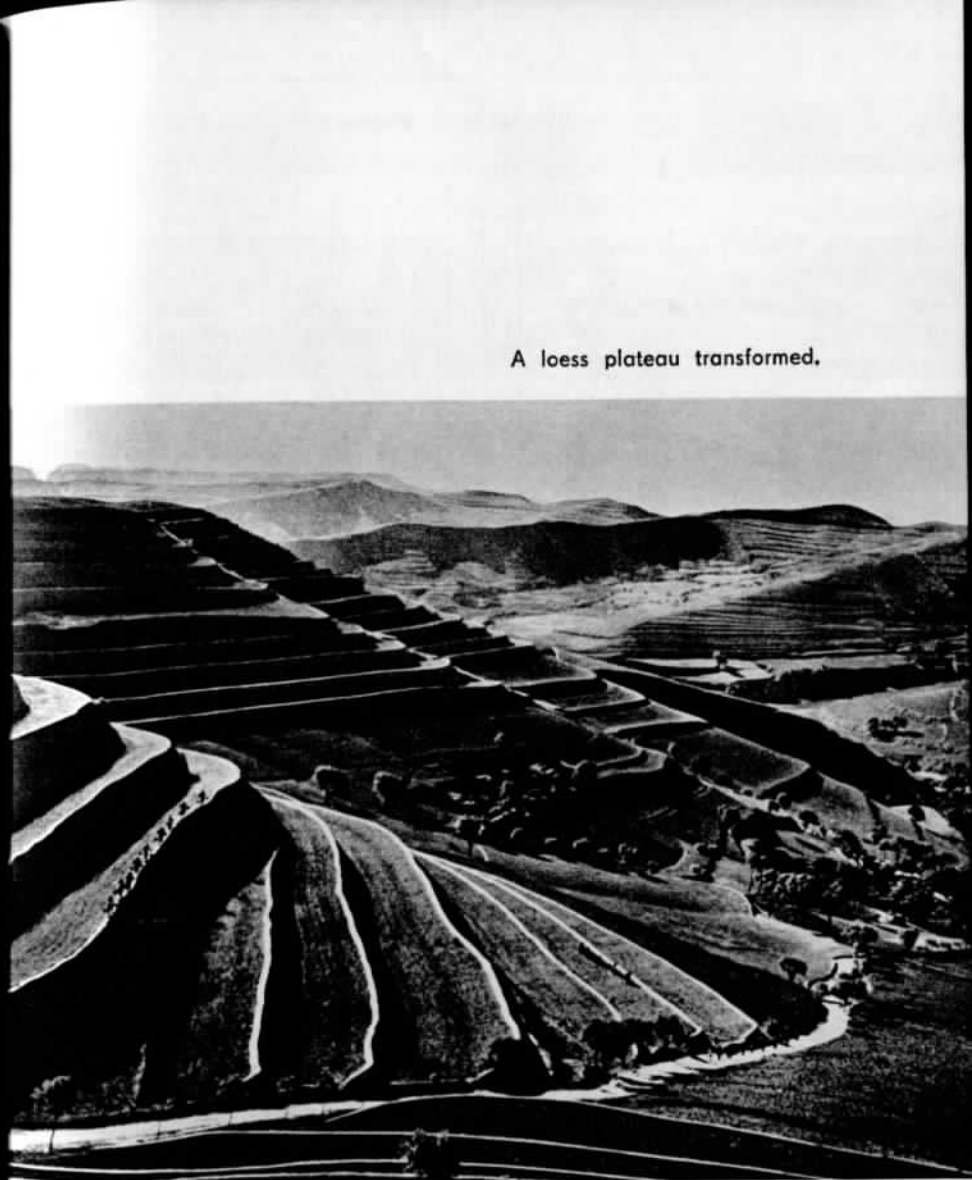
Renminbi is China's sole currency. Its issuance and management is controlled by the state bank, and no region or unit has the right to issue currency. To facilitate planned management of the circulation of currency, transfer and settlement of payments beyond a stipulated limit between all enterprises, government organs, organizations and army units must be effected through banks. Bank drafts of any sort are not negotiable on the market. Unlike in capitalist society, speculative dealings in drafts are non-existent in China.



A syphon project on the Haiho River.



Leading water uphill.



A loess plateau transformed.

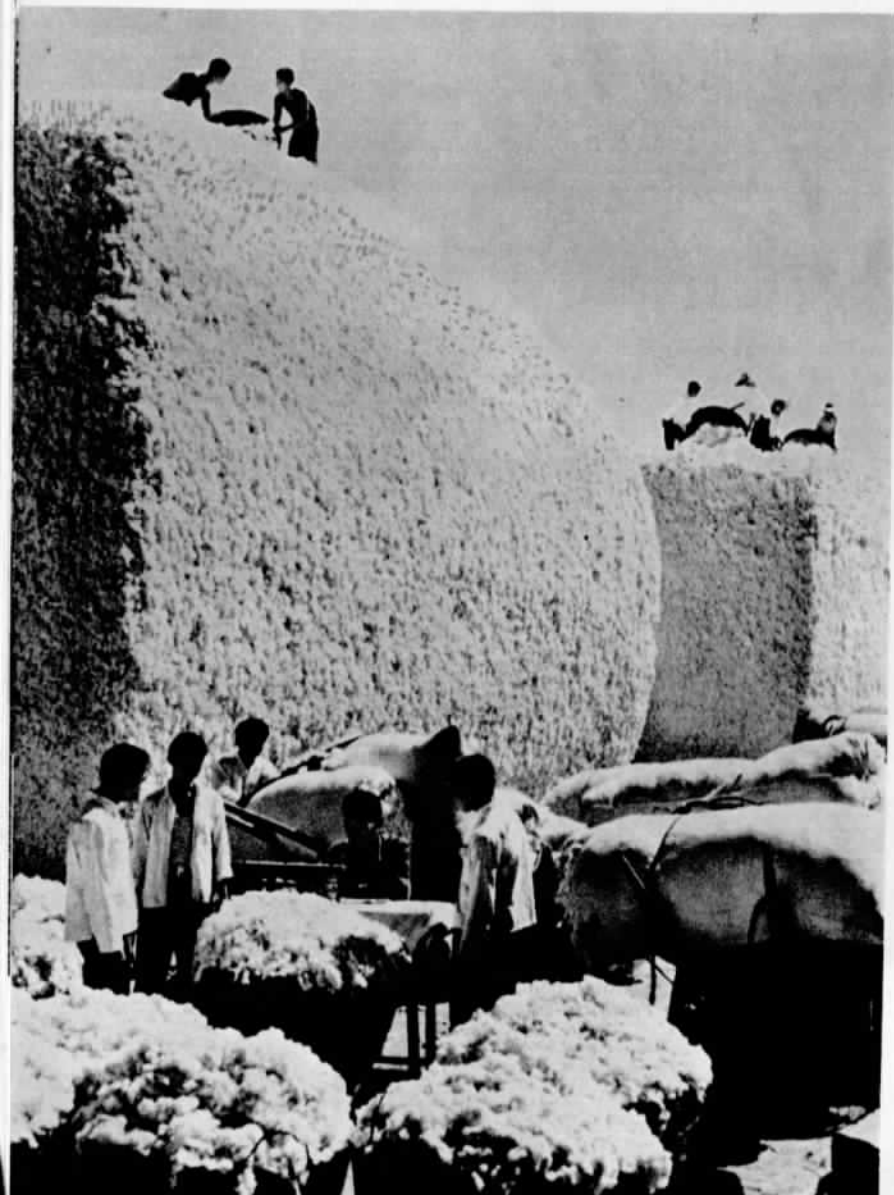


Tachai's re-arranged hills and streams.



Large-scale water conservancy work in Linchu County, Shantung Province, brings irrigation to many dry fields.

Delivering new cotton to state stores.



A rewarding wheat harvest follows experimental planting in cold areas of Tibet at 3,000-4,000 metres above sea level.



Bountiful grassland in southern Kansu Province.

Revolution in Education

POPULARIZATION of education, done on an immense scale, is one of the achievements made by new China since her birth. The numbers of students enrolled in primary and middle schools have increased by many times compared with pre-liberation years. Today some 90 per cent of China's school-age children are in school. The number of university graduates by the end of 1973 was 12.3 times the total trained in 20 years before liberation. Apart from higher educational institutes and primary and middle schools there are large numbers of factory-run workers' colleges, vocational schools, part-work-part-study schools and agricultural technical schools.

Old China's more than 80 per cent illiteracy rate is no more.

New China popularizes education by "walking on two legs." That is, in addition to schools run by the state, the communes and production brigades in the rural areas have established large numbers of primary and middle schools of their own with assistance from the government.

Teaching in these schools is geared to suit the characteristics of life in the farming and pastoral districts, and everything is done to make it possible for children to attend.

Education is not confined to schools. A great many workers, peasants, army men, office workers, salesclerks and neighbourhood residents are improving their educational level or studying revolutionary theories in all sorts of study organizations, such as short-term study classes and evening political schools, during their spare time or during part of their working hours. The whole society has become one big school.

The revolution in education, started during the Great Proletarian Cultural Revolution, is now going on throughout the country. What is being undertaken is the transformation of the old educational system together with its principles and teaching methods in the light of Chairman Mao's teachings: **Education must serve proletarian politics and be combined with productive labour and our educational policy must enable everyone who receives an education to develop morally, intellectually and physically and become a worker with both socialist consciousness and culture.**

Before the Cultural Revolution, Liu Shao-chi and his followers, who had usurped the leadership in the educational departments, worked in opposition to Chairman Mao's proletarian revolutionary line. School education was being conducted almost as it was before liberation or according to Soviet methods. The schools were dominated by bourgeois intellectuals and the graduates were estranged from workers and peasants as well as from reality and labour. The trend was towards the

creation of an intellectual elite and education becoming a tool for effecting capitalist restoration.

The revolution in education is concerned with the number of years in school, policies, teaching methods, teaching material, the enrolment system and the remoulding of teachers. Priority is given to the study of revolutionary theories so that teachers and students teach and study for the revolution, and serve the people wholeheartedly.

Before the Cultural Revolution, for a student to complete his education from primary school to university required 16 to 20 years. During these years the students were shut up in their classrooms and learned by rote. They had little idea how workers worked and peasants tilled. At graduation they still had no practice in working with their hands and lacked the feelings of workers and peasants, their heads being crammed with formulae and equations. Such students fell far short of the requirements of socialist revolution and construction.

Experimentation is now under way in completing the primary school course in five years, middle school in four to five years and the university course in two to three years. This means a cut of four to five years in schooling from primary school through university. But in this shorter period the students acquire more practical and theoretical knowledge than in the past. Superfluous subjects and redundant or useless teaching material are being discarded. More important is that the ideological education of students is strengthened and book-learning closely integrated with practical production. School education is no longer confined to the classroom. Primary and middle schools in town and country have established close links with nearby factories, people's communes

and army units. Where conditions permit, primary and middle schools have opened small workshops and farms and invited workers, peasants and armymen to serve as part-time teachers. The universities have instituted a new system of combining teaching with scientific research and productive labour; besides building up regular links with factories and people's communes, they run their own factories and farms. Liberal arts students, taking the whole of society as their factory, go to the workshops, villages and trading stores to make social surveys and to learn from society at large — from the workers, peasants and soldiers. By taking part in the three great revolutionary movements of class struggle, struggle for production and scientific experiment, they bring into full play the militant role of the liberal arts.

In this way the students, in the course of receiving education, make a useful contribution to society and create wealth for the state. What is more important, while working together with workers and peasants the students begin to understand and draw near to the labouring people and learn how to work in their service.

To achieve this integration, teachers and students go together to a factory, farm or people's commune to take part in collective labour for a given period in accordance with the teaching plan. Discussion meetings are held on the spot or, if they have returned to school, in the classroom, to analyze what they have learned and raise it to a theoretical level. The old method in which the teacher spoon-fed the students has been abolished. Under the new method every encouragement is given to develop the students' initiative and bring out to the full their eagerness to think things out independently. In the uni-

versities, lectures are printed and issued to the students in advance and the students can present their views before the class. Through discussions by the teacher and students, each makes up for the other's deficiencies, establishing between them a comradely relationship that is revolutionary, democratic and united.

In line with Chairman Mao's instruction that **the teaching material should be thoroughly transformed**, institutions of higher learning in China have over the past few years compiled no less than 10,000 kinds of teaching material. That for primary and middle schools has also been rewritten in the provinces, municipalities and autonomous regions. The new teaching material embodies Chairman Mao's thinking and line in educational revolution and gives prominence to the ideology of serving proletarian politics, socialist revolution and construction and the training of successors to the proletarian revolutionary cause.

The old examination procedure used exams like surprise attacks, as if the students were enemies. The test questions were either odd or stated in such a way as to perplex or worry the student. Now, an open-book examination system has generally been instituted in all schools and the test questions are announced beforehand. Students are allowed to refer to books and to discuss the problems among themselves. This procedure is designed to train and test the students' ability to analyze problems and solve them.

The university enrolment system has also been changed. As a rule, universities no longer take senior middle school students in their graduation year but instead select them from among outstanding young workers, peasants and

soldiers with two or more years of practical work behind them, on the recommendation by the masses and approval by the leadership of the locality or unit. Allowance is made with regard to age and educational level for veteran workers, poor and lower-middle peasants and revolutionary cadres who have rich practical experience. This does away with the "book knowledge first" criterion, which unfairly barred the labouring people and their sons and daughters from entering the universities.

With the working class taking the political centre-stage of the superstructure during the Cultural Revolution, workers' propaganda teams went into the universities and, under the unified leadership of Party committees there, provided guidance in political-ideological education, in this way altering fundamentally the former situation in which institutions of higher learning were dominated by bourgeois intellectuals. Schools in the rural districts are in the charge of the poor and lower-middle peasants. The workers and peasants, together with the revolutionary teachers and students, are carrying out Chairman Mao's instructions to transform education to meet the needs of the class struggle and of production and practice. This has brought an excellent situation in the revolution in education. A large number of workers, peasants and soldiers have become lecturers. Through tempering in the Cultural Revolution former teachers have likewise changed their mental outlook greatly, many of them making new contributions.

The educational revolution, which has already shown its great vitality, has achieved notable successes. The first batches of worker-peasant-soldier university students, enrolled during the Cultural Revolution, have

graduated or are about to. Highly conscious politically, they have a vocational level far above that of old university graduates. The first worker-peasant-soldier graduates of Tsinghua University, co-operating with several hundred factories and mines in a dozen provinces and municipalities, undertook more than 360 projects as their pre-graduation practice. One-third of the projects reached advanced Chinese standards and 80 per cent of them have been adopted in production.

After graduation, most Chinese middle school students go to the rural areas and become peasants. Others become workers or armymen and integrate with the labouring people. Eight million of these graduates who went to the countryside after the Cultural Revolution began have become a generation of new, educated peasants with socialist consciousness. They are making an important contribution to the building up of a socialist new countryside. Of far-reaching significance is their role in helping to sweep away the centuries-old exploiting-class ideas and customs of looking down on the peasantry and on labour, and also in gradually lessening the differences between workers and peasants, between town and country and between mental and manual work.

Though still in its experimental stage, the educational revolution has already achieved remarkable successes. It is aimed at preventing and opposing revisionism, training millions of successors to the proletarian revolutionary cause, speeding up socialist revolution and construction and ensuring that socialist China will not change its political colour. Spurred by the current movement to criticize Lin Biao and Confucius, the educational revolution is developing in depth and is bound to win still greater victories.

New Medical System

MARKED improvement in the health of China's close to 800 million population has been made by the People's Republic in her first quarter-century.

With the development of socialist construction and the strengthening of the collective economy of the people's communes, new China has established a medical system which serves the great majority of the people. Workers and staff of industrial and mining enterprises are provided free medical service under the Labour Insurance Regulations. Government staff and workers and college students also receive free medical care, and a co-operative medical service has been set up in the vast rural areas. In this way China has brought the security of reliable medical care to the broad masses of her people.

Smallpox, plague, cholera and venereal diseases, rampant in old China, were eliminated soon after liberation, while the incidence of other infectious diseases, local and occupational diseases has been greatly reduced or brought under strict control. With the rising living standards and growing medical service, the death rate has dropped

strikingly, and the average life span of the Chinese people is much longer.

In semi-colonial and semi-feudal China the people got little or no health care. Diseases were prevalent. Medical institutions were few, and most of them were located in the cities, available to only a small number of people. The peasants, the great majority of the Chinese people, had no access to doctors or medicine.

After the birth of new China, the Communist Party and the People's Government laid down the principles for medical and health work serving the workers, peasants and soldiers, putting prevention first, bringing together doctors of traditional Chinese and Western schools, and linking medical and health work with mass movements. Foremost attention has been paid to educating medical and health workers in the spirit of wholehearted service to the great majority of the people.

Over 80 per cent of China's population is rural, so putting the medical and health work at the service of the majority of the people would be no more than an empty slogan if it failed to serve the peasants. In 1965 Chairman Mao issued the call: **in medical and health work, put the stress on the rural areas**, reaffirming the revolutionary line of serving the workers, peasants and soldiers, the great majority of the people. This call is the fundamental principle and important content of the revolution in health work. During the Great Proletarian Cultural Revolution and the movement to criticize Lin Biao and Confucius, medical and health workers along with the masses of the people sharply repudiated the revisionist line pushed by Liu Shao-chi and Lin Biao which laid the stress on the cities at the expense of the countryside,

ignored the prevention and treatment of and research into the common, recurrent diseases among the working people and made medical facilities available to a few people only. Criticizing this wrong line has made it possible for the principle of providing medical care for the great majority of the people to be firmly carried out and for tremendous changes to be effected in rural medical and health work. "Barefoot doctors" have come into existence and multiplied, and co-operative medical service has spread to every corner of the country.

Co-operative medical service is a new system carried out by the peasants themselves on a collective and mutual-aid basis. Commune members pay a small sum into the co-operative medical fund, generally one yuan (about half a U.S. dollar) per person annually, receiving in return free general medical care. For more serious cases requiring transfer to hospitals above people's commune level, the co-operative medical fund covers part or all of the medical costs. "Barefoot doctors," trained to treat and prevent common, recurrent diseases among the peasants, are selected from among the peasants and middle school graduates who settle in the villages and are well acquainted with rural conditions. As part-time doctors, they work alongside the peasants in the fields. China's "barefoot doctors," now numbering over a million, together with three million part-time health workers and midwives in the villages constitute a mighty contingent of grass-roots medical workers serving the vast rural areas, and the regular or technical training they receive is provided by the commune health centres, county hospitals, anti-epidemic stations and visiting urban medical workers.

Since the Cultural Revolution began many city medical workers have settled in the rural areas or periodically made rounds of the villages. In medical education, priority is also given to the rural areas in enrolling students in the medical schools and colleges, posting their graduates and giving in-service training to medical personnel. The prevention and treatment of common, recurrent diseases and their basic theories have become one of the main subjects in China's medical research. The state pays special attention to improving rural medical service, providing material and financial aid and producing more medicine, medical apparatus and biological products suited to the needs of the countryside. Medicine prices have also been reduced by wide margins, averaging only a fifth what they were in the early post-liberation period. Before liberation most medicines, medical apparatus and biological products were imported. Today all these are domestically produced in sufficient quantities to meet home requirements, and many items in sufficient quantities for export.

Hospitals have been set up in all counties; health centres, in the people's communes; clinics, in the production brigades. This network of grass-roots medical and health institutions is being expanded and consolidated in China's vast rural areas.

By the end of 1973 the number of the country's hospital beds was more than 20 times that before liberation. The number of highly qualified medical personnel trained since the founding of new China is some 27 times that in the 20 pre-liberation years. The hospital beds and personnel in the county-run medical institutions, or levels below, account for more than half of the national totals.

Medical and health work in industrial and mining areas and cities has also steadily improved. Working conditions in industrial and mining enterprises have greatly improved and measures for labour protection have been strengthened. In addition to receiving free medical care the workers and staff benefit from state-financed labour insurance. Their dependents are reimbursed for half of their medical bills. Workers' hospitals are run in industrial and mining districts and in large factories and mines. Medium and small factories and mines have their own clinics. Institutes for research in preventing and treating occupational diseases and sanatoria for industrial workers operate in some provinces and municipalities. Urban hospitals have steadily advanced medical service and disease prevention in their districts so as to serve the workers and local residents better.

In recent years, in accordance with the needs of the planned, proportionate development of the national socialist economy, vigorous efforts have been made to popularize family planning, and this has shown good results.

In the thinly populated minority nationality areas the People's Government has taken appropriate measures to encourage population growth. The Mongolian population in the Inner Mongolia Autonomous Region, for example, has increased by over 100 per cent since liberation. The state pays special attention to the protection of women's and children's health. The health of Chinese women has greatly improved in the 25 years since liberation and women have become an important force in industrial and agricultural production. New China's

children are heavier and taller than those of pre-liberation days.

The patriotic mass health campaign initiated by Chairman Mao himself has become the common regular work not only of the medical and health departments but of everyone. The masses of the people have been mobilized in the campaign to combat diseases and insanitary habits and to wipe out the "four pests" (mosquitoes, flies, bedbugs and rats). The campaign, launched from time to time since liberation, encourages the revolutionary spirit of the people, helping them to change old, undesirable customs and habits and to transform nature. It makes sanitary habits public practice, greatly reducing the number of disease-carrying agents and radically cutting down disease incidence. To eliminate snail fever (schistosomiasis), a parasitic disease once rampant over vast areas south of the Yangtze River and doing tremendous harm to the population, the People's Government mobilized the masses to wipe out snails, the disease-carrying agent. This was done by destroying snail breeding grounds while cutting new irrigation channels and by improving the management of water sources and the disposal of human and animal waste. At the same time, corps of medical workers were organized to give effective treatment to snail fever patients. Today the disease is controlled, areas where odd cases of snail fever still crop up being rapidly reduced. The patriotic health campaign has given great impetus to the work of safeguarding the people's health by preventing and wiping out disease.

The combination of traditional Chinese medicine with Western medicine is advancing medical science and technique in China. Through this combination,

traditional Chinese medicine and pharmacology with a history of several thousand years have gained wide application and fuller development. Acupuncture anaesthesia, a new method of anaesthetization, was worked out by using modern scientific methods to study and sum up practical work in traditional Chinese medicine, and has already found wide application. Analgesia, obtained by inserting one or more needles at a certain point or points on the body, permits operative procedure while the patient is fully conscious. This method ensures safe surgery on many parts of the body without the side-effects produced by drug anaesthetics. For patients with poor liver, kidney or lung function, or those seriously ill, debilitated or prone to shock or hypersensitivity to anaesthetics, acupuncture anaesthesia is often preferred. Similarly, by combining the methods of traditional and Western medicine, successes have been achieved in shortening the healing time in bone fractures, in non-surgical treatment of acute abdominal conditions, in curing a serious burn case affecting 98 per cent of the body area (88 per cent of which were third degree burns), in dealing with difficult cases of rejoining severed limbs and fingers, and in autoplasmic transplantation of a severed limb. These achievements open up a wide vista for still greater advances in Chinese medical science and technique.

Minority Nationalities — Now and Before

IN the quarter-century since the birth of new China the minority nationalities living in remote border areas have crossed into socialist society directly from feudal or slave society or even one with traces of primitive communes, covering a course which might have taken them one or several centuries to complete. The minority nationality regions are thriving, as are those peopled mainly by the Han nationality.

China adheres to a policy of equality for all nationalities. The people of all 55 nationalities, big or small, help one another and co-operate to achieve a common progress. This has radically changed the picture in pre-liberation days when the people of all nationalities were subjected to ruthless exploitation and oppression by the imperialists, Kuomintang reactionaries and local ruling classes.

The Tulung nationality, one of China's smallest, used to lead a primitive life in the Tulung River valley in southwest China's Kaolikung Mountains. Today they enjoy a happy life in a people's commune under socialism. They have abolished the slash-and-burn farming method and made marked progress in agriculture. In sharp

contrast with the days when they kept records by tying knots and carving signs on wood, the Tulung people have primary schools and a middle school staffed by their own teachers. Without a single doctor, they begged for the mercy of gods when they fell ill in the old days. Today there is a co-operative medical service in every production brigade and a clinic in the commune. The state sent them doctors and medicines, and everybody receives free medical care.

Discriminating against minority nationalities, the Kuomintang reactionaries treated the Tulung people as savages. Today the people of Tulung and all other nationalities are masters of the country and take part in managing state affairs on an equal footing. Representatives of minority peoples hold leading posts in Party and state organs and some are members of the Political Bureau of the Party Central Committee, members of the Party Central Committee, secretaries of Party committees of provinces and autonomous regions, and vice-chairmen of the Standing Committee of the National People's Congress, the supreme organ of state power. More than 14 per cent of the deputies to the successive National People's Congresses have come from minority nationality peoples, who account for only six per cent of the country's population.

The minority peoples enjoy the right to manage affairs concerning their respective nationalities in areas where they live in compact community. In other words, they have the right to national regional autonomy. In China there are now five autonomous regions equivalent to provinces, 29 autonomous *chou* or leagues equivalent to administrative regions, each covering a number of coun-

ties, and 69 autonomous counties or banners. The five autonomous regions are the Inner Mongolia Autonomous Region, the Sinkiang Uighur Autonomous Region, the Kwangsi Chuang Autonomous Region, the Ningsia Hui Autonomous Region and the Tibet Autonomous Region. The autonomous organs at all levels exercise certain rights of self-government under the centralized, unified leadership of the Central People's Government. This means they are entitled to manage local finances within the scope prescribed by law and enact specific rules and regulations according to the political, economic and cultural characteristics of their own nationalities.

The minority nationality people distributed over various other parts of China enjoy the same democratic rights as the local inhabitants and receive special consideration for their living, customs and habits.

New China pays much attention to selecting and training cadres from among minority nationalities. In the Sinkiang Uighur Autonomous Region there are now some 84,000 cadres from the Uighur and other minority nationalities, more than 20 times the early post-liberation figure. Women account for 19 per cent of the total. In the Inner Mongolia Autonomous Region, cadres of minority nationalities numbered some 20,000 in 1973, and many held leading posts on Party committees and revolutionary committees in leagues, municipalities and banners.

After the birth of new China the People's Government led the people of all minority nationalities in carrying out democratic reform and socialist transformation. The socialist system was established and productive forces were emancipated, opening up wide avenues for the

minority peoples to proceed with socialist economic construction. Modern industry went up and agriculture and animal husbandry made much headway throughout the minority areas — a far cry from their days of backward farming and livestock breeding and the total absence of industry. Communication and transport facilities were improved greatly in outlying or secluded areas. Now the people's living standards are rising; the market is thriving.

After the democratic reform of 1959 in Tibet which overthrew feudal serfdom, one of the darkest and most barbarous systems in history, a million serfs embarked on the road of collectivization. People's communes were set up in most pastoral and farming areas. In the spirit of hard work and self-reliance, the emancipated serfs and slaves developed production quickly by improving the natural conditions and introducing scientific farming. Winter wheat and paddy rice are being planted extensively and giving good yields on the Tibetan Plateau, once considered unsuitable for their cultivation. Both the total grain output and number of livestock in Tibet in 1973 were more than double those of 1958, the year before the democratic reform started. The region now boasts of some 200 small and medium industrial enterprises, including coal mining, power generation, cement, farm tools, tanning, woollen textiles, motor vehicle repairs, timber processing and sugar refining. An increasing number of former serfs and slaves are joining the ranks of the working class. Tibetan workers and staff now account for more than 46 per cent of the total.

In northeast China, the Olunchun people, one of China's smallest nationalities, used to be hunters in dense forests of the Greater and Lesser Khingan Mountains in northeast

Heilungkiang Province, wearing animal skins, sleeping under birch bark and warming themselves by campfires. They have now settled down in village houses built with state assistance and developed agriculture. Their population has increased to 2,700, doubling the early post-liberation figure.

Some minority peoples who once kept records by tying knots in rope or had no language of their own have now created written languages for themselves with state aid. Books, newspapers and periodicals are published in great quantities in the Mongolian, Tibetan and other minority languages. Institutes for nationalities and universities and colleges have been set up in leading minority nationality areas. Each nationality, however small, has its own college graduates. The Tibet Autonomous Region now has an institute for nationalities, a teachers' school, seven middle schools and over 2,500 primary schools.

Before liberation, rampant diseases decimated the population of some minority peoples. Now hospitals and clinics have been set up in counties and communes. Mobile medical teams from major cities make regular rounds of minority areas. In Tibet, free medical care is enjoyed by the people throughout the region. Better health has resulted in a steady growth of minority populations. Since liberation the population of Mongolians has increased by 3.27 times, Uighurs in Sinkiang by 42 per cent, and Tibetans by 200,000.

The Kuomintang reactionaries carried out a policy of discrimination against minority nationalities and, in collusion with imperialism, bled their areas white, causing their backwardness. After the founding of new China, the People's Government gave special attention and

assistance to the economic and cultural development in the minority areas to promote a faster rate of progress there than in predominantly Han-populated areas. A series of policies and measures were adopted towards that end, including greater investments in construction, financial subsidies, tax reduction or exemption, provision of large quantities of supplies and specially needed commodities. Skilled workers, experienced farmers, doctors and teachers were sent to the minority areas. State investments and financial subsidies for the Inner Mongolia Autonomous Region totalled 9,320 million yuan over the past 25 years. Financial subsidies to the Tibet Autonomous Region have covered the greater part of its expenditure since 1960.

The tremendous changes in the minority areas have been effected by the people of all nationalities who, guided by Chairman Mao's proletarian revolutionary line, have united with and helped one another and brought their socialist initiative into full play in an arduous struggle to build up the country.



Students at Tsinghua University in their chemistry laboratory.



China's Tai nationality people have their own doctors,



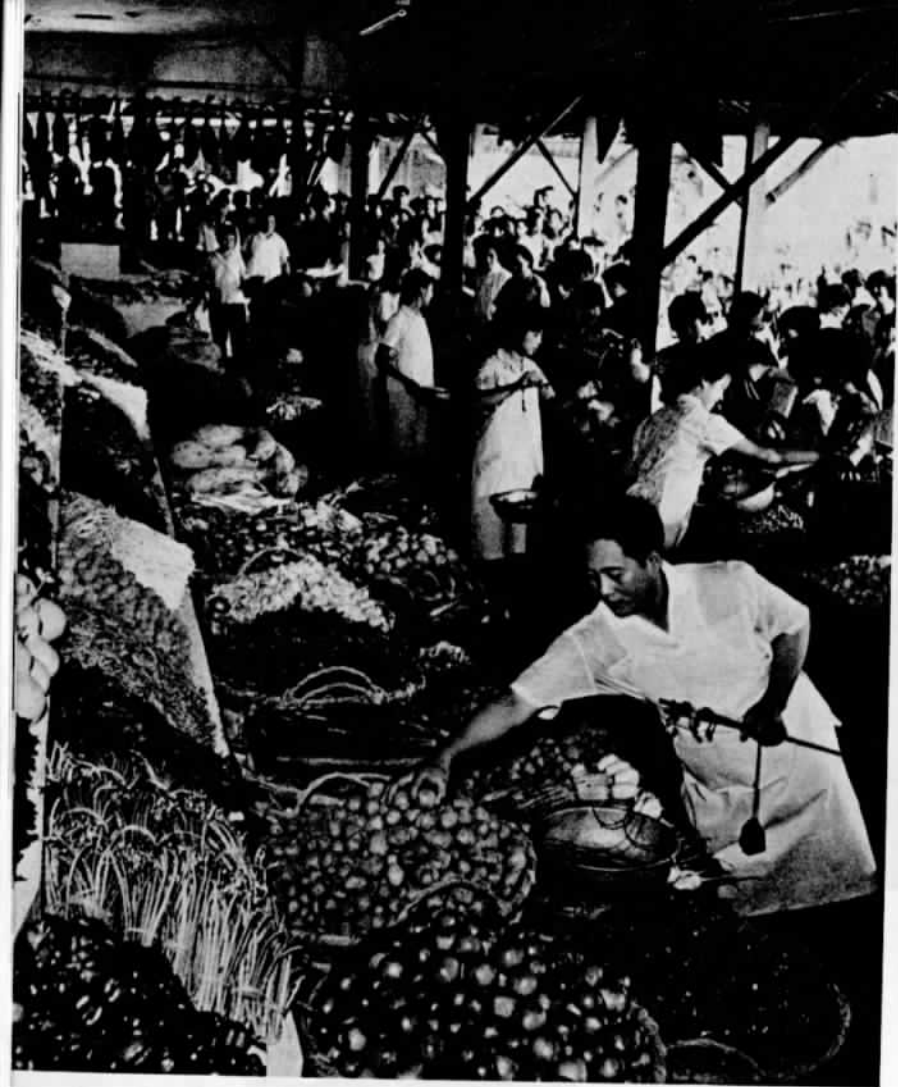
Minority nationality people denied education for generations now have easy access to it.



Women's perforating team at the Taching Oilfield.



Happy children in a tug-of-war.



China's vegetable markets are well stocked.

Rural basket-work.





A workers' sanatorium in Liaoning Province.

Women in Socialist New China

WOMEN carry half of heaven on their shoulders" is a saying popular in China in describing the role played by Chinese women in socialist revolution and construction.

Over the past 25 years the masses of Chinese women have contributed their share alongside the men in transforming a semi-feudal, semi-colonial old China into a socialist country with initial prosperity.

Women make up half of China's population. A considerable number of outstanding women came to the fore during the various historical periods of the national-democratic revolution and socialist revolution, in the course of the revolutionary wars and other revolutionary struggles. For example, quite a number of advanced women were in the ranks of the famous 12,500-km. Long March made by the Chinese Workers' and Peasants' Red Army in 1934-35.

Since the founding of new China, large numbers of women cadres have been brought up by the Communist Party and the People's Government. Many women of outstanding ability are emerging as never before in socialist revolution and construction. Large numbers of

advanced women have been admitted into the Communist Party. Women made up 20 per cent of the delegates to the Tenth National Congress of the Chinese Communist Party held in 1973 and 12 per cent of the members and alternate members of the Tenth Party Central Committee.

Today, many outstanding women hold leading posts in organizations ranging from the Party and government's central and local bodies down to factories, communes, stores and schools. Textile worker Wu Kuei-hsien, who courageously rallied and led the masses in combating revisionism in the Great Proletarian Cultural Revolution, is now an alternate member of the Party Central Political Bureau and Vice-Premier of the State Council. Women members of the Party Central Committee include Wei Feng-ying, an engineer trained from among the ranks of punch operators; Li Su-wen, a former grocery saleswoman; Pasang, an emancipated Tibetan serf; Pao-jihletai, a Mongolian cadre of a pastoral area whose unit is cited for outstanding work; Lu Yu-lan and Hsing Yentzu, outstanding educated youth who settled in rural areas to build a socialist new countryside. Among the alternate members of the Party Central Committee are airwoman Chu Hui-fen, deputy political commissar of the General Administration of Civil Aviation of China; Yang Po-lan, an advanced textile worker, and Kao Shu-lan, a gas welder. Most of them have been elected Vice-Chairman or members of the Standing Committee of the Fourth National People's Congress.

Working women suffered grievously in old China. Not only were they, like the men, exploited and oppressed under foreign imperialist and domestic reactionary rule, but they were also made to suffer from the 2,000-year-old Confucian-Mencian ideology that "men are superior to

women." They were deprived of the right to take part in political and social activities, even in certain fields of productive work. In the home, dominated by the clan authority and the authority of the husband, they were in a degraded position. Their marriages were arbitrarily arranged by their parents and they could be bought and sold like commodities.

The oppression of working women is primarily class oppression inasmuch as inequality between the sexes stems from class inequality.

When the People's Republic was founded in 1949 Chairman Mao called on the women of the whole country: **Unite and take part in production and political activity to improve the economic and political status of women.** The Party and the People's Government, in the state constitution, laws and a series of policies, ensure and promote women's equal rights with men in political, economic, cultural, social and family life. For instance, the Marriage Law promulgated in 1950 abolished the feudal marriage system based on arbitrary and compulsory arrangements and put into effect a system of freedom of marriage. The Labour Insurance Regulations issued in 1951 carry special provisions to safeguard the interests of women and children. Again, the Decisions on the Development of Agricultural Producers' Co-operatives adopted by the Party Central Committee in 1953 stipulate: "Equal pay for equal work should be the rule for both men and women, based on the amount and quality of their work. . . . However, in the assignment of work, it is necessary to give due consideration to the special physiological difficulties of women." The Electoral Law promulgated in the same year states: "Women shall have the

right to elect and to be elected on equal terms with men."

With the rapid development of the socialist economic and cultural construction, more and more women are taking part in productive labour as well as in political and cultural activities, and more types of work steadily open for them. Housewives by their collective strength make a considerable contribution to socialist construction by setting up various kinds of neighbourhood factories turning out many useful products including such advanced items as equipment for the electronics industry. The No. 1 Transistor Equipment Factory set up by housewives in the western district of Peking is producing automatically-controlled diffusion furnaces for over a score of provinces, municipalities and autonomous regions in the country. While creating material wealth for society, Chinese women change their economic subordination and mental outlook.

Times have changed, and today men and women are equal. Whatever men comrades can accomplish, women comrades can too. This teaching of Chairman Mao's has been a profound education to the people of new China and tremendously encouraged Chinese women. Large numbers of women now work in the spheres of industry, agriculture, culture, education, science and health -- in all fields and every kind of work except that unsuited for women physically. All services and trades open their doors to women, and discrimination against them is impermissible.

At the Taching Oilfield, national pacesetter in industry, there are large numbers of women workers, cadres and technicians doing extraction, refining and other jobs. Displaying the revolutionary spirit of self-reliance and hard

struggle like the men, they have contributed to opening and running the oilfield. An oil extraction team of young women formed in September 1970 is known for its outstanding work as "The Iron Girls' Team."

Women make up 20 per cent of the workers and staff at the February 7 Rolling Stock Plant in Peking. It had practically no women workers before liberation. The women workers there do all kinds of work and are found among the leading cadres in units from the plant Party committee down to the workshops, teams and shifts.

Women account for half the farm work done each year in Shansi's Tachai Production Brigade, national pacesetter in agriculture. Outstanding among them is Kuo Feng-lien, former leader of Tachai's "Iron Girls' Team" formed in 1963 and now secretary of the brigade Party branch. Her team worked hard together with the men on Tachai's Tiger Head Hill and transformed its rugged, pitted slopes into terraced fields that give high, stable yields. The women's team also played an active role in wresting a good harvest in 1973 after a 17-month-long drought.

On the well-known Red Flag Canal project in Linhsien County, Honan Province, women alongside men took part in blasting cliffs, driving tunnels and building bridges, hewing out a waterway on the rugged Taihang Mountains.

More than a fifth of the country's medical personnel are women. There is in addition a large contingent of women "barefoot doctors," a new entity of the Cultural Revolution which began in 1966. Almost all medical personnel in maternity and child care work in villages and factories are women.

To protect women's health and help free them from household drudgery there have been set up in growing

numbers in various parts of the country community dining rooms, nurseries, kindergartens, maternity and child care organizations. In family life, it is encouraged that men and women share the housework equally so that women can take equal part in political and productive activity.

The millions of working women in China are now taking an active part in the movement to criticize Lin Piao and Confucius, condemning the contempt for women and girls and other exploiting-class ideas of Confucius and Mencius. This is of far-reaching significance to the thorough emancipation of Chinese women.

Changes at the Anshan Iron and Steel Company

GUIDED by the brilliant **Charter of the Anshan Iron and Steel Company** as promulgated on the recommendation of Chairman Mao, this largest of China's iron and steel complexes has been making significant progress along the socialist road and ever greater contributions to the country's socialist revolution and construction.

In the Cultural Revolution Anshan's workers and cadres, conscientiously implementing the Charter, launched a movement to learn from Taching. With Marxism-Leninism-Mao Tsetung Thought as ideological weapon, they criticize the bourgeoisie, revisionism and the thinking of all exploiting classes. A greater revolutionary enthusiasm has brought about much change in the over-all appearance of the enterprise and steady improvement in production technique. Outputs of steel, rolled steel, pig iron and iron ore in 1973 were 37-90 per cent more than in 1965, or 57-124 times those of 1949. Production capacity was further raised in 1974. In the last few years the company produced about 100 new varieties of steel and 1,000 new varieties of rolled steel, filling blanks in the country's metallurgical industry. The funds

accumulated over the years are sufficient to build another iron and steel complex of Anshan's size.

Keeping to the Correct Orientation

Influenced by the revisionist line before the Cultural Revolution, certain leading personnel in some of the company's plants or mines focussed attention on the material aspect and neglected the human factor. Stressing production, they failed to grasp class struggle and struggle between the two lines, consequently leading the enterprise along a wrong path for a time. Through revolutionary criticism and struggle during the Cultural Revolution the cadres and workers came to see that only with the Party's basic line as guide and a firm grasp of class and two-line struggles, and with revolution commanding production, could the enterprise advance along the road of socialism and production develop rapidly.

Personal experience has impressed this fact on the workers and staff members of the medium rolling mill, which is 40 years old. After liberation production was quickly restored. Later, Liu Shao-chi's counter-revolutionary revisionist line led some of the mill's leaders astray. They put production first and used material incentives and the red tape of "one-man management" to tie the hands of the masses, so that production slowed down. During the Great Leap Forward in 1958, the mill, guided by Chairman Mao's revolutionary line, persisted in placing proletarian politics in command, strengthened the Party's leadership, relied wholeheartedly on the workers and mobilized their socialist initiative and creativeness. The result was that the output of rolled steel

increased each year. But the interference and sabotage by Liu Shao-chi and his agents were not over and again in the early 60s caused the enterprise to swing somewhat off its socialist orientation. The masses' revolutionary enthusiasm was dampened, resulting in a drop of more than 50 per cent in the output of rolled steel.

During the Cultural Revolution the masses repudiated this revisionist line, denounced Liu Shao-chi, Lin Biao and their followers for their crimes opposing the **Charter of the Anshan Iron and Steel Company**, undermining socialist construction and attempting to restore capitalism. Production made new headway and the 1971 output of rolled steel was 2.4 times that of 1965, creating a record. The mill's experience of both successes and failures taught its leadership that the development of production depends entirely on following Chairman Mao's revolutionary line and putting proletarian politics in command.

A few leading cadres at the company's Kungchangling Iron Mine for a time had their eyes only on the efficiency of the perforator, electric shovel and mine car when they went up the hill to the mine. When they came back down they rushed to the controller's office to check the output on the work chart. This style of work resulted in a falling off in production. These leading cadres were sharply criticized by the experienced workers. The Party committee called a special meeting to study Chairman Mao's relevant instructions and sum up the lessons drawn from their experience before the Cultural Revolution when they concentrated only on production and forgot line struggle. With their consciousness raised, leading Party committee members went to selected spots at the grass-roots to investigate conditions and make changes in units

which had lagged behind. The dressing plant and Ling-tung Mine were two that definitely had problems. The Party cadres started their work there by grasping class and line struggles, arousing the masses to launch revolutionary criticism and expose bad elements and wrong things, and to struggle against class enemies. At the same time they supported the masses in their revolutionary spirit of fighting the wrong line, which stimulated their initiative in grasping revolution and promoting production. The backwardness of these two units quickly gave way to progress. As the Party committee promptly spread this experience, a lively situation of "grasping line struggle as the key link to speed up production" arose throughout the mine. Encouraged by this success, the committee members were more than ever impressed with the importance of grasping line struggle and carrying out education in ideological and political line. These were made main items on their agenda, which they constantly studied and adhered to. They also launched rectification campaigns at regular intervals to hear the masses' views, mobilizing them to be on the look-out for any deviation from the correct line, all of which helped in promoting revolution and steady development of production in the entire mine.

Good Results of the Mass Movement

In 1970, having made full investigation and study, Anshan's workers and cadres had evolved an over-all plan for transforming their enterprise and developing production. To realize their plan, the company's Party organizations at all levels, relying on the masses and launching

mass movements, succeeded stage by stage in technical innovation and transformation.

The First Blooming Mill, over half a century old, had been considered by some as already "set" and impossible to transform. The mill's Party committee recalled the Great Leap Forward of 1958 when the launching of mass movements had stimulated the renovation of equipment and technological changes which resulted in production continuously expanding. The wrong, "set" concept was scrapped. The masses then made suggestions and submitted ideas for improving some principal equipment such as the soaker, blooming mill and continuous mill. In the past few years this half-century-old plant has seen 510 technical innovations, 220 sets of old equipment renovated and 55 new sets built — all by the plant itself. Its production capacity was greatly raised. In each of the three years beginning from 1971 its quota for the state plan was overfulfilled, output in 1973 rising to six times its original designed capacity.

The Anshan Municipal Party Committee summed up and spread the First Blooming Mill's success in tapping the production potential of an old mill through mass movement, and a vigorous drive to transform the entire Anshan Company was soon under way. Some leading cadres of the First Steel Smelting Mill, which had far exceeded its designed capacity during the Great Leap Forward, in 1971 claimed that the potential of this old mill with its outdated equipment had been fully tapped. To further raise its output would require state funds for additional workshops and equipment, they said. Sitting in their offices they went on to work out a renovation plan, which however, due to its heavy demands for

investment and equipment, remained for a long time simply on paper. After the workers criticized these leaders for not trusting the masses, the mill's Party committee organized about a dozen teams of leaders, workers and technical personnel. These "three-in-one" teams mobilized the masses for united effort in tackling the difficult technological problems of increased charging, quick smelting and protecting the furnace body. Without affecting normal production, the workers rebuilt three open-hearth furnaces and built and installed three large steel-casting machines and three chargers during the major overhaul. Using only money budgeted by the plant for overhaul expense, they did what had been considered by some as impossible and greatly increased steel output. They followed up by rebuilding the old mill by mass effort so that its steel output doubled the original designed capacity. By mobilizing the masses and undertaking technical transformation, the Second Steel Smelting Mill, the East Anshan Iron Ore Mine, the General Sintering Plant, the Second Blooming Mill and the steel wire rope mill all raised their production capacity substantially.

Some people at the Anshan Iron and Steel Company used to regard imported equipment as sacred and untouchable. The workers were not allowed to modify it in any way. During the Great Leap Forward the workers had responded to Chairman Mao's call to break through the cobwebs of blind faith and free their minds. They went in for technical innovation on a large number of imported machines and increased productivity by several hundred per cent. During the Cultural Revolution the workers and cadres criticized the "philosophy of worshipping everything foreign," the "doctrine of crawling along at a snail's pace," and other revisionist bilge. The result was an

upsurge in further transforming foreign equipment. The seamless tubing mill, built in China's First Five-Year Plan period, increased its production capacity by 150 per cent and varieties and specifications of products by more than ten times, after several years of joint effort by workers and staff in remaking the principal machines. Innovations in six processes including crushing, ball grinding and flotation in the flotation workshop of the East Anshan Sintering Plant resulted in a considerable increase in production. From 1971 this plant has overfulfilled the state plan every year. The output of concentrated iron ore in 1973 was 38 per cent above the 1965 figure.

The Anshan Iron and Steel Company's Party organizations at various levels also launched mass movements for undertaking new projects. Chita Hill, only ten kms away and having rich deposits of iron ore, had been worked for many years by a few people, spending tens of millions of yuan without getting any ore. That was before the Cultural Revolution and under the influence of Liu Shao-chi's revisionist line. With the establishment of the Anshan Municipal Revolutionary Committee the entire city's efforts were focussed on exploiting these deposits and within a year they overcame the difficulties and had practically completed the construction of a large mine within a year, following up by building 16 major projects including blast furnaces and oxygen-making machines. All this demonstrated the power of the mass movement.

Supporting All Parts of the Country

The Cultural Revolution has extended the vision of the Anshan workers. Having in mind the interests of the

entire country, they keep firmly to the Charter of the Anshan Company. Taking the fulfilment of the country's construction needs as their glorious task they go on making new contributions.

In March 1974 the state placed an urgent order for steel pile plates for use in a certain harbour. The job of making these non-corroding plates of high tensile strength involved smelting and rolling that were considered difficult. Some thought they couldn't do it. The workers thought differently, however, and said that no matter what the difficulties they would deliver the plates according to specifications. The steel smelting mill workers studied Chairman Mao's teaching: **We should encourage comrades to take the interests of the whole into account** as they undertook the task, overcoming such problems as sticky slag formation, long smelting periods and furnace body corrosion, working throughout at extremely high temperatures. They succeeded in achieving good quality and high speed. The First Blooming Mill workers set up a "three-in-one" team to crack the hard technological nuts of soaking, rolling and finishing. They studied and improved a number of technological processes, raising rolling efficiency and fulfilling the task ahead of time. The heavy rolling mill completed the last process of the steel pile plates. The workers then organized a team to go three times to the harbour, quite a distance away, to learn the opinions of the users, then improved the plate pass and the method of making the plates. The harbour workers were satisfied with the product.

At another time the state urgently needed four thin-walled rust-proof steel tubes. To do this rush work outside its own plan for only four 2-kg. tubes, the seamless

steel tubing mill had to assign special personnel to design and make the pass, mobilizing workers and technical personnel from five workshops to handle an additional dozen processes. When the four thin-walled rust-proof steel tubes were finished after seven days and nights of intense work, they were delivered by special messenger to the place where they were urgently needed.

The Anshan Iron and Steel Company has also taken the initiative of helping other similar complexes to solve problems. In 1970 a big fan in the sintering plant of the Paotow Iron and Steel Company broke down. When Anshan's General Sintering Plant was asked to help, it had just finished repairing its only fan and was going to install it on their No. 4 sintering machine. Should they offer it to Paotow? The workers said, "Better inconvenience ourselves than leave a brother plant in difficulty. We'll send this big fan to Paotow." The Party committee agreed, and a revolutionary committee cadre went with some workers, delivering the fan and installing it. The workers at the Paotow plant were greatly inspired.

In the past ten years or so over 70,000 workers, cadres and technical personnel have gone from Anshan to other places to help in construction while orders for equipment have been filled and sent for installation in other establishments.

Young Workers Come of Age

Enlightened by the Charter of the Anshan Iron and Steel Company and tempered in the Cultural Revolution, a new generation of steel workers is quickly maturing.

These young people dare to think, speak and act, and are full of go.

Twenty-four young workers at the Youth Vanguard Furnace in the open-hearth furnace shop of the First Steel Smelting Mill were all born after the founding of the People's Republic. Upon arrival at the plant they were told by Li Shao-kuei, a nationally-renowned steel worker and deputy head of the shop, through his own story, the bitter suffering before liberation, and the history of the struggle between the two lines in the plant. When Li was transferred to another mill, he presented the young people at the Vanguard Furnace with a steel workers' rod, encouraging them to carry on the revolutionary traditions of the older workers. Educated in Mao Tsetung Thought these young people go ahead with heavy tasks. Concerning themselves with state affairs, they help the leadership to adhere to the correct line. In August 1973 the output of one of the shop's smelting sections temporarily dropped. Some of those in charge blamed the outdated furnace and other unfavourable conditions. They suggested offering material rewards as stimulus to the workers. The members of the Youth Vanguard Furnace, however, did not agree with this idea. Li Teh-tseng, in charge of the furnace, and some others studied and investigated, then said that the drop in output was not due to the old furnace but to wrong thinking. The Party branch was helped by the Party committee to sum up experience and carried on the criticism of Lin Piao and rectification of working style, with the masses repudiating the "theory of productive forces" and the allegation that "the masses are backward." The revolutionary criticism aroused the masses' socialist enthusiasm so that the plan was overfulfilled without

material incentives, adding people or changing the furnace. Persisting in grasping revolution and promoting production, these 24 young workers, united as one, perfected a new oxygen blowing technique for the large open-hearth furnace, shortening the smelting time for each heat by 30 minutes.

Anshan's young workers have broad revolutionary vision. They love their work and are devoted to it, performing extraordinary deeds in doing ordinary jobs. Wang Hui of the General Sintering Plant is an example. A Red Guard five years ago, he is educated by the plant's Party and Youth League organizations, seriously studies Marxist-Leninist works and Chairman Mao's writings. He is tireless in work and remoulding his world outlook, and has been selected as a model worker of Anshan City.

Young workers of one of the sections at the iron works, learning from the older generation of workers who went out into bitter winter wind to retrieve used parts from out of the snow and rubble to build blast furnaces, also picked up and repaired many tens of tons of used parts valued at 200,000 yuan. The old workers say, "It makes us happy to see these youngsters maturing with high political consciousness and able to stand hardship."

Battle in the Taching New Oil Zone

IN January 1973, a leading member of the Taching Oilfield Party Committee brought from Peking an important decision. There was an excited stir over the entire oilfield as people passed on the news: "A new oil zone is to be opened!"

The subterranean oil-bearing structure of this new oil zone had been explored during the early, tumultuous stage of the setting up of the Taching Oilfield in 1960. It features thick oil-bearing strata, great pressure, and rich oil deposits of good quality. For years the Taching workers had been resolved to open it up when the country so demanded and now the day had come at last! Thirteen years after the first battle to open up the Taching Oilfield a new fight would begin.

Top Speed

Winter is harsh in Taching with the temperature falling to 20-30 degrees below zero Centigrade. The new oil zone was an immense wilderness covered with snow,

the earth frozen to a depth of nine feet. Like the Taching Oilfield 13 years before, the area had only the vast expanse of sky overhead, while beneath was grassland. The new oil zone should be built up in two years and its capacity should exceed that of the old zone, which was built in six. Faced with this heavy task, the workers and cadres said: "We of the working class at Taching have the tradition of fulfilling tasks entrusted to us by the state, and have never been known to fail." They dismissed the idea of enlisting help from other places, boldly shouldering the task themselves.

It was a hard struggle and everyone strove for top speed. Blueprints were ready in less than two months after assignment of the task. Dozens of drilling teams came from the old zone 50 to 100 kms away and were soon at work here.

Drilling wells required 140 types of co-ordinating operations and time was needed for the large contingents of workers doing so many kinds of work to settle down, let alone setting to work in the vast grassland conditions. At the work-site the dozens of drilling teams were waiting for water, electricity, mud and cement. Without any one of these they could not begin. But the eager workers said that revolution could not stop and work must not be delayed. As builders of socialism they should not "crane their necks waiting for food like water fowl." They threw themselves into the tense battle for oil.

Electricians finished putting up a high-tension transmission line 20 kms long in eight hours instead of the usual 15 days. At dawn the southern part was barren while in the afternoon 400 eight-metre-high electric

poles were erected so that powerful current was sent to various teams in no time.

Fifteen kms of water pipes had to be laid. Comrades of the drilling headquarters met to make a plan after midnight. By three their plan was made and at five they called the workers together. At seven 23 electric welding machines were ready and 140 welding workers were on the job. On the third day water ran to every drilling-site. The whole work was completed 20 days ahead of schedule.

Mud is to well-drilling as blood to human life. The earth was beginning to thaw and its surface was sticky, while below it was rubbery. Machinery was useless in digging a mud pond. Pickaxes did not work either, while dynamite only blew out a bucket-sized pit. The leadership was still puzzling over this problem when the workers came up with their "earth-peeling method." By the heat of the sun and from fires the earth thawed in layers and the workers dug the mud out. The mud pond was ready for the next few wells.

Top speed in the battle was achieved by seizing every minute and second in addition to the fight put up by the Taching workers against cold wind and snow in the spirit of sacrifice for the revolution. One day in the early winter of 1973 an unusual blizzard arose as if to test the will and strength of the workers. Snow driven in an eight-grade wind soon covered the grassland with a blanket several feet thick. But the workers stuck to their job.

Could the drilling workers stand the fierce gale and the bitter 40-degree-below-zero cold? The leading comrades were worried as they made their way from one

team to another with the help of staffs. It was midnight when they reached Drilling Team 1202. They found the workers scarcely able to stand against the strong wind, their eyebrows frosty white and miniature icicles hanging from their eyelashes. Still they held fast to the brake handle on the drilling rig and wielded the 50-kg. pliers, the drill bit thrusting straight down. The leadership said again and again that they should stop, but they refused. "What is snow? Even if it's knives that fall we'll go on working to open up the new oil zone as soon as possible!" The derrick swung in the wind and the worker on the 24-metre derrick platform felt as if he were being tossed in a small boat on the sea. Still he worked on calmly for several hours as though it were nothing.

Even iron and steel can crack in cold and snow, but the workers never flinched. To bring a new oil zone into production for the state in a short time they battled nature with a will stronger than iron and steel.

Drilling Team 1266 three times fulfilled its task ahead of schedule and completed its 1973 quota of sinking 30 wells on September 22, 100 days ahead of time. Instead of celebrating their success they held a mobilization meeting at which they set themselves a new quota for the next job — one well per man for the year. And on December 14 their team of 43 members completed its 43rd well. Actually, Team 1266 had comparatively less manpower and equipment, and its catching up with the other teams stirred the whole work-site. Members of this team said: "In socialist construction we must strive for top speed, and never stop." By the end of the year they had sunk two more wells.

Every well sunk was put into operation at once and then run well. The heroic Taching workers exceeded every time schedule set for building the new oil zone. The original date for oil-gushing had been set up two months to August but actually it occurred on July 18. It was only 98 days from the sinking of the first well to the producing of oil from the entire first batch of wells. To open up such a large oil zone and bring it to a fairly high productive level within the year meant unprecedented speed in China's history of extracting oil.

Scaling New Heights

Among the leading cadres and workers in the new oil zone were quite a number of veterans who had seen duty at the various big oilfields in the country. Few, however, had dealt with such complicated oil-bearing structure.

This new zone has high-pressure oil-bearing formations and abundant reserves of natural gas, the first such oilfield tackled by China's workers. In addition to the natural gas capping the oil pool, there are several high-pressure gas-bearing strata, the deepest being several hundred metres below the surface, a situation tending to cause blow-outs during drilling.

In April 1973, Drilling Team 1261 was assigned to work in the heart of the new zone where natural gas was most concentrated and active. One day shortly after drilling began, a dark column of natural gas and water mingled with rocks and mud burst forth with a deafening noise and rose dozens of metres into the air. The blow-out shook an area several kms around, and if

it were not controlled at once the 40-metre-high derrick and all equipment on the well-site would be destroyed.

At this crucial moment Hsing Ta-chun, the team's political instructor, jumped onto the derrick platform to direct the accident prevention. Mud was needed to put down the blow-out, and dozens of workers threw themselves into the mud pond, mixing it with their own strength. People rushed from all directions to help. Some poured cement and barite powder into the mud pond to add weight to the mud. Some moved equipment to safety while others ran up to the derrick platform to help. When the first group of workers grew faint from the gas fumes the second group took over, and when they were injured by rocks spewing out, a third group took their place. There would be no retreat until the blow-out was stopped.

It took three hours of fierce struggle before the danger was over. Then, surveying the damage, Hsing Ta-chun thought: It takes courage to put down a blow-out, yet it has to be done. His attitude heightened the workers' morale, and they went on with him to the next well.

But another blow-out occurred while the second well was being sunk. In order to give Drilling Team 1261 some time to relax, the leadership intended to transfer it to a low-pressure well-site. Though a bit upset by the two blow-outs in one month, Hsing Ta-chun and the whole team pledged never to retreat. "Where would our will and determination be if we did? No, we'll never step back until the blow-out is conquered."

The workers built up their confidence, their revolutionary will moving the leadership to allow them to carry on. The team looked upon blow-outs as paper tigers in

general, while in fighting them they regarded them as real tigers. Carefully assessing the measures they must take to conquer the blow-out, they succeeded in sinking the first high-pressure well.

The first and second wells sunk by Drilling Team 1274 had deviations of 1.7 and 1.8 degrees respectively from the vertical. Some thought that the second well being a little more off the vertical than the first did not matter much, since 3 degrees was within limits, and especially if the complicated geological structure was allowed for. But immediately after the second well was sunk, the team's political instructor, Chao Hsing-chung, asked the comrades to discuss why the deviation was 0.1 degree greater than in the first. He said: "Our view of the 0.1-degree increase in deviation indicates our attitude towards socialist construction. A little slackening from time to time could add up to an 18-degree difference by the end of the year."

After settling the question of attitude to the 0.1 degree, this Team 1274 of practically all young people sank dozens of wells in complicated earth structure and not one had a deviation over 1.8 degrees, the lowest being only 0.2 degree.

Fully confident now, the Taching workers fought and defeated all the blow-outs that occurred in the three months of building. In the 60s they had opened up China's first large oilfield at high speed by relying on their own efforts. In the 70s they opened up China's first high-pressure oilfield, also at top speed.

But new tasks were always awaiting them. To build an up-to-date oil and gas collection and distribution proj-

ect the designers and research workers toured Taching's old and new oil zones, at the same time making a comparative study of the various advanced methods and processes at home and abroad. Basing on their decade-long practical experience and the geological conditions of the new oil zone and the properties of its product, they devised a whole set of new methods and processes to ensure that the field maintained stable and high output over the years to come. They were labour-saving and provided good conditions for the automation of oilfield management. Now, not an oil extraction worker can be found at the well-sites in the new oil zone. They sit in a pump-room controlling 15 wells automatically.

A New Generation of Workers

As China's petroleum industry develops, workers who participated in the opening up of the Taching Oilfield in the early 60s are assigned to new oilfields in other places, while vigorous young people have started to work at Taching where they constitute 70 per cent of the workers in the new oil zone. The Young Pioneers of the 60s and the Red Guards of the Cultural Revolution became pathbreakers in the battle to open up the new oil zone.

Among the thousands of outstanding young workers is Kao Chin-ying, 26 years old, who had come to the team shortly after the Cultural Revolution began and had been appointed leader of Drilling Team 1205 before the new oil zone was opened. Kao was constantly educated and helped by the late "Iron Man" Wang Chin-hsi, the team's first leader. Wang Chin-hsi had led the team members in hauling the heavy, massive drilling rig from the railway station to the well-site. Taching's first

oil well was then sunk, and a foundation laid for the opening up of the Taching Oilfield. In the 70s, Kao Chin-ying, as the team's seventh leader, led it in a race against time, hoisting huge parts of the new zone's first drilling rig into position with only their own strength and sinking the first oil well in the new zone.

Even when suffering from painful dislocation of a lumbar intervertebral disc Kao Chin-ying ignored the pain, thinking of the many new oilfields waiting for the drilling rigs. "We of the younger generation of oil workers are determined to extract the oil wherever it occurs in the country."

In the 60s Wang Chin-hsi used to live in a makeshift hut that went with the drilling team from place to place. Kao Chin-ying took it over and made it his home near the well-site. The wind blew in everywhere, but Kao would not give it up. He said: "Here I can keep a finger on the pulse of the drilling rig and an eye on the well-site. In case of emergency I can jump onto the derrick platform and have the brake handle in my hands in a few seconds." Kao Chin-ying felt the happiest to be able to win time for drilling more wells.

And there are workers like Kao Chin-ying everywhere in the new oil zone, and moving stories of what they have done. Four of Team 1274's five leaders are young people who began their apprenticeship during the Cultural Revolution. Another team, in charge of moving equipment for all the drilling teams, has an average age of 19. These young people are on call at any hour of the day or night. A third young team of 18 apprentices has a name for speed and quality in welding.

The young generation at Taching excels in both production and ideological remoulding. They say: "We missed the battle of the 60s but we'll make it up in the 70s. Hardship will strengthen us." They earnestly read the works of Marx, Engels, Lenin and Stalin and of Chairman Mao, modestly learn from veteran workers and consciously change their world outlook.

Young worker Yin Hsueh-sheng and his group once installed five rigs in a day, chalking up a record in the new zone. When they were about to knock off, they noticed a tiny crack in a welded pipe. Usually it needed only to be wrapped with some insulating material when laying it underground. But Yin Hsueh-sheng insisted: "We are working for socialism. Every piece of work must be of high standard." Though it was getting dark, the young people switched on the lamp on the welding machine and repaired the pipe. The faulty section was cut off and exhibited in front of the mess hall, to serve as a warning and a spur.

New Motive Force

The victorious Cultural Revolution and the deep-going movement to criticize Lin Piao and rectify the style of work are a powerful motive force for the development of the new oil zone.

The vast new oil area is a battlefield where the workers and staff members are active both in the struggle for production and in the fight against Lin Piao's counter-revolutionary revisionist line.

Aping Confucius, Lin Piao spread the apriorist fallacy of being "born with knowledge" and advocated the idealist conception of history that "only the highest are

wise and the lowest are stupid," and trumpeted the reactionary "genius" theory. The Taching workers have refuted these absurdities with their revolutionary practice over more than a decade in developing the Taching Oilfield. They said: "It was not any 'genius' or 'sage' like Lin Piao or Confucius who opened up and built the Taching Oilfield from scratch but we of the Taching working class. Where did our wisdom and ability come from? We were not born with it as Lin Piao claimed, but learned it through practice guided by Chairman Mao's theory as explained in his articles 'On Contradiction' and 'On Practice.'"

The current movement to criticize Lin Piao and Confucius has added to the revolutionary enthusiasm of the Taching workers. Veteran cadres who participated in the first opening up of Taching join in the new battle with renewed vigour. They say with pride: "We're getting on in years but our will to continue the revolution is stronger." Some are grey-haired veterans of revolutionary wars who had shed blood for the people's cause and now fight at this new forefront without a thought for themselves. Women cadres, carrying out ideological and political education, walk from one drilling team to another explaining the Party's basic line.¹ Cadres at the grass-roots level rely more closely on the masses

¹At the Working Conference of the Party Central Committee in Peking in August 1962 and at the Tenth Plenary Session of the Eighth Central Committee in September the same year, Chairman Mao put forward in a more comprehensive way the Party's basic line for the entire historical period of socialism when he said: Socialist society covers a considerably long historical period. In the historical period of socialism, there are still classes, class contradictions and class struggle, there is the struggle between the socialist road and the capitalist road, and there is the danger of capitalist restoration. We must recognize

and pay attention to their well-being. They live in tents and work at well-sites alongside the workers. Often in the night after the workers have fallen asleep the cadres see that everyone is properly covered so as not to catch cold.

Inspired by the Cultural Revolution and the movement to criticize Lin Piao and rectify the style of work, service trades people go all out to serve the workers. Though no shops are to be seen with a signboard at the grassland work sites, 12 kinds of services are available such as hardware, chemical preparations, general goods, grain and edible oil, vegetables, food products, books and stationery. The post office staff, as well as barbers, shoe and bicycle repairers do their work in the open. Doctors tour well-sites dispensing medical treatment to workers on duty, including simple dentistry and surgical operations. These service trades comrades said: "As in a war, the rear should always serve the front."

The deep-going movement to criticize Lin Piao and Confucius is giving fresh impetus to the construction of the new oil zone. Inspired by Chairman Mao's revolutionary line the Taching workers' heroic deeds of the 70s, like those of the 60s, will go down in the annals of the development of China's petroleum industry.

the protracted and complex nature of this struggle. We must heighten our vigilance. We must conduct socialist education. We must correctly understand and handle class contradictions and class struggle, distinguish the contradictions between ourselves and the enemy from those among the people and handle them correctly. Otherwise a socialist country like ours will turn into its opposite and degenerate, and a capitalist restoration will take place. From now on we must remind ourselves of this every year, every month and every day so that we can retain a rather sober understanding of this problem and have a Marxist-Leninist line.

Trunk Railway Line In China's Southwest

RUNNING across high mountains and big rivers, the Chengtu-Kunming Railway, a trunk line in China's southwest railway network, was completed during the Great Proletarian Cultural Revolution. It links up Yunnan, Kweichow and Szechuan provinces, and greatly shortens the travel time between the border areas and other parts of the country.

The completion of the Chengtu-Kunming Railway is an unprecedented engineering feat in the history of China's railway construction. The line goes through areas with complex geological conditions and changing weather. In the first days of construction, some "specialists" from abroad asserted that no railway could possibly run through those regions. But China's railway workers, the railway corps of the People's Liberation Army and peasant builders, armed with Marxism-Leninism-Mao Tsetung Thought, heroically challenged whatever obstacles and dangers stood in their way and made the project a reality.

The construction was begun in July 1958. But with interference and sabotage by Liu Shao-chi's counter-

revolutionary revisionist line, the project was practically halted in 1962. In August 1964 Chairman Mao issued the call: **The Chengtu-Kunming Railway must be built at a fast pace.** Very soon armies of heroic railway builders from all parts of the country streamed to the work-sites and started the battle to build the 1,085-km. line.

On their 12,500-km. Long March, the Workers' and Peasants' Red Army led by Chairman Mao scaled the towering Taliangshan and Hsiaoliangshan mountains and crossed the turbulent Tatu and Chinsha rivers. Now, displaying the same revolutionary spirit of hard struggle that Chairman Mao himself developed, railway builders followed up through places traversed by the Red Army. They built temporary huts on river banks and put up rough camp stoves in wilderness and barren mountains. They linked mountain tops with suspension bridges and spanned rivers with transport cables. With high aim and spirit, everybody was proud to be a trail-blazer.

Work was in full swing in towering mountain ranges or at the gorge along the Tatu River where, according to the popular saying, "one can see the 'crack of sky' flanked by vertical cliffs overhead, and roaring waves beneath." The railway builders rushed to the work-sites as soon as they put down their luggage.

At the Yalung River gorge beneath high cliffs and rugged paths, technical personnel took upon themselves the task of clearing away rubble and pitching rows of tents at the site which they called "Revolutionary Village."

Before the roads were finished workers and men of the army railway corps moved machines and materials to tunnel fronts and bridge piers by shoulder-pole, pack

animal and raft. They dismantled giant machines and carried the parts to mountain tops scarcely visited by any people. Electricians and army signal corps braved hazards to string up high-tension wires to pave the way for mechanized operations. Technical personnel trudged over mountains and rivers for reconnaissance survey. They made careful calculations, improving designs for projects to cut down state outlay.

With the preparatory work completed at top speed, the stage was set for actual construction. Some people commented that building this railway along the route of the Long March was like marshalling battalions onto battlefields amid myriads of mountains and rivers.

In 1966 the storm of the Cultural Revolution personally initiated and led by our great leader Chairman Mao swept all parts of China. The work-sites became a hive of activity with red banners fluttering. In high spirits, army and civilian builders gathered to criticize and repudiate Liu Shao-chi's revisionist fallacies of "worshipping everything foreign" and "crawling along at a snail's pace." The criticism gave the workers greater drive in their onward march to conquer natural barriers.

It was a tough struggle. No sooner had they overcome one difficulty than another would crop up; but so it was with the victories too.

The line winds up and down a mountainside in seven places in the Taliangshan, Hsiaoliangshan and Hengtuan mountains. Sometimes it was impossible to set up a station above ground and it had to be built in a tunnel. Along the Tatu River, 21 kms of a 24-km. stretch run through tunnels, and this is called the "Tatu subway." In the Taliangshan Mountains, 2,300 metres above sea level, a

6.5-km. tunnel makes three turns through the mountain in the shape of a "spectacles rim." At the Lungchuan River gorge the route rises 300 metres in a 15-km. stretch between Shihkaoching and Tatienching. To provide a less steep climb, the rail line is 37 kms long with 20 tunnels in one 18-km. stretch. Some tunnels describe huge circles, the two openings facing the same direction with one scores of metres higher than the other. These tunnels of various designs, single, multi-track and circular, connect like an underground "Great Wall," demonstrating both engineering skill and a tremendous amount of work.

But heroes never fear difficulties. Army and civilian builders proudly pledged:

*We'll reach into the sky no matter how high;
We'll dig through the earth no matter how deep.
Perilous peaks and swift rivers bow before our plan,
Overcome by the heroes.*

The railway corpsmen arrived at a 1,000-metre tunnel work-site with only hand drills, four-kg. hammers and two old air compressors. Bigger machinery had to await road-building. But the builders did not wait. Displaying the spirit of the legendary "Foolish Old Man" who removed the mountains, they began hammering out blast holes by lantern and torch light. Ventilation was poor and the temperature often rose above 35° C. Not even taking time to clear rubble from the cramped work space, they hammered the rock out while lying on top of it. In this way the entire 1,000-metre tunnel, dug from two openings, was hammered out by sheer hand labour in five

months, averaging a monthly footage of 100 metres from each opening, a record.

The rock structure was so varied in a tunnel assigned to one company of railway corpsmen that they called it their "geological museum." There were water-eroded caves that collapsed at a touch, and also rock they could hardly nick. Deep gullies had temperatures as high as 40° C., while water spurted from underground rivers through rock seams. The scorching mid-summer sun on the rock heated up even the tunnel, but neither the heat nor the bad air made the workers leave their jobs except for a cold drink or to douse their heads with cold water. No one complained. One day after a round of blasting, an icy gush of water suddenly came spurting in from an underground river. The men, over-heated, now had to work in chilling knee-deep water which poured from the tunnel at the rate of 9,000 tons in 24 hours. Still no one flinched. Even when autumn and then winter came, quotas were continually overfulfilled until the tunnel was completed.

The army of railway builders conquered every difficulty by their heroic labour and came through to success, strengthened and tempered.

Tough struggles were going on at the hundreds of bridge-building sites. Huge girders must reach across big rivers, and piers the height of 15-storey buildings had to be planted in deep gorges. "Suspended stations" hung out on cliffs were under construction too. High and low, in heat and cold, defying difficulties and dangers, construction teams worked for days and nights in swift currents and on dangerous shoals.

The two-km. Laochang Gorge on the Tatu River is flanked by vertical cliffs 300 metres high and is generally covered in clouds and mist except for about two hours in a day, when the sun comes through. A single 54-metre span of stone was to be thrown across the gorge.

A bourgeois engineering "authority" had said the bridge could not be built. "No such bridge has ever been built abroad," he argued. But the railway workers thought differently. Determined to shatter such bourgeois notions by revolutionary criticism, they replied: "We'll do what has never been done abroad as well as what has." Combining revolutionary spirit with scientific approach, they designed and built — in 55 days and by indigenous methods — the single span arched railway bridge of stone, the longest of its kind in China.

The P.L.A. Yang Lien-ti Company, named for a hero of the P.L.A. railway corps cited many times for outstanding deeds, was assigned to dig foundations for the piers of a large bridge. The men had to dive into swift, icy currents and swim around submerged rocks and dangerous shoals to place packs of explosives. But, said the men, "When we build bridges in icy swift-flowing water for the revolution, we are warm in our hearts and fear no danger or hardships."

One evening dark clouds gathered. A thunder and hailstorm caught a company of the railway corps installing girders on bridge piers. Company Commander Huang Teh-lung called an emergency meeting. "Do we stop or go ahead, comrades?" he asked.

"When every minute counts, we can't stop," came the men's answer. "The storm will steel and temper our

revolutionary will." Swiftly they worked out safety measures and went back to their posts.

The storm raged on. A 100-ton beam being hoisted into place began to sway back and forth. Deputy Platoon Leader Fu Kang-yeh, a Communist Party member, immediately leaped onto the boom and made his way along it, staggering in the wind. Then he let himself down the steel cable onto the hanging beam and quickly fixed the jacks and the crane. The men below rushed to tighten the crane rope and steady the beam so that it came down nicely on the piers.

And so the railway corpsmen gained time by installing girders through that stormy night, breaking an established rule in bridge-building. Two work teams had girded the piers with a four-span bridge. The whistle of the rail-laying crane rumbling over the new bridge signalled the company's success in breaking still more records in their race against time.

Inspired by the spirit of the Ninth National Congress of the Chinese Communist Party convened in April 1969, the builders answered Chairman Mao's call to **unite to win still greater victories** with a new upsurge to **grasp revolution and promote production and other work and preparedness against war.**

Day and night, rail-laying cranes cut through rugged terrain and over water, while bridge-laying cranes working their way towards the Tatu River now operated at the Chinsha. The Chengtu-Kunming Railway was finally completed and formally opened to traffic on July 1, 1970, the 49th birthday of the great, glorious and correct Chinese Communist Party. Decorated passenger trains set out from both Chengtu and Kunming with workers,

peasants, army men and representatives of minority nationality people aboard. The trains met at Hsichang where the Red Army had passed in 1935 and a mass celebration rally of 100,000 army men and civilians was held there.

The Party Central Committee wired a message of congratulations to all the builders, commending them on their success in the race for time against the imperialists, revisionists and all reactionaries, for their great contribution to the Party and the people. Inspired by this, the railway builders immediately moved on to new and more challenging tasks.

Expressing the railway builders' revolutionary and militant spirit, a soldier-poet had this to say:

*You ask whether our life is hard? We reply:
With the 750 million people at heart,
Building the railway for our motherland
Can only make us happy.*

A Railway in Rugged Mountains

A 632-km. trunk railway line in China's southwest was completed in October 1972. Cutting through the rugged mountains of western Hunan and eastern Kweichow provinces, it was built in just two years. Named the Hunan-Kweichow Railway, it joins the Chckiang-Kiangsi Railway on the east, while on the west it links with the Kweiyang-Kunming line, forming China's second east-west trunk line.

A Vast Army of Workers for the Project

In the fall of 1970 the good news that Chairman Mao and the Party Central Committee had issued the call to build the Hunan-Kweichow line spread quickly to the newly completed Chengtu-Kunming Railway work-site, the Hsiangkiang River and the Miaoling mountain area. The railway workers and people of various nationalities were happy and inspired. They said it was very important to build this Hunan-Kweichow Railway from Chuchow near Changsha to Kweichow's provincial capital Kweiyang, linking China's rich southwest with Peking,

east and central-south China. It would facilitate the interchange of the southwest's rich natural resources and the industrial equipment and technical resources of these other parts of China.

Poor and lower-middle peasants said they had looked forward to the building of this railway for decades. Before liberation the Kuomintang reactionary government only squeezed money out of the people and never built the railway. After liberation, interference and sabotage by Liu Shao-chi's revisionist line had stopped the work. But today, with the splendid victory of the Great Proletarian Cultural Revolution, when Chairman Mao and the Party had decided to build the railway, they gave firm support. A snowstorm of revolutionary pledges deluged Party committees at all levels.

Those from the Second Railway Engineering Bureau of the Ministry of Communications who had worked on the Chengtu-Chungking, Paochi-Chengtu, Szechuan-Kweichow and Kweiyang-Kunming trunk lines, tempered again and again, had fulfilled their task with flying colours each time. Now, just off the Chengtu-Kunming Railway work-site and called on to build this new line, they were highly enthusiastic and said: "It will be a great honour to build a railway near Chairman Mao's hometown!" And so workers and cadres set out, scarcely taking time to draw a deep breath, or for temporary housing or their teams to be set up. This latter was done aboard the train en route. Many workers passed their homes without stopping off but merely exchanged a few words with their family members on the railway platform, while others just waved to their dear ones from

train windows. More than 100,000 workers in high spirits, and huge amounts of equipment, boarded or were loaded onto over 100 trains from south and north, bound for the new work-sites.

Just as they had sent their sons and daughters to join the Red Army in days gone by, the poor and lower-middle peasants of the area now sent their best militia members to the construction-sites. From the shores of Tungting Lake and the banks of the Hsiangkiang River to the Miaoling mountain region, hundreds of thousands of militia travelled by train or boat. Most, however, hoisted red banners, shouldered knapsacks and marched hundreds of kilometres to the work-sites, singing all the way.

The militia of Shaoshan, hometown of Chairman Mao, gathered before the Chairman's portrait at the train station to pledge their determination. Exhorted by the Shaoshan Brigade Party branch secretary, Mao Ti-chiu, to make new contributions to socialist construction, they responded by saying: "We'll do credit to Chairman Mao's hometown and won't leave the work-site till the railway's completed!" Militia from Tsunyi, gathering at the historically significant site of the Tsunyi Conference which established Chairman Mao's position as leader of the whole Party, reviewed the history of the two-line struggle within the Party and pledged by all means to persist in Chairman Mao's revolutionary line.

An old revolutionary, Shih Yang-kuang, who had acted as guide for the Red Army when it crossed the Wukiang River on its Long March, now was appointed the militia's political instructor, teaching them the Red Army's revolu-

tionary tradition in making new contributions for the people by building this new railway.

Among the militia workers from Chitung County in Hunan Province was an old stone mason, Hsieh Tai-kao, who before liberation had been pressganged by the Kuomintang reactionaries to do labour on a railway here. It was a bitter experience which ended in his having to sell his padded clothing and quilt and beg his way back home. Now, hearing the Party's call to construct this railway, he was delighted and hurried to sign up for the work. The cadres were moved by this old stone mason's enthusiasm and assigned him to teach the young people, while he was overjoyed and travelled 35 kms to meet the first builders to the work-site.

There were seven outstanding girls from western Kweichow, three of the Yi nationality, one of Ching and three of Han, the oldest 19 and the youngest not yet 15. Fired with the idea of joining this project, they could scarcely sleep for several nights after signing up. When the leadership refused them permission, considering them still little girls, they retorted vehemently, "Grown women can hold up half the sky, how is it you won't let us hold up just a little bit of it?" Insisting on going to the work-site with the others, they started out, walking over mountain paths for two days till they caught up with the militia group of their district and "squeezed in." When they reached the work-site the leadership again urged them to return home. But the girls stood firm, saying: "To build a railway which will link us with Peking we'll not go home until the whistle of the first train blows!" Finally the leadership agreed. They did

very well on the job and earned the name "seven sisters of iron."

This tremendous army of builders, with the will to complete the Hunan-Kweichow line at the earliest possible date, had concentrated at the work-sites in just about one month's time, turning the silent banks of rivers and streams and the almost uninhabited mountain regions into areas alive with people's voices, machines roaring and red banners flying. At night floodlights lit up work-sites and intense activity reached deep into the mountain fastnesses and virgin forests.

Building the Line at High Speed

To save time, many workers simply put up tents of bamboo matting and tree boughs nearby to live in, and then took up chisels and hammers and set to work at once rather than waiting to build more permanent housing. When electric lighting had not yet reached their work-site they used lanterns or pine resin torches and made bonfires to light their way, blazing the roadbed and tunnelling through the mountains. To speed transportation of equipment from railway stations or wharves, the builders carried the heavy loads up the mountain on their shoulders.

The most difficult sections were those through the Hsuehfeng Mountains in the east and the Kweichow Plateau in the west where there were many bridges and tunnels. Especially on the Kweichow section there are high peaks, deep valleys and chasms. Two-thirds of all tunnels and bridges were in this part, as were the longest and highest bridge and the longest tunnel. The com-

pletion of this section, therefore, was the key to completing the entire line at high speed. Still, most important equipment and machinery went to work-sites of tunnels over 1,000 metres long and those of big and high bridges. So workers on other projects bore the difficulty of using less machinery. One 600-metre tunnel in Kweichow was built with only a few pneumatic drills and a dozen or so tip-carts. Building materials were less than sufficient. But the workers there said: "We may not have much equipment but we have a lot of strength; our dearth of material is contrasted by our confidence." They substituted oil and bamboo lamps for electric ones. With no battery-powered cars to pull the tip-carts, the builders relied on their two hands to remove rock and bring in timbers. "We have portable loading machines," they quipped, "our hands, and 'No. 11' battery-powered cars, our feet. So what are we afraid of? The foot-borne Eighth Routers in the past overtook motor vehicles; we can match mechanization on our two feet."

One site in Kweichow's Miaoling area lacked water and the workers were going to lay 30 metres of large concrete pipe. But 300 tons of water would be needed to mix the concrete. Should they wait for a suction pump? "No," said the workers, "we mustn't wait." So workers, militia, cadres and even some of the women on visits to their menfolk were organized to carry the 300 tons of water on shoulder-poles along a narrow and steep mountain path up the mountain to the site. When the tunnel was completed, the builders carved into the rock at its entrance the large red characters: "Our sweat dissolves a thousand layers of rock; iron arms open up ten thousand mountains." The couplet records the workers' revolutionary mettle and reflects the heroic

spirit of the Chinese working class armed with Mao Tsetung Thought to overcome all obstacles.

As bridges had to be built at great heights, and digging tunnels was very strenuous work, women had always been forbidden to do these jobs. But the militiawomen on the Hunan-Kweichow Railway project broke through this old custom and did all sorts of jobs to facilitate the early completion of the railway. So there is a March Eighth Bridge on the Hunan section and a March Eighth Tunnel on the Kweichow section, both built mainly by the militiawomen. The tunnel, 256 metres long, was built by 216 militiawomen whose average age was 19. Half of them were of the Miao, Shui and Puyi nationalities. These women started out by stealing into the tunnels to learn how the work was done, the leadership giving permission only after they had shown their determination and ability, and then sending skilled workers to direct them. This greatly encouraged the women, especially those of minority nationality. For the first time in their life they bobbed their long hair and changed from their traditional voluminous skirts into work pants so as to work more freely. Handling the shaking 35-kg. pneumatic drills made their arms ache and their heads spin, but their spirit was magnificent. "We're not afraid that the rocks are hard; we'll smash them to bits. The drill's kick doesn't faze us either; we'll make it charge out ahead!" In drilling high blast-holes these women stood the heavy drills on their shoulders when there were no supports. Often they were drenched in water from the tunnel and their own sweat, but none would give up.

At midnight on February 27, 1971 one tunnel had a cave-in, with rock, mud and sand coming down in a

tremendous avalanche, sealing the tunnel entrance shut with 17 workers and militiamen inside. As the air became thinner and the workers found breathing more and more difficult, they thought not of their own safety but of how to continue the work. They pledged to fight to their last breath for the revolution. So, in the weak beam of a flashlight they carefully applied the concrete they had already mixed, spadeful by spadeful, onto the tunnel roof before it could harden, dug out the tools that had been buried, and only then began working on the cave-in. An hour later, with the help of comrades who had come to their rescue, they succeeded in opening a small passage to the outside. They could only leave one by one, and every worker and militiaman insisted on being the last one out, that all the others should be delivered to safety first, till finally the political instructor had to issue an order: "Militia first, workers next and cadres last." And so the 17 brave fighters emerged from the danger area, suppressing tears of emotion. The very next day they joined the others in removing the debris and then went on driving the tunnel through the mountain.

All along the railway project spread such words as these: "It takes only a year or so to build a railway but it serves many generations for thousands of years. Better sweat building one than let difficulty remain." Many construction teams and militia units started drives on their own initiative to assess quality and discover possible problems, finding solutions to them on the spot. Suppose, for example, the gravel for concrete-mixing was not washed clean, or a section of the rock-facing on the roadbed was not firm, or that the earth had not been tamped properly — no precaution could be neglected.

Embodying the spirit of the Party's general line of going all out, aiming high and achieving greater, faster, better and more economical results in building socialism, the workers and peasants, shoulder to shoulder, not only completed this heavy task in only two years, but the engineering quality was good and the cost relatively low.

Backed by 70 Million People

In the days when contingents of builders were heading for the work-sites adjacent towns and villages presented a scene of supporting the front in a "people's war." The 70 million people of Hunan and Kweichow provinces formed a strong rear for the large army of construction workers, guaranteeing smooth completion of the rail line.

The entire town of Cold River in Hunan mobilized to receive the builders as they passed through, preparing over 2,100 rooms to accommodate them. They set up reception hostels, tea stalls and first-aid stations along both sides of more than 15 kms of the road to the town. Whenever teams of construction workers or militia units passed, cups of steaming hot tea were placed in their hands by Little Red Guards or residents. Workers off shift hurried to help arrange food and lodging for the builders before even washing or changing their work clothes. Old white-haired people came out to show the workers the way. The builders were very moved and remarked: "'Cold River' is a misnomer; it's really very warm here."

The poor and lower-middle peasants of the two provinces were personally concerned for the militia setting

off for the work-sites. Yao Chao-hsiu, a woman in her sixties who had given her only son in the War to Resist U.S. Aggression and Aid Korea, was too excited to sleep after she heard of the call to build the new railway. She said: "Though I have no son to send to work on the railway, I mustn't lag behind in supporting the project." She did not feel tired staying up late for several nights on end making more than 30 pairs of straw sandals under the dim oil lamp for the militiamen going to the site. She added to these a fat pig and over 150 kgs of vegetables she had raised, requesting that all be sent to the construction-site. Then, still not satisfied, she exchanged her hand-reared chicks at the market fair for some bigger ones. With these, and the chickens and ducks sent by her daughter, she went to the production brigade office. When the brigade leader urged her to keep some for herself she refused, saying: "If not for Chairman Mao and the Communist Party rescuing my family from the sea of bitterness, what would I have to contribute to support anything?" And she wouldn't leave until her contributions for the work-site had been accepted.

One whole commune in Kweichow Province organized to help meet the needs of the construction workers for spade handles, straw sandals and mattresses, and vegetables. Li Hua-tang, brigade revolutionary committee vice-chairman and a Party member of Miao nationality, said to his family, "It's all due to Chairman Mao's leadership that we of the Miao nationality have stood up and have a good life. Now that Chairman Mao has called for the building of this railway to our village, certainly we give all-out support." So his old father made spade handles, his mother wove sandals of twisted

straw, while he and his wife made the mattresses, their little son handing them bundles of straw. The three generations in one evening made nine pairs of sandals, four mattresses and six spade handles, and next day sent them plus a 20-kg. squash to the brigade office.

In the winter of 1970, 24 poor and lower-middle peasants, braving the elements, drove more than 500 fat sheep to the work-site from a county northeast of Kweichow, thinking only of getting the sheep there as soon as possible. Caught in a snowstorm, with the sheep bleating and the people also feeling the pinch of cold and hunger, they sought no shelter. For weren't the workers and militiamen at the site also having a bitter time in the mountains? The thought spurred them on against the blizzard and they travelled the 400 kms over mountains and streams, through seven counties, in 21 days. They did not lose a single sheep.

Staff members of various enterprises and departments in the two provinces, in order to make the project a success, carried supplies by shoulder-pole during the two years of the construction to wherever the work was going on, set up banking and postal services — whatever was needed.

The joint struggle of the vast army of workers and the people resulted in the completion of the Hunan-Kweichow Railway on October 13, 1972. It had been driven through mountain peaks, over gorges and rivers, to realize a decades-long aspiration of the people of the two provinces.

A Successful Voyage

THE eve of new China's 25th anniversary saw the gala sailing of her 10,000-ton freighter, the *Fengqing*, from the mouth of the Yangtze River towards Shanghai Harbour. Amid the beating of drums and the clashing of gongs thunderous cheers of "Long live Chairman Mao!" and "Long live the policy of independence, initiative and self-reliance!" burst forth along the banks of the Whangpoo River.

This freighter, designed and made by China's own efforts and consisting entirely of domestic-made equipment, had returned from her 32,000-nautical-mile maiden voyage of the Pacific, Indian and Atlantic oceans, in Asia, Africa and Europe — a distance equal to one and a half times round the globe at the equator, turning a new page in the history of China's shipbuilding and maritime navigation.

The successful maiden voyage of the *Fengqing* not only proved the reliability of China-made ship equipment but, more important, it swept away vestiges of blind faith in foreign things. It demonstrated the correctness of Chairman Mao's policy of maintaining independence and

keeping the initiative in our own hands and relying on our own efforts and defended Chairman Mao's proletarian revolutionary line.

Sailing with Flying Colours

On May 4, 1974, the newly launched freighter *Fengqing* weighed anchor at Shanghai to begin her maiden voyage. She braved the waves of three oceans, sailed through seven straits, crossed the equator four times, rounded the Cape of Good Hope twice and called at eight ports in eight countries, all in 150 days, returning to China on September 30 with flying colours. The *Fengqing* had been warmly received and praised everywhere.

Ready to weigh anchor after refueling at Mombasa Harbour in Kenya, the *Fengqing's* captain was asked by a middle-aged white pilot, "What country made that beautiful ship?" When told that she was built entirely by China, the pilot looked over the main engine and navigating apparatus, unable to suppress his surprise and admiration. "It's a fine ship! I wish your maiden voyage success!" said the pilot as they parted.

A pilot who boarded the *Fengqing* at a port on the Black Sea looked anxious because the port was crowded with vessels and the water routes were narrow. Would the main engine and the rudder get the ship in to port? But his anxiety did not last long, for with the seamen's skilful handling the freighter was manoeuvred quickly and correctly so that when she dropped anchor safely the pilot smiled and said, "The ship's all right, and the crew are all right too!"

"Fine! Fine!" said Romanian friends when the *Fengqing* stopped at Constanta Harbour in that country. Pointing at the steel ladder with hand rails in the cargo hold, an old Romanian docker voiced approval, as he did also of the small shelter cabin on the deck from where the worker operated the crane. Finally, indicating the whole ship, he put up a thumb. "It's a fine vessel!" This old worker's few words expressed the friendly feelings of the Romanian people for the Chinese people. Romanian friends were interested in China's developing shipbuilding industry. A number of shipbuilding engineers came from long distances to see the *Fengqing*, and all said to the ship's captain and political commissar that they were impressed with the quality of China's ship construction. "We hope to continue friendly technical exchange!" they said.

It was early spring in Mauritius when the *Fengqing* called there and overseas Chinese warmly welcomed her as the "first spring swallow." Old and young alike went aboard and had their pictures taken under the five-star red flag. On learning that this ship was entirely China-built, an overseas Chinese over 80 was moved to tears and said, "As I go aboard, I feel as if I were stepping on the soil of my motherland itself. This is because of Chairman Mao's brilliant leadership!" The local overseas Chinese newspaper featured prominently news and articles about the *Fengqing*. When the time came for the ship to leave port, overseas Chinese shouted with tears in their eyes, "We hope ships come often from our motherland!"

When the *Fengqing* arrived at the port of Brindisi in Italy and stood there grandly, this very fact gave the

anti-China buffoon Antonioni a slap in the face for slandering China's growing shipbuilding industry. The Italian people warmly welcomed the *Fengqing*, Italian friends arriving from far and near with bouquets and baskets of flowers to congratulate the crew on the ship's maiden voyage. Grasping the seamen's hands they said, "China is good! Mao Tsetung is good!"

The Right of Sailing Distant Oceans Comes Through Struggle

While celebrating the *Fengqing's* successful voyage, people could not forget the sharp struggle they had to win the right to sail the seas.

Ever since liberation there have been fierce struggles between the two lines in China's shipbuilding industry. The focal question has been: to make ships by self-reliance, or to trust only imported goods and worship everything foreign? The building in great numbers of 10,000-ton class ocean-going ships by Shanghai shipbuilders was a product of the Great Proletarian Cultural Revolution. The revisionist line pushed by Liu Shao-chi and Lin Piao, a capitulationist and traitorous line advocating blind faith in foreign things, was thoroughly repudiated in this great revolutionary movement. Giving full play to the spirit of self-reliance, the shipbuilders, in only eight years, constructed dozens of 10,000-ton ocean-going ships on 3,000-ton docks and made 10,000-h.p. main engines in matsheds. But the struggle did not cease. Some of the old concepts that had been criticized and repudiated turned up again in new guises. Some people looked askance at China-made vessels and main

engines and asserted that domestic-made ships might be all right on coastal waters and nearby seas but not on distant oceans, and for long voyages an imported main engine was indispensable. And so the revisionist line put limits on the *Fengqing* despite her being certified as sea-worthy for "unrestricted navigation."

The movement to criticize Lin Piao and Confucius rekindled the tremendous socialist enthusiasm of the shipbuilders and their revolutionary spirit of self-reliance was irresistible. They indignantly protested the fallacious logic that "domestic-made ships cannot sail distant oceans." A revolutionary big-character poster was put up by the workers of the Kiangnan Shipyard. The argument around the *Fengqing* brought into the open the sharp struggle between the two lines and two ways of thinking in the shipbuilding industry. The real nub of the question was not whether domestic-made ships with domestic-made main engines could sail the seas or not; it was a question of some people having blind faith in foreign things, of their thinking and line not being correct.

The Kiangnan Shipyard workers knew very well what it meant to place blind faith in foreign things. The shipyard had been founded in 1865 by Li Hung-chang, the notorious servant of foreign interests. This traitor, who pushed a capitulationist, traitorous line, spread the fallacy that "it would cost twice as much to build a ship than to purchase one from abroad." Using imported steel and machines from America, Chiang Kai-shek's reactionary government announced the building of a ship, the *Pohsien*, but nothing ever came of it. In the 80 years up to liberation this "shipyard" never built a ship

deserving the name. After liberation, under the wise leadership of Chairman Mao and the Chinese Communist Party, the Kiangnan Shipyard workers built the country's first 10,000-ton freighter, the *Dongfeng*, in the fiery years of the Great Leap Forward. Liu Shao-chi and his outfit spouted the revisionist line that "building a ship is not as good as buying one, while chartering one is better still." This line of reasoning resulted in the strange phenomenon in the Kiangnan Shipyard of its two 10,000-ton docks accommodating small barges and big cranes lifting small hulls.

The big-character poster won warm support and the revolutionary current pushed the *Fengqing* on to her test run. With a cargo of 11,000 tons, the freighter set out in stormy seas, doing 120 hours and proving the reliability of her domestic-made equipment.

The trial voyage nullified the absurdities against the *Fengqing's* sea-worthiness. Supported by Party organizations at higher levels, the ship gained the right to sail the seas.

Daring to Sail Against the Wind

The workers who built the *Fengqing* are pathbreakers in carrying out the policy of **maintaining independence and keeping the initiative in our own hands and relying on our own efforts**. Her crew are heroes who dared to sail against the wind. To defend Chairman Mao's revolutionary line, they joined the shipbuilders in launching a scorching attack on blind faith in foreign things. They shattered the servile theory that "domestic-made ships cannot sail distant oceans" by making the first voyage.

An elderly seaman who had worked on foreign ships before liberation and suffered from exploitation and bullying by the imperialists said, "For years we've been looking forward to the day when we could sail our own large freighters. We'll do our best to man this splendid ship built by our workers."

The maiden voyage of the *Fengqing* with all China-made equipment took her to Europe. Some people spread the nonsense that it was striving for the limelight. Others were worried. The seamen, however, were in high spirits as though preparing for a festival, for they considered the *Fengqing's* long voyage was an honour to be won for the Chinese proletariat and people.

The days of preparation were busy ones for the entire crew, who were studying and mastering all the equipment. The second mate led a team in charge of maintaining the navigating instruments, and they studied the necessary technique conscientiously. Looking at the blueprint, the electrician Chu Heng-fu led three young men in checking the complicated electrical equipment and circuits from top to bottom and from stem to stern. The workers of the Kiangnan Shipyard and the factories concerned also went on board to help the crew get to know the performance and properties of the different kinds of equipment, proud of what they had accomplished and determined that the freighter *Fengqing* should be a well functioning carrier of friendship between the Chinese and other peoples of the world.

"Honour-winning people handling an honour-winning ship" was the slogan put forward by the crew for the maiden voyage. With love of their own country and the spirit of internationalism, they kept every piece of the

ship's equipment and every piece of cargo in good order. The *Fengqing* sailed with over 11,000 tons of rice for Romania. This cargo would be stored in the holds for two months in changes of seasonal conditions. It must arrive in good condition. First mate Chou Chun-ling, in charge of this work, saw that each hold was inspected three times a day and that the temperature and humidity were suitable for the storage of the rice. This was no small job, climbing up and down the cargo-holds. Each time the freighter passed the equator the temperature in the main hold rose to 40° C., but the men did not allow the temperature of the rice to exceed 30° C. so that the entire 11,000 tons arrived in port in good condition.

Facts Refute Fallacies

At the time of the socialist upsurge in China's countryside, Chairman Mao pointed out: **The masses have a potentially inexhaustible enthusiasm for socialism. Those who can only follow the old routine in a revolutionary period are utterly incapable of seeing this enthusiasm. They are blind and all is dark ahead of them. At times they go so far as to confound right and wrong and turn things upside down.** Those who opposed domestic-made ships sailing distant oceans are just such people as Chairman Mao was criticizing for their lack of faith in the great strength of China's working class. Such people, taking a wrong stand and in awe of foreign things, were bound to carry out a wrong line and turn things upside down.

On the controversial question of the ship's main engine, some worried people said, "You can't ride an ox as you

ride a horse; how can you build a main engine without the conditions?" But this was not the view of the Kiangnan Shipyard workers.

"The main engine is the heart of a ship and we must build it with our own hands. We'll never attain speed in our socialist construction if we rely on imported engines. We of the Chinese working class will never allow others to get a strangle-hold on us." With stupendous will and determination and overcoming every difficulty, they made the *Fengqing's* 10,000-h.p. main engine themselves, saying proudly that it would also be called the "honour-winning engine."

Another controversial question concerned five China-made pieces of apparatus. Some insisted that the radar, electric longitude comparator and three other pieces be replaced with imported equipment. But the seamen of the *Fengqing* strongly protested, joining with the workers of the Kiangnan Shipyard and other factories providing complete sets of equipment for the vessel in criticizing the idea as blind worship of foreign things.

The *Fengqing* with her China-made engine braved tropical storms, strong gales and high waves, safely sailing 32,000 nautical miles. The main engine never missed a beat. On her return voyage, setting out from Las Palmas Harbour on the Atlantic Ocean, the *Fengqing* rounded the Cape of Good Hope and then headed straight for Mauritius in the Indian Ocean. This was a test for the main engine, which had been running for 18.5 days continuously. At the Cape of Good Hope the ship encountered fierce waves, strong gales, heavy fog and cloud-bursts. Still the main engine functioned normally and

the ship never reduced speed. When high waves delivered silvery, flapping fish onto the deck, the seamen quipped: "Gifts from the sea for our new ship and her masters!"

Sceptics had warned against making long voyages without imported radar apparatus, others claimed that China-made radar was effective only within three nautical miles, so what was the use of it? Again facts disproved their allegations, for several islands calculated to be 50 nautical miles off the Pacific coast were clearly reflected on the China-made radar's fluorescent screen. One of the islands was found at 48 nautical miles. The radar was effective at 50 nautical miles at another test and proved its worth throughout the five-month voyage.

Other sceptics alleged that the China-made electric longitude comparator would be thrown off by the heat of the equator. The workers of the Shanghai Navigation Instrument Plant took up this challenge and produced a comparator that stood the test of a 55° C. temperature, and it functioned perfectly throughout the 120 days on the high seas.

The ship's China-made transmitter-receiver set also demonstrated its stable frequency, high sensitivity and good selectivity.

It took capitalist countries some 40 years from their first 2,000-h.p. diesel engine to make a 10,000-h.p. turbo-charged diesel engine. It took China only 13 years. China also was designing and building good-sized ships a dozen or so years from the time she was only repairing and fitting out small boats, an industrial step-up which took capitalist countries about half a century to make.

The *Fengqing's* successful voyage is another demonstration that China's heroic shipbuilders and seamen armed with Mao Tsetung Thought have the ability to stand on our own feet in the family of nations.

How the Chinese People Control Their Rivers

SOLID, tree-lined dykes now run along the banks of China's major rivers, which for centuries had been deadly scourges. Hundreds of newly-dug canals serve both transport and irrigation. Mountainous areas of the south and plateaus of the north, where water used to be scarce, are now served with a maze of reservoirs, irrigation channels and pump-wells. "Yellow dust filling the air or else flooded homes" is a situation definitely of the past.

For thousands of years the Chinese labouring people had to fight against flood and drought for their very survival. But though they had built a number of world-famous projects for this purpose, records show a total of 1,056 droughts and 1,029 floods in the 2,155 years from 206 B.C. to liberation in 1949, an average of practically one disaster every year. In the old society, when the labouring people were socially enslaved, they had no freedom to deal with the viciousness of nature either.

But the changes since liberation did not occur of themselves. Twenty-five years ago when new China was born, her rivers ran wild and such dykes as existed were quite

unsafe. With few water control projects the peasants had to depend on the doubtful beneficence of nature for their harvest. Flood and drought often alternated, or occurred simultaneously, depriving millions of their lives and homes. Imperialist prophets asserted that new China would collapse, that she could never conquer drought and flood, which had proved insuperable for all past governments.

The stupidity of the imperialists' wishful prophesy revealed itself, however, when the emancipated Chinese labouring people learned Chairman Mao's teaching that **irrigation is the lifeblood of agriculture** and began transforming nature by their own efforts, gradually solving the problem of too much or too little water.

Impressive work has been done on the Yangtze, Huai, Yellow and Haiho rivers, where drought and flood posed a constant threat to the people. In the old society, the reactionary rule and its ideology prevented the people from realizing and applying their actual strength in struggling against nature. In fact, the reactionary rulers used every natural disaster to place more levies on the people on the pretext of building water control projects, which never came to anything. At the same time they spread the doctrines of Confucius and Mencius that the people must submit to the "will of heaven," pressganging the peasants into forced labour to build temples and fostering superstition.

The storm of socialist revolution guided by Mao Tsetung Thought smashed the political and economic fetters binding the labouring people and swept away the ideological sludge that made them subservient to the "will of heaven" at the expense of their initiative and creative-

ness. The people began to be the true masters of the land.

When Chairman Mao issued the great call in 1951: **The Huai River must be harnessed**, the people responded with incredible joy, at once forming a vast labour force to tame the river. There were old people who in the old society had been reduced to beggary, women whose families had been wrenched apart in flood, and younger people who had grown up under the threat of flood. Confident and determined, drawing strength from Chairman Mao's call, they saw for the first time that the reins for controlling the Huai River lay in their own hands and they decided to grasp them tight. From then on, every winter and spring in the past two decades and more, hundreds of thousands or as many as several million people have turned out to work on river control projects in all weathers.

When unusually heavy floods hit many parts of the world in 1954 the Yangtze River around Wuhan rose one metre higher than in the disastrous 1931 floods when Hankow city was submerged, the water in some places reaching to the second storey of buildings in the city proper. But this time the people of Wuhan swung into action to prevent this happening again. More than 200,000 people worked for 100 days and nights, moving a total of 3.5 million cubic metres of earth and stone to the dykes from the hills around to reinforce them. The rampaging Yangtze River had to submit to the fighting men and women who were convinced that they could conquer nature.

The transformation of Hsinghua County around a Huai River tributary provides vivid contrast between

past and present. Floods were frequent in this low-lying county. In the 1931 disaster 2,600 people starved to death and 6,700 families fled in a single township of 11,000 households alone. Hsinghua is quite a different county after river control, which involved the removal by the local people alone of 170 million cubic metres of earth in the more than two decades. Far from being a threat to the people, the water of the Huai River helped send the county's grain output up to 715,000 tons in 1973 as against only 135,000 tons in 1949.

Ke Shih-yang, 56 years old, is a veteran model river-tamer. He is also a member of his commune's revolutionary committee. Before liberation the multiple oppression by landlords and Huai River floods had forced his family to go begging time and again.

"When will the floods ever end? When will farmers' life cease to be bitter?" were questions Ke Shih-yang asked himself before liberation. Years passed but no change came, and finally he had to resign himself to the "will of heaven."

After liberation, when the Party led the poor and lower-middle peasants in overthrowing the landlords and sharing out the land, these poor peasants got organized with the help of the Party organizations to tackle the Huai River. Ke Shih-yang joined the front lines of the work force, labouring together with the other dedicated men and women who did not rest until they had built a 200-km. dyke shoring up the northern bank of the Huai and dug 1,000 reservoirs. With these and supporting projects completed, they began the actual work of putting the trouble-making Huai River

under control, silencing the last whisper of the theory that "heaven decides everything."

Ke Shih-yang, who became a Chinese Communist Party member in 1954, remained active in the fight to thoroughly control the Huai River. He said: "Building a new Huai River serves future generations."

Visitors to China from the capitalist world often ask how new China has been able to solve so many of her flood and drought problems so quickly when old China could not solve them in the thousands of years before.

The answer to this question lies within the system itself. It is due to the forces set free by China's advanced socialist system and the Chinese people's soaring socialist enthusiasm engendered by it.

The builders on water control projects undertaken by the local people, of even sizable proportions, have used simple tools and equipment — hammers, chisels, picks, wheelbarrows, home-made explosives and devices — with scarcely an item of large, modern equipment except on state-financed, major projects. Yet, with these simple tools and their own efforts, the Chinese people have begun controlling the Yellow River, known for centuries as "China's Sorrow," and the Haiho, putting these former menaces to the people to good use in socialist construction for the present generation and those ahead. Out of the 22 million hectares of farmland vulnerable to waterlogging in China, 16.6 million hectares had been put under control by 1973.

As an agricultural country old China had few regularly irrigated fields. Today, Chinese peasants have built large numbers of new-type fields which give steady high yields even in bad years. In new China's first quarter-century

there have been built more than 2,000 big and medium reservoirs, and electric or motor-driven pumping stations with a total of 30 million horsepower. The amount of electricity consumed by China's rural areas exceeds that consumed before liberation by the entire country including the cities. China's freed labouring people have solved the many difficult problems which baffled past dynasties.

The Kuomintang reactionaries invited imperialist "specialists" and "authorities" to help them control China's rivers and the press made quite a noise about their "wonderful plans" for the Yangtze and Huai rivers. Nothing noticeable was achieved but sheafs of reports that remained in their files while the Yangtze River went on bringing disaster to the people in the area. Eventually the Kuomintang reactionaries designed a three-gate flood diversion regulator to be built near Wuhan, a project which an average production brigade could quickly complete today. At that time, the Kuomintang reactionaries begged and received "assistance" from five foreign countries for the project and took three years to finish it.

In new China's early years, when the Chinese people began work on their first large-scale flood diversion project on the Yangtze River's Chingkiang tributary, they were faced with the task of repairing and reinforcing all existing dykes along the Chingkiang and building 208 kms of new dykes. They were also to construct an 86-arched-steel-gate flood diversion regulator providing safety for the 170,000 people of the area in case of flood. Inspired by Chairman Mao's call to **strive for the successful completion of the Chingkiang River flood diversion project in the interests of the people**, the builders accomplished the task in 75 days,

During the Cultural Revolution, to reclaim land from the sea, the people of Chaoyang County in Kwangtung Province warded off the pounding of sea waves on their South China Sea coast mainly by hand labour aided by simple tools and equipment. In only nine months they put up along the coast a 1,500-metre-long dyke with 72 nine-ton sluice gates. The top of the dyke is wide enough to allow for two-way motor traffic. This project protects 20,000 hectares of existing farmland and provides the conditions for reclaiming 2,300 hectares from the sea.

The stone for the construction was all obtained locally and moved to the site by man-power. This amounted to roughly 70,000 truck loads of stone over a distance of 20 kms, but the people did not ask for any motor vehicles, leaving these for other construction projects. What they did was to mobilize 3,000 bicycles and carts, and with these they completed the transport job in eight months. Bicycles were rigged up to carry 300-kg. loads and kept going between the beach and the rugged mountain path day and night. As one poor peasant expressed it: "The sluice gates went by bicycle into position, and the dyke on our shoulders."

In the old society, any "water control" the landlords, capitalists and bureaucrats ever undertook was done in the interest of their own profits and not for the people. Lawsuits and popular strife over water resulted, and many a family was ruined.

Today, with a new type of relationship among people based on socialist ownership of the means of production, people willingly sacrifice the part for the whole, subordinate personal interest to that of the collective, take

on hard jobs and leave easy ones to others. This ensures unified, over-all planning and multi-purpose projects, and makes possible greater, faster, better and more economical results in water control construction.

One instance is the Tsining region in Shantung Province where, during the Cultural Revolution, 30,000 people started work on a major project to expand the irrigated acreage and facilitate navigation. The project called for the digging of an additional river course in the neighbouring county of Peih sien in Kiangsu Province which would cut through 3,300 hectares of its farmland. There was a good deal of discussion on the pros and cons of this, the poor and lower-middle peasants of Peih sien finally deciding: "It will mean giving up some of our land, but the people in Tsining will grow a lot more grain with the new river than we'll be giving up. We should consider the interests of the whole country and the whole revolution."

In recent years the people of Shantung have been building a number of major water control projects, and the people of neighbouring Kiangsu Province have co-operated by letting excess water from Shantung run off into Kiangsu's water control network. Shantung people, in their turn, took the initiative in closing the sluice gates during a flood so as not to bring harm to their neighbour. Another example is the selflessness of the people of Anhwei, who took it upon themselves to dig a canal in their own province to drain off excess water from Honan. Once when flood water rushed down from the hills, the Honan people took the brunt of it while building dykes which protected Anhwei's crops from damage.

In the quarter-century since the founding of new China, and particularly since the Cultural Revolution got under way eight years ago, Chairman Mao's brilliant materialist and dialectical thinking has spread as never before among the hundreds of millions of people and has promoted China's water conservancy work.

The Chinese people have also turned their attention to the dialectical relationship between irrigation and soil improvement. In the winter-spring of 1973-74 China expanded and improved irrigation on 3.3 million hectares of land, levelled 5.2 million hectares, deep-ploughed 13 million hectares, terraced 930,000 hectares and transformed 730,000 hectares of low-yield land. The benefits of water conservancy work in 1974 were the greatest in any post-liberation year so far.

Drought used to be the main menace to farming in the vast north China area where annual rainfall is low and rivers often run dry. To tap the abundant underground water sources had long been the desire of the people there, but in the old society most villages could not locate them, relying as they had to on geomancy. After liberation, considerable progress was made in tapping and using underground water, but results were limited so long as the counter-revolutionary revisionist line with its idealist apriorism exerted their influence. Many areas were declared unsuitable for well-sinking and the people were in the dark concerning the laws governing the location of underground water supplies.

During the Cultural Revolution rural cadres and peasants in north China, proceeding from the materialist theory of knowledge, were convinced that they could understand the objective world no matter how com-

plicated and that underground water, as an objective reality, was certainly governed by definite laws. Taking the scientific approach of practice, knowledge, again practice and again knowledge, they made investigations, studies and scientific analyses which led to their sinking a number of pump-wells in eastern Kansu, northern Shensi and northwestern Shansi provinces, areas thought to be water-deficient and unsuitable for well-sinking. China by 1974 had 1.3 million pump-wells irrigating 7.3 million hectares of land.

Large areas in southwest China have a peculiar karst topography with such an extreme dearth of water that not a drop was to be found above ground during the dry seasons, fields were desiccated and crops withered. Yet the murmur of underground water could be heard in some places with the naked ear.

During the Cultural Revolution a Kwangsi hydrogeological team surveyed 428 spots where subsurface water was indicated, 2,200 square kms of land between mountain heights and 44 deep caverns, finally verifying the location of 19 underground water sources, sufficient to irrigate 2,660 hectares of farmland and provide drinking water for 10,000-some people.

The Chinese people's achievements in water control bear out Chairman Mao's teaching: **Socialism has freed not only the labouring people and the means of production from the old society, but also the vast realm of nature which could not be made use of in the old society.**

Little more than 25 years ago the Chinese people were fighting a losing battle against flood to protect their individual homes and struggling against drought for their very lives. Today their aim is to control the rivers

not only as they affect a commune or a brigade, a region or a county, nor are they satisfied to do this merely within the bounds of a province or river valley; they aim at the whole of China.

In the northern part of Kiangsu Province is the Chiangtu electrified drainage and irrigation project, the largest of its kind so far in China. It is a water control network including three large drainage and irrigation pumping stations and a dozen other projects linking the Yangtze and Huai rivers. In drought, water is pumped from the Yangtze into the Lihsia River in northern Kiangsu. In flood, excess water is taken care of by a reverse process.

A still larger pumping station is now under construction, its builders resolved to make part of the water of the Yangtze which had flowed eastward aimlessly for millions of years cut through mountains and flow purposefully northward to irrigate farmland in northern China.

Such resolution plus over-all planning and the work necessary to bring it about is an outstanding feature in today's water control construction.

North China experienced drought in the summer of 1973. When water ran short in the industrial city of Tientsin, help was given it by diverting Yellow River water through the People's Victory Canal in Honan, the Wei River, the Wei Canal and the South Canal, flowing to the city through 30 counties and cities in Honan, Shantung and Hopei provinces in a feat of co-operation impossible under any of the dynasties.

The prospect of sending south China's excess water to the dry north, building a network of rivers and canals

over the entire country so that every part of the country is covered with green is certain to be realized in the not too distant future, for the people are working towards it enthusiastically.

In a mountain village in central Szechuan Province the 55-year-old poor peasant Yuan Tse-chuan, now livestock breeder for his production team, has since 1967 in the Cultural Revolution been using his spare time to prospect and chart water resources in water-short Jenschou County, travelling 1,000 kms over mountains, covering a dozen communes within a year or so. Planning on the basis of this data and making as many as 60 corrections, he has worked out and proposed a complete water conservancy scheme for the county. Yuan Tse-chuan's maps and plan demonstrate a poor peasant's devotion to the people.

The veteran in water control construction Shih En-chiu, who began this work shortly after liberation, is still selflessly at it, having gone on to a key project in the Huai River harnessing. Shih En-chiu often says: "We should think beyond our own small family and concentrate on our socialist motherland!"

Where, with the masses as the real heroes, is the impotence of the past in face of natural disasters? As Chairman Mao pointed out in the Great Leap Forward year of 1958: **The working people on the 9,600,000 square kilometres of the People's Republic of China have really begun to be the rulers of our land.**

A New Dam Across the Yellow River

THE Yellow River, the second largest in China, originates in the Bayan Kara Mountains in Chinghai Province and follows a long zigzag course before entering the Loess Plateau in northwest China to pass through Lanchow in Kansu Province. It then turns north-eastwards and squeezes through Chingtung Gorge between the Holan Mountains and the Ordos Plateau. Here a big concrete dam straddles it, diverting the turbulent water at man's will into numerous irrigation canals and a row of power stations.

It was in response to Chairman Mao's great call, **work on the Yellow River must be done well**, that the people of various nationalities in China started this key water conservancy project at Chingtung Gorge. It has turned a new page in the history of the Yellow River. Located in the Ningsia Hui Autonomous Region, the Chingtung Gorge project is one of the major constructions to develop the main course of the Yellow River. It is a multi-purpose project designed mainly for irrigating surrounding fertile fields, and also for providing electricity and preventing floods. Construction was started in the Great Leap

Forward year of 1958. Irrigation began in 1960 and electricity generation at the end of 1967. The completion of the project is a victory for the people of various nationalities in China in their common fight against nature.

Making Revolution at the "Dragon King's Temple"

For many years a legend had circulated in the Chingtung Gorge area that in ancient times the Yellow River waters were blocked by the Holan Mountains so that the upper reaches were flooded. King Yu, in charge of river-harnessing, came to Chingtung Gorge and split the mountains open with one blow of his axe, allowing the Yellow River through. This is only legend, but it shows the ardent wish of the people along the Yellow River to tame it.

As many as 2,000 years ago the labouring people in Ningsia irrigated their fields with water from the Yellow River. On the contrary, the reactionary ruling classes in the past regarded the Yellow River as "sacred" and "unconquerable." To maintain their reactionary rule, they exerted every effort to push the doctrine of Confucius and Mencius that "everything is decided by heaven." To the east of Chingtung Gorge, facing the roaring waters, they built a "Dragon King's Temple"* to deceive the people with the belief that their "fate" was in the hands of this clay idol. Each year, before allowing the people to use any water from the Yellow River for irrigation, the reactionary rulers would enact a farce of offering sacrifices to the "river god," forcing

* Dragon King in Chinese mythology controlled rain and water.

the people to assemble in prayer to Dragon King. In the long years before liberation, however, with no dams ever built to control the water, dykes and canals frequently burst and big tracts of good land were laid waste during the flood season, while in drought the river and canals dried up and the crops withered. Under the guidance of Chairman Mao's revolutionary line, the labouring people of various nationalities in Ningsia launched a new fight to tame the Yellow River when the key water conservancy project at Chingtung Gorge was started in August 1958.

At that time, Ningsia's industrial base was rather weak and there were no modern machines or instruments on the work-site. There were cynics who scoffed at the idea. "You're dreaming to think of damming the Yellow River without machines!" they said.

But the labouring people who had fought the savage river for generations replied, "With Chairman Mao's wise leadership we will surely conquer nature and tame the Yellow River. To gain time, we'll start with hand methods and gradually create the conditions for mechanization."

Tens of thousands of builders came on donkeys or camels, wooden boats or sheepskin rafts from all directions to take part in the project they had dreamed of for years. Chingtung Gorge which had slumbered for centuries came awake with activity. With the turbulent river roaring beneath them, the builders put up the big signboard "Project Headquarters" right in front of "Dragon King's Temple," challenging at once the doctrine that "heaven ordains all" as symbolized by the clay idol. These builders were determined to demonstrate that with

the leadership of the Communist Party the Chinese people are quite able to transform their land. This idol had been toppled and stripped of all prestige.

The robust and young organized themselves into various shock brigades and requested the toughest jobs. Women of Hui nationality who had never before left their homes arrived from various places and organized a "March 8" shock brigade to join in the battle. Another legend about King Yu is that in his work on the river he passed his own home three times without going in. Today, many moving stories were told about women sending their menfolk to work on the project and young couples engaged to be married postponing the event till the project was completed, and there were actually numerous workers who passed their own doors many times without going in. An old man over 70 arrived at the work-site with his own provisions after travelling for ten days by donkey. He had come from the Mount Liupan area where the Red Army passed on the Long March, volunteering to contribute his share. Stroking his snow-white beard he said with emotion, "Only led by Chairman Mao and the Communist Party have the people of various nationalities such enthusiasm, for we're working for the happiness of future generations!"

The People Have Strength

Construction on the Chinglung Gorge project started just as the freezing season was approaching. The first stage of the work, the building of two cofferdams in the river channel, should be completed before the river froze over to permit the excavation of the dam's foundation

pit. After a day's hard work, the builders still held enthusiastic discussions in their tents in the evening on building the cofferdams. Having summed up the experience in using the straw-and-earth cofferdam method created by the Chinese labouring people in past centuries for irrigation, water retention, maintenance, and for banks protection and emergency work along the Yellow River, builders proposed to use this method for the present project.

This set off heated debates on the work-site. The conservative-minded, believing in neither the creative ability nor the strength of the masses and basing themselves on rules in old books, argued that such big cofferdams as were required across the turbulent river must be of sand and stone, wood or concrete. Straw-and-earth cofferdams, they claimed, would only be washed away.

But the rolled steel, cement, timber and other materials needed for the project had to be brought in from other parts of the country, and the method they proposed would certainly hold up the work till after the freezing season. The question of the material for the cofferdams was one of whether the check dam was to be built with greater, faster, better and more economical results, and essentially one of whether or not to believe in the masses' tremendous creative power.

The Party committee of the Engineering Bureau firmly supported the majority opinion to build straw-and-earth cofferdams.

Twenty-six experienced workers of the Hui and Han nationalities were selected from the Ningsia Hui Autonomous Region to help build the cofferdams and plunged into the battle together with over 10,000 builders. Two

cofferdams were to be built, one on the east and one on the west side of the river channel, extending towards midstream. The cofferdams were to be constructed of alternate layers of stalks, straw and earth.

Winter came, with the cutting wind on the northwest highlands howling fiercely and the rapid Yellow River water chilling to the marrow. The builders only worked with still greater vigour and enthusiasm. Squad leader Chu Sheng-chin, a Party member, and Ma Yung-su, a worker of Hui nationality with 30 years' experience using indigenous methods in water conservancy work, led the masses in building towards the centre of the riverbed. Finally, after 40 arduous days and nights, they completed the two straw-and-earth cofferdams which reduced the width of the river by half. Like bronze walls, they withstood a flow of 2,100 cubic metres per second, preparing the way for excavating the dam's foundation and building the concrete dam itself.

Throughout this battle, the builders saw their own great strength to combat harsh nature, and their confidence grew. It was freezing weather again when the crucial moment came for closing the dam. Now, local inhabitants knew that the Yellow River was like a sleeping python when frozen over, appearing calm but with tremendous force beneath its ice surface. If the water level rose by so much as a metre in closing the dam, kilometres of ice in the upper reaches would break up and come rushing down in torrential ice floes, while water would form an ice barrier blocking the gap and destroying the cofferdams at once. Some said that water never had been diverted during the freezing season and the attempt should not be made. But, if the dams were

not closed in the winter, there would be no irrigation the following spring. What to do? Face up to the difficulties, or sit back with folded hands waiting for favourable conditions?

The Party committee of the Engineering Bureau called meetings asking the builders to put their heads together, while committee members visited experienced water conservancy workers to learn exactly how the Yellow River behaved during the freezing period.

Then the battle to seal the gap began, the builders with their staunch revolutionary spirit racing against time. Tens of thousands of dynamite charges were used to blast away the ice at the gap and part of the river flow was diverted into a new canal. Then, quickly they filled the gap with wire netting containing rocks and concrete blocks. Finally, with a deafening noise the last massive concrete block was wedged into place and the dam closed.

Outbursts of cheering from crowds of people echoed through Chingtung Gorge at the builders' success, while they laughed at this age-old "vicious dragon" tamed now by people of the Mao Tsetung era. The clay idol had been reduced to a heap of mud and was being washed away by the rushing water.

Intensifying the Fight to Conquer Nature

Red banners fluttered on the work-site, trucks and carts streamed back and forth and explosions rocked the place day and night as the construction progressed rapidly.

Then the chill wind of the Liu Shao-chi revisionist line blew in, giving rise to a fierce struggle at the work-site between going on with the project or stopping the work. Some said the project involved too much work and that the geological structure was too complicated. Further, that in the far northwest where it was located, the industrial base was weak and transportation difficult. They said that the project would have to be abandoned sooner or later, and the sooner the better.

The broad masses of workers, cadres, technicians and peasants of various nationalities, however, thought differently. In loess caves and around campfires, they concentrated on studying Chairman Mao's instructions: **The wealth of society is created by the workers, peasants and working intellectuals. If they take their destiny into their own hands, follow a Marxist-Leninist line and take an active attitude in solving problems instead of evading them, there will be no difficulty in the world which they cannot overcome. And, this army has an indomitable spirit and is determined to vanquish all enemies and never to yield.**

Finding strength and the correct course to follow from Chairman Mao's brilliant works, they filed a flood of revolutionary appeals with the Engineering Bureau's Party committee. They said: "This much needed project, which stems from the Great Leap Forward, shows the Party and Chairman Mao's concern for us minority nationality people. It must not be stopped."

They declared that the difficulties would surely be overcome and that the project would surely be completed. They resisted the revisionist line calling for a halt and

raising high their red banners persisted in their work day and night.

When a worker discovered a large fault while digging for the dam's foundation, the builders studied this problem together and made suggestions for overcoming it, rebuffing with action Liu Shao-chi's revisionist policy of stopping the project. Following Chairman Mao's teaching that **the masses have boundless creative power**, the Party committee relied closely on the masses in tackling the fault through which large quantities of water were leaking out. The workers descended into the foundation pit a good 30 metres below the riverbed by ropes and stepping on rocks to operate the drills. Then all pumps went into action, the workers pumping the gushing water out of the pit and into the riverbed. The temperature dropped to 20 degrees below zero and the workers' eyebrows and caps became white with frost. But their enthusiasm only grew. When a pump developed engine trouble, Party member Chang Pao-hsing jumped into the icy water to inspect it. This inspired the others to follow him and the pump was soon repaired. Throughout the period of Liu Shao-chi's counter-current the builders displayed their collective wisdom and strength and carried out still better Chairman Mao's policy to **maintain independence and keep the initiative in our own hands and rely on our own efforts**. Making over 2,500 technical innovations, they overcame difficulties one after another and the construction went ahead. The revisionist line went bankrupt.

The Great Proletarian Cultural Revolution brought enormous fresh impetus to the builders on the Chingtung Gorge project and the work-site became a battlefield of

revolutionary mass criticism. Recalling the two-line struggle in the process of building the Chingtung Gorge project, the workers indignantly condemned Liu Shao-chi's revisionist fallacies of "crawling along at a snail's pace" and "worshipping everything foreign," and more consciously implemented Chairman Mao's revolutionary line. Devoting their revolutionary zeal sparked by the Cultural Revolution to the project, they declared: "We'll complete the year's plan in six months. We'll make up for the time lost due to the interference by Liu Shao-chi's revisionist line!"

Very soon the work-site was a new scene of activity, with workers in concrete reinforcement, moulding and many other kinds of work pulling together to speed the building of the concrete dam.

When a turbo-generator set designed and made by the Harbin Electric Engineering Factory arrived for the project, the builders fondly gave it the name "Win Honour," declaring that as this turbo-generator set was delivered ahead of schedule, they would install it ahead of schedule too. Their large crane with 200 tons lifting capacity was still on the way so the workers dismantled the set and hoisted each part by smaller cranes. The rotor weighed 60 tons and could not be taken apart. The workers used two cranes each with a ten-ton lifting capacity to hoist it. The first turbo-generator set was installed within six months and began supplying electricity on December 26, 1967. When the good news spread through the Yellow River valley, the people heartily cheered Chairman Mao and the great victory of his revolutionary line for bringing them electricity.

The Rugged Northwest Turned Green

After the completion of the Chingtung Gorge project the Yellow River began to bring benefit to the people of various nationalities in Ningsia, the region appearing more like the lush south than the rugged northwest. Through the magnificent dam rushes silvery water from the man-made lake into canals to the vast fields in the Yinchuan Plain and creating an oasis within the Gobi Desert, bringing irrigation to large tracts of land. Rows of high-tension transmission lines carry electricity to power factories and run farm machinery. Electric lights shine like stars in the sky. These great socialist changes have brought great excitement and a much better life to the people of various nationalities in Ningsia.

When water first came from the Yellow River to the Tyngri Desert and then to the edge of the Maowusu Desert there was great rejoicing among the people of various nationalities living there. They ran alongside the headwater and cheered this great benefit for the people. Dipping up water in their hands, old folks told their children with tears of happiness in their eyes: "Never forget that this water is brought to you by Chairman Mao!"

Certain foreign geographers had asserted that the desert in the foothills east of the Holan Mountains could not be changed even in one or two generations. But, armed with Mao Tsetung Thought, the Chinese people transformed it in far less than a generation. Digging many canals of good quality at high speed and low cost, they changed over 13,000 hectares of desert using water made available by the Chingtung Gorge project. The entire irrigated area is now green with rice fields,

orchards, gardens and shelter belts along the roads and canals. Villages have sprung up. Chairman Mao's teaching: **Ensure that there will always be water for irrigation in times of drought and adequate drainage in times of heavy rain,** has become a reality.

Former alkaline land and mud beaches have become grain-producing areas. Cultivated area doubled and average per-hectare output jumped from 0.75 ton before liberation to more than 3 tons. This desolate region of much wind and sand but few people in the past has been fundamentally changed. A great power network has been set up with 60 per cent of the area's electric current carried by 6,000-km. high-tension transmission lines over mountain and desert from the Chingtung Gorge power station to supply cities, countryside and pasture areas. The boon to industry, agriculture and animal husbandry is apparent.

Ningsia had no modern industry before liberation and only a small generator with a capacity of several tens of kws left over from the Ching Dynasty. The Chingtung Gorge power station now provides electricity for the development of such modern industries as metallurgy, coal-mining, machine-building, chemical fertilizer, agricultural machinery, textiles and electronics. A mining area in the Holan Mountains extends for 50 kms like an open "treasure house," as a dozen or more modern coal pits have gone into production in the past few years, making the place a new coal base in the northwest.

With electricity in the countryside, the communes and brigades have established five small industries — iron-smelting, coal-mining, power-generating, cement-making and chemical fertilizer-making. They power motors for

pumping, threshing, grinding, fodder-crushing and oil-pressing at the push of a button, freeing large numbers of people from heavy manual labour. Now, when the labouring people study in the brightly-lit political evening schools, when they sit with their families by the radio listening to the news broadcast or the revolutionary model operas, when their children do homework and women make new dresses under the electric lamps . . . all feel deeply the great happiness of living in the era of Mao Tseitung Thought.

The Tachai Road

THE Tachai Production Brigade of the Tachai People's Commune in Hsiyang County, eastern Shansi Province, lies 1,000 metres above sea level in the Taihang Mountains of north China. It has 83 households with 440 inhabitants.

In pre-liberation Tachai the topsoil was lean and crop yields were meagre. With grain output averaging less than 0.75 ton per hectare even in the best year, the people led a wretched existence.

After more than 20 years of struggle Tachai today is a flourishing, prosperous socialist new village. Per-hectare grain yield in 1973, for example, was 11 times the pre-liberation figure despite an unusually severe drought. The more than 7.5-ton-per-hectare average that year meant every member of the Tachai Brigade bringing in a ton of grain.

Tachai is a standard-bearer in continuing the revolution in the rural areas after the transformation of the system of ownership. The people of Tachai have blazed a path for all the Chinese peasants in building a socialist new countryside through consistently following the

principle of putting proletarian politics in command and placing Mao Tsetung Thought before everything else, giving full play to the spirit of self-reliance and hard struggle and displaying the communist style of love for the motherland and the collective.

Ever since 1964 when Chairman Mao issued the call: **In agriculture, learn from Tachai**, a mass movement to answer it has rolled across the land with mounting vigour, energizing millions of Chinese peasants to **grasp revolution and promote production**.

How did Tachai transform itself?

Kuo Feng-lien, the present Party branch secretary of the Tachai Brigade, says, "There could never have been the new Tachai of today without Chairman Mao's revolutionary line."

*

Before Tachai's liberation in 1945 most of the people were either farm labourers or had been beggars at one time or another. Many families had sold sons or daughters to keep alive. One landlord and three rich-peasant households in the village owned 60 per cent of the land. In the land reform following liberation, when these exploiters were overthrown, the impoverished peasants got land to till.

Natural conditions in Tachai were very poor. People described it as "a place of steep, rocky hills without three *mu** of level land and where not a year passed without a calamity." Its approximately 50 hectares of cultivated land were fragmented into more than 4,700

* One *mu* is equivalent to 1/15 hectare.

plots, the smallest less than 1/150 hectare. Many of these little plots hung precariously on the slopes so that any sizeable downpour would wash away topsoil and fertilizer. Such was the old Tachai. What should these newly emancipated peasants do in such an unfavourable situation? How was their situation to be changed?

As early as 1943 Chairman Mao in his article "Get Organized!" pointed out: **This scattered, individual form of production is the economic foundation of feudal rule and keeps the peasants in perpetual poverty. The only way to change it is gradual collectivization, and the only way to bring about collectivization, according to Lenin, is through co-operatives.**

Socialist collectivization is a deep-going revolution in which every step forward involves a struggle to overcome the resistance. The handful of overthrown exploiters will naturally do all they can to sabotage the new order and restore their lost paradise. A bunch of chieftains of opportunism inside the Party falling in with the requirements of class enemies at home and abroad will inevitably carry on retrogressive and restorationist activities. The deep-rooted centuries-old concept of private ownership in the minds of the people, too, impedes the establishment of the new social system.

Tachai began to organize mutual-aid teams in 1946. An agricultural producers' co-operative was formed in 1953 which developed into one of the advanced type and finally, in 1958, into a brigade of the Tachai People's Commune.

In the past 20 years and more Tachai's poor and lower-middle peasants led by former Party branch secretary

Comrade Chen Yung-kuei* went through acute struggles between the socialist and capitalist roads. The hearts of the people could be welded together with the guidance of Chairman Mao's revolutionary line. This meant firmly keeping to the socialist road and fighting against class enemies, against the revisionist line and against erroneous ideas. Only in this way could they beat natural adversities and overcome their poverty.

Progress Through Struggle

There were 190 people living in Tachai on the eve of its liberation. The Japanese aggressors had killed 42 young and middle-aged men in a massacre in 1940. In 1945 over 20 young men went off to join the people's army. That left the village with mostly old men, women and children. Chen Yung-kuei faced very real difficulties the following year when in response to Chairman Mao's call to **get organized** he took the lead in forming a mutual-aid team with poor peasants and farm labourers as core. Ten households, including Chen Yung-kuei's, made up the mutual-aid team. Four of the families had no able-bodied adults and only the children could come out to work. In five other families those who could do farm work were all aged peasants. The oldest member of this mutual-aid team was over 70, the

* Comrade Chen Yung-kuei was elected to the Party Central Committee at the Ninth National Congress in 1969, and to the Political Bureau of the Party Central Committee in 1973 at the Tenth Party Congress. Now he is also Vice-Premier of the State Council.

youngest was seven. The oldest child was 14. The group became known as the "old folks' and children's mutual-aid team." At the time there was another mutual-aid team in Tachai, made up of well-to-do middle peasants with plenty of manpower and money who styled themselves the "stalwarts' team." They poured scorn on the "old folks' and children's mutual-aid team." "Just a bunch of old fogies and kids! You'll get a lot of laughs but not bigger yields!" they jeered.

Chen Yung-kuei's reply was: "Old folks have experience and children will grow up. We can't go wrong as long as we listen to the Party!" An undeclared emulation took place between the two teams. The "old folks' and children's team" hadn't much in the way of labour or tools, but it had plenty of unity and mutual help and worked hard collectively. In the first year this team gathered 30 kgs more grain per mu than those farming individually. And the "stalwarts' team"? It was "mutual aid" in name but every man for himself in fact. With each trying to grab all he could, its crops languished and before long the team folded up.

As the years went by, mutual aid and co-operation increasingly demonstrated their superiority over the scattered small-peasant economy with farming on a household basis. Some of the well-to-do middle peasants saw the advantages of getting organized and asked to be admitted to the mutual-aid team of old folks and children. By 1949, 49 of Tachai's 69 families had joined the mutual-aid team which now stood solidly on its feet. Though containing the element of co-operation, the mutual-aid team was still a collective labour organization based on the private ownership of land and could

not fully satisfy the requirements for expanding production. In 1952 the 49 households decided to move on and transform their team into a semi-socialist elementary agricultural producers' co-operative.*

Chen Yung-kuei went to the county to apply for permission more than a dozen times, but each time he was turned down. Liu Shao-chi, the biggest capitalist-roader inside the Party, was at that time flagrantly contravening Chairman Mao's proposal and doing all he could to damp the peasants' enthusiasm for co-operatives. Liu Shao-chi was frantically pushing his revisionist line, advocating "long-term protection to the rich-peasant economy" and ranting that it was a "wrong, hazardous and utopian socialist concept in agriculture to elevate mutual-aid teams to agricultural producers' co-operatives."

After much struggle they were allowed at last to set up a co-operative but only on condition that the number of households participating should not exceed 30. The pretext given was that "a large co-operative is too unwieldy." What were the other 19 households to do — go back to individual farming? Chen Yung-kuei got around that by including all 49 households in the co-op while calling it "a 30-household co-op."

That very first year of 1953 they brought in a big harvest. And by the time the county found out they

* In an elementary agricultural producers' co-operative the members pooled their land as shares. Each member was paid according to the amount of work he did and the amount of land he pooled. When it developed into an advanced co-operative in 1955, the land was collectively owned by the co-op, the members' draught animals and large farm tools were bought by the co-op and the socialist principle of "from each according to his ability, to each according to his work" was practised.

hadn't excluded any of the 49 households, there was very little it could do about this.

Several class enemies in the village — the overthrown landlords, rich peasants and other counter-revolutionaries — hated the co-op like poison for taking the road of socialist collectivization and attempted to sabotage it. At a meeting to celebrate the first bumper harvest as a co-op, a counter-revolutionary (former agent of the Japanese aggressors) got up and declared: "What's your 120 kgs per *mu*! I got 150 just working on my own!"

Chen Yung-kuei had just returned from a meeting in the county, bringing with him a government directive introducing planned purchase and supply. According to the new directive, the purchase and supply of grain were to be placed under unified state control, with private buying and selling of grain prohibited. The state was to fix the amount of grain to be delivered and sold by each agricultural unit according to its output. Now, when this counter-revolutionary deliberately exaggerated his yields and spoke for individual farming, Chen Yung-kuei decided to call his bluff. He informed the meeting of the amount fixed by the state for Tachai, adding, "Our co-operative, mutual-aid teams and individual farmers have all brought in excellent harvests. This is simply wonderful! We'll be able to overfulfil the quota for Tachai. The amount for each unit will be settled tonight!"

That caught the counter-revolutionary flat-footed. "I was bragging," he retracted. "I didn't get in as much as I said!" He begged to be allowed to deliver and sell in proportion to what he had actually harvested, which averaged only 75 kgs per *mu*.

"Why, we can't let you do that," replied Chen Yung-kuei. "After all, just now you yourself declared 150 kgs. If you want to admit your guilt, you can call on each family in the village and let everybody know that you were trying to sabotage the collective economy." And sure enough, bright and early the next morning this counter-revolutionary went from house to house admitting his guilt and asking for correction.

This struggle knocked some of the cockiness out of the class enemies and boosted the spirits of the poor and lower-middle peasants. It also brought home to all once more that building a collective economy was not all smooth going.

In the autumn of 1953 after consultations with all the poor and lower-middle peasants, the Party branch drew up a ten-year plan for building fields. Tachai's fields were then easy prey to drought and waterlogging. They were still scattered over the seven gullies and eight ridges of a mountainside. To solve this once and for all meant thorough transformation of the land. It was necessary to terrace the strips of land on the slopes and build fields in the gullies to give good yields despite drought or waterlogging. This was quite an undertaking, its size exemplified by the way they brought Wolves' Haunt Ravine under control.

This ravine, about 1.5 kms in length with high steep sides, was the largest in Tachai. Whenever the heavy rains came the run-off would sweep everything before it. In the winter of 1955 all 58 able-bodied peasants in the village were sent to work on a project to convert Wolves' Haunt Ravine into productive fields. They worked right through the winter and into spring in freezing

wind and snow, throwing up 38 retaining walls across the rugged ravine with stone slabs hewn out of the hillsides. The spaces in back were filled with tens of thousands of cubic metres of earth. They built about 1.5 hectares of farmland on this ravine.

Then a terrific summer downpour in 1956 washed away the fruits of their hard labour — walls, crops and all. But the people were not disheartened and went back to work again that winter. Deeper and firmer foundations were laid and larger slabs of rock set in place. A small reservoir was built at the head of the ravine to hold back some of the run-off and lessen the volume of rushing water. And as if to test the will of the Tachai people, an even heavier rain fell in the summer of 1957. The reservoir and retaining walls crumbled. Even the rocks were carried away.

The class enemies took this opportunity to foment trouble. "Men can't beat Dragon King" just as chickens can't beat dogs," they taunted. Some were in ecstasies of joy. "A whole cold winter's effort washed away just like that! We told you so, didn't we!"

Those were difficult days. The Party members and poor and lower-middle peasants took it hard and Chen Yung-kuei became firmer than ever. He thought of the gloating smirks of the landlords and rich peasants and recalled the awful fates of his class brothers in the old society. He also saw before him the lofty ideal of communism.

"We can't give up! We can't do anything that pleases landlords and rich peasants! We must change Tachai's hills and valleys!" he declared.

* See footnote on p. 143.

A meeting of Party members was called and another for the poor and lower-middle peasants to ginger up everybody's will to fight. With cadres and the masses united as one they launched their third assault on Wolves' Haunt.

This was a tougher campaign than the previous two. For 27 days cadres and members of the co-op battled in snow and freezing weather. Chia Chin-tsai, deputy secretary of the Party branch, wielded the exhausting 19-kg. hammer which the landlord in the old society had ordered made especially for him so as to get more work out of him. Now he was swinging it as never before, in the service of building a country belonging to working people like himself. This spirit and drive was shared by the others and matched by a scientific spirit. The builders carefully studied the causes of failure in the previous attempts and worked out many improvements. One of them was to build curved retaining walls instead of straight ones to withstand greater stress. At the end of the 27 days two hectares of terraced fields stood proudly on Wolves' Haunt.

For a whole decade the people worked on like this and brought their plan to fruition. The 4,700 and more tiny meagre plots were merged to form more than 1,800 fields with stable, higher output. These plots in 1962 beat the 1952 yield by 272 per cent.

Severe Trials

In the years 1959-61 Tachai's poor and lower-middle peasants went through new trials when Liu Shao-chi, renegade, hidden traitor and scab, pushed a revisionist

line in the countryside. He advocated *san zi yi bao* (the extension of plots for private use and free markets, the increase of small enterprises with sole responsibility for their own profits or losses, and the fixing of output quotas based on the household) and the "four freedoms" (freedom to practise usury, hire labour, buy and sell land and engage in private enterprises). If Liu Shao-chi had had his way, it would have meant the restoration of capitalism, with the whole countryside going back to the old way of individual farming. However, the people of Tachai persisted along the socialist orientation and repulsed Liu Shao-chi's revisionist line with their actions.

Here is an example. With harvests none too good in some other places during those years, there arose some difficulties in grain and fodder. But Tachai had plenty of both because it had been gathering good harvests for several years in a row and had prudently built up reserves. A neighbouring brigade sent people round to Tachai to borrow grain. Chen Yung-kuei promptly agreed, but first of all he listened to what his own brigade members had to say, since it would be taken from the collective reserves. The majority agreed, but a few hedged. "Why shouldn't we get some interest on this loan?" they argued. The Party branch firmly rejected the suggestion of taking interest, while Chen Yung-kuei considered the idea intolerable.

"What sort of society are we living in today? What sort of people try to make money out of other people's suffering? Are we for socialism or are we for capitalism?" he demanded. After discussion, the members unanimously agreed to lend grain to their neighbours interest-free.

Later, when a brigade came to buy fodder straw from Tachai, Chen Yung-kuei sold them 5,000 kgs at six fen a kg. — the price set by the state — after discussing the matter with the others. But some tongues wagged: "Tachai got the worse end of the bargain! Other brigades are selling at 60 fen a kilogramme." Most of the brigade members, including the poor and lower-middle peasants, replied that selling dear to make a profit was taking the capitalist road, that it was not Chairman Mao's revolutionary line. And so Tachai's reserve fodder straw and bran up to tens of tons were sold to other brigades at the state price.

Later Tachai weathered another very severe trial. Their coming out on top was only because the brigade persisted along the socialist road, stood firm against the revisionist line for restoring individual farming and opposed the perverse capitalist tendency of seeking private gains.

In 1963 Tachai met another disastrous natural calamity. Heavy rain lashed down wildly on Tachai for seven straight days and nights, devastating most of the fields that the people of Tachai had so assiduously built over the previous ten years. Crops were swept away or flattened, roads were washed out and 97 per cent of the houses were badly damaged. Again the class enemies perked up. In high glee they crowed: "The red banner of Tachai is down forever!" and tried to incite people to run away. This would have crippled production and blocked any attempt to rebuild Tachai.

Those were indeed bleak days. Chen Yung-kuei spent many sleepless nights with the other members of the Party branch committee and poor and lower-middle

peasants working out ways and means to get over this disaster. The idea of fleeing reminded the poor and lower-middle peasants of the miseries after a natural disaster in the old days — of families dispersed, sons and daughters sold, of their deep despair and suffering.

The poor and lower-middle peasants said: "We have the leadership of the Party and Chairman Mao and our socialist collective economy. The question is not one of running away but of how to grow more grain!" Firmly standing by the Party branch, they exposed the plots of the class enemies and determined to restore production and rebuild their shattered homes through self-reliance and hard work. Four times they sent back the relief grain, supplies and funds sent to them by the government.

Having made up their minds to fight on, they turned to the next question — concentrating on production or repairing their houses? If they put all their efforts into rebuilding homes and neglected production, they would have roofs over their heads but nothing to eat. That would have made things still worse. If they tackled grain production they would have the strength to repair houses and rehabilitate the fields. Finally it was agreed to restore the ravaged fields and then turn their attention to living quarters. The school, cultural centre and offices were cleared to provide temporary accommodations; brigade members helped each other to solve the shortage of houses.

It was a long, hard fight but everyone pitched in with a will.

Each fallen stalk of maize or other crops that could be revived was raised up by hand, soil firmly packed about

its roots and manure added. Totally destroyed crops were replaced. Everything possible was done to get production going again. In the most critical period they worked in the fields in the daytime and at night built houses. They quarried their own building stones, fired bricks and made lime. The plan to fully restore the fields within five years and build the houses in ten proved conservative. They accomplished the first in 18 months and the second in three years. They dug 208 new cave rooms and put up new houses adding up to more than 400 rooms so that eventually all the brigade members lived in new houses or cave dwellings. With an average of one and a half rooms per person, housing conditions were now much better than before the big rain came.

Despite the severe setback they still reaped a bumper harvest that year, enabling every brigade member to receive his full share of grain as planned. What was more, they fulfilled their original targets for putting aside grain reserves and selling surplus grain to the state.

Forward to New Victories

In 1964 our great leader Chairman Mao gave a high appraisal of Tachai, issuing a call to the whole country — **In agriculture, learn from Tachai.**

This was followed by the socialist education movement (the "four clean-ups") in the countryside, in which organizations at all levels carried out a political, ideological, organizational and economic clean-up. It was a struggle between socialism and capitalism, directed

mainly against the handful of Party persons in power taking the capitalist road. A work-team was sent to Tachai as soon as the movement began. But it implemented Liu Shao-chi's revisionist line of protecting the handful of capitalist-roaders and attacking large numbers of good cadres plus poor and lower-middle peasants who were taking the socialist road.

On reaching Tachai the work-team immediately spearheaded its attack on Chen Yung-kuei and the many other cadres who had been upholding Chairman Mao's revolutionary line. "The pole of Tachai's red banner has been attacked by worms," they asserted, trying to discredit the brigade and so countermand Chairman Mao's directive on learning from Tachai. They fabricated all sorts of absurd charges, claiming that the high yields Tachai had been reporting were based on understatement of its cultivated area. They asserted that brigade members had been getting less than their share of grain as it had been distributed before it was dry, etc., etc. They rounded up the poor and lower-middle peasants for meetings to get them to press charges against the cadres, and when no charges were made they simply fabricated them.

The brigade cadres were under fire for 20 days, but as Communists not one of them bowed before the revisionist line. These cadres and the poor and lower-middle peasants stood solidly together and boycotted all the erroneous decisions of the work-team. Some Party members openly refuted the slanderous attacks levelled against the brigade cadres by the work-team. Veteran poor peasants walked out of meetings it called. At the

height of the struggle the 23-Point Document* drawn up under Chairman Mao's direction was issued, setting guidelines for the socialist education movement in the rural areas and steering it back in the correct direction. A new work-team was sent and its careful investigations proved that politically, ideologically, organizationally and economically the Tachai Brigade had been acting all along according to Chairman Mao's instructions.

And so Tachai passed through another severe trial. With greater zeal and confidence, its people, led by the Party branch, swiftly restored production after the 1963 calamity, then moved forward to construct new fields.

After that the commune members went on to improve the soil. They worked on this for five years and turned plot after plot into land which would guarantee high, stable yields whether there was too much or too little rain. People call these plots "sponges" because they absorb and retain moisture and hold the fertilizer. They have several types of soil in Tachai. Red, grey, sandy

* In 1964 the socialist education movement was carried out in the countryside. At a working conference of the Party Central Committee Chairman Mao directed the drawing up of a document *Some Current Problems Raised in the Socialist Education Movement in the Rural Areas* (i.e., the 23-Point Document). In it he denounced Liu Shao-chi's bourgeois reactionary line (though the name of Liu was not publicized at the time) which was "Left" in form but Right in essence, and repudiated the absurd way he posed the nature of the movement as "the intertwining of the contradictions inside and outside the Party" and "the contradiction between the 'four cleans' and the 'four uncleans.'" Also in this document Chairman Mao for the first time specifically pointed out: **The main target of the present movement is those Party persons in power taking the capitalist road.**

and clay. The red and clay soils bind hard, so they add sand to make them more porous; clay and red soils are added to sandy soil that does not retain moisture and fertilizer well. To enrich the soil they add plenty of organic manure, at the same time heightening the retention walls. In time they built up the original lean, thin layer of Tachai soil into a deep rich loam.

When the Great Proletarian Cultural Revolution started in 1966 Tachai was swept along with the rest of the country by this tempestuous revolutionary struggle. The Tachai people exposed and criticized the crimes committed by the opportunist chieftain Liu Shao-chi in trying to restore capitalism in China. This further helped them understand the great significance of implementing Chairman Mao's revolutionary line and advance firmly along the bright road of socialism under the guidance of Chairman Mao.

In the winter of 1970 they began to lop off hills and fill in more gullies to build what they call "man-made plains."

This effort to enlarge the area of arable land was another big battle. Tachai resounded with thunderous blasts as they dynamited the peaks. Bulldozers shoved, streams of handcarts dumped, and soil gradually filled in the gullies. Those in their seventies threw away their walking sticks and picked up shovels; primary school pupils turned up after school to do their stint. In three years they flattened 37 small hilltops and filled in 15 small gullies to create "man-made plains" in the winter-spring slack farming season.

The Tachai of today was built through such struggle carried on for more than 20 years.

Per-hectare yield of grain in Tachai, which before liberation never topped 0.75 ton, reached 3 tons in 1964, while in the bad drought year of 1973 the yield still averaged more than 7.5 tons per hectare.

Tiger Head Hill towers above Tachai. Seeing it today mantled in green pines and cypresses and 37,000 fruit trees, one can hardly visualize the bald hill of 20 years ago.

In the past the people of Tachai did not engage in side-line occupations. Today there are brick and lime kilns, smithies and carpenters' workshops, to name a few. There were only a few animals. Today there are herds of horses and mules and pigsties full of porkers — 4.8 head of large livestock and 2 pigs per household. And they have started to raise fish in the retention ponds.

The Tachai people take grain as the key link and ensure an all-round development. Income from sources other than grain accounts for 53 per cent of the brigade's total as against 27 per cent before 1967.

Machinization proceeds apace and 60 per cent of the land is tractor-ploughed as the brigade now owns five tractors besides a couple of lorries, fodder-crushers, threshers and driers — in all more than 80 pieces of machinery. The brigade has also put up five cableways totalling 2,400 metres for transporting rock and manure, and for bringing in crops and the like.

Education, culture and health facilities have multiplied with the expansion of production. Since the introduction of a co-operative medical service, health standards have improved considerably in this mountain village. Tachai gives all its school-age children a nine-year education.

Living standards have gone up by a big margin. The brigade, as well as individual households, has reserves of grain and every family has money in the bank, many of the accounts reaching 1,000 to 2,000 yuan.

Farming for the Revolution

The Tachai people are much better off but Chen Yung-kuei always reminds them that they must not have only Tachai in view. If they cared only for Tachai they could work one year and rest for three. But why should they farm better? To build up our socialist motherland and support the revolutionary struggle of the people of other countries, they say.

It is precisely this lofty political ideal which engenders the unrelenting revolutionary spirit of hard work.

In 1963 for example, when calamity struck Tachai, the state promptly sent grain, money and relief supplies. The Party branch welcomed the truck and cart drivers and prepared meals for them, but asked them to take their goods back — they should be given to more needy brigades. When the landlords and rich peasants heard this they muttered: "What's all this! Men die for riches, birds die for food! But these cadres of ours turn back goods delivered right to our doorstep just because they want to become models!"

The poor and lower-middle peasants answered: "We rely on Chairman Mao's revolutionary line and our own efforts to solve our difficulties — not on help from outside!" They know that following the principle of self-reliance involves more than the Tachai brigade — it determines the road to take to build socialism.

Then again in the spring of 1973 a drought of unprecedented severity struck the area. The Tachai people had built a canal round the hills to connect with a reservoir and ensure water for their crops, but during this drought they let other brigades and teams use the reservoir while they themselves fetched water from ponds. They planted their whole maize crop by carrying water to the fields in buckets slung on shoulder-poles. They had to carry 1,500 loads of water for each hectare of land, each round trip covering five kms. They walked 7,500 kms to supply enough water for each hectare of maize they sowed. That's how they managed to get a bumper harvest in spite of the drought.

The people of Tachai farm for the revolution, not for themselves. What's uppermost in their minds is doing more for the motherland. Tachai delivered the state levy and sold to the state 22.5 tons of surplus grain in 1953. As production expanded after setting up the people's commune in 1958 the amount rose to 95 tons. In 1971 it was 160 tons. In 1973, a year of severe drought, they delivered and sold 150 tons of grain besides putting enough aside for their own consumption and for reserves. This meant each member of Tachai provided the state with some 340 kgs of marketable grain that year.

The Tachai people have never become proud or rested on their laurels. With the Party branch to lead them they are forging ahead with might and main, bent on doing more each year so as to make greater contributions to the revolution. In 1968 they scientifically worked out a rational density figure for high yields of

maize and also for transplanting millet seedlings. The following year they enlarged the area sown to wheat and began double-cropping. In 1970 they grew paddy rice experimentally for the first time in the Taihang Mountains with very high yield. They began building "man-made plains" in 1971. In the two drought years of 1972 and 1973, they undertook water conservancy work with good results.

The Party Branch — Solid Bastion

People must be up and doing if they want to bring about radical changes. But who should they rely on to give them the lead? There is the saying in Tachai: "Village vics with village, household with household. The masses look to the Party branch to provide leadership." For more than two decades the Party branch led by Chen Yung-kuei has consistently been a firm leading group in implementing Chairman Mao's revolutionary line.

The Communist Party members and cadres of Tachai love our great leader Chairman Mao and firmly follow his proletarian revolutionary line and policies. Their working style is based on the mass line. There is no shilly-shallying with them when it comes to class and two-line struggles. Sharp, decisive and full of go, they are thoroughly down-to-earth in their work. They dare to shoulder the heaviest tasks and always take the lead in collective productive labour. Ever since the co-op days of 1953, both old and new cadres have persisted in taking part in collective productive labour,

Chen Yung-kuei has set a fine example. Completely at one with the masses and sharing alike with them, he has always kept the qualities of the working people. The first thing he does on returning from a meeting in the county or the province is to join the brigade members in the fields at whatever work they are doing, sweating it out with the others. He is "covered with dust on fine days and mud from head to foot when it rains." "Chen Yung-kuei feels and works like us," the poor and lower-middle peasants say. "He's our leader, and a good one, but he never puts on official airs."

With Chen Yung-kuei to lead them, the cadres of Tachai also show exemplary conduct. They are always where the going is toughest. An example is brigade leader Chia Cheng-jang in his late fifties who has grown up with Chen Yung-kuei. When they set up the agricultural co-operative in 1953 Chia Cheng-jang was the only one among the poor and lower-middle peasants who could read and write at all so he volunteered to keep the accounts. In the ten years he was in charge he never took for himself so much as a needle or piece of thread belonging to the collective. The masses called him "Red Accountant." In all those years no one ever knew him to work at his books in the daytime, but always after a full day's work in the fields with the others. Later, when Chia Cheng-jang was still busier with heavier duties, he put in no less than 300 days a year at collective productive labour.

The Tachai Brigade today is a large one, engaged in many undertakings, and its few cadres could never run it without the support of its members. The cadres rely on the masses, particularly on the poor and lower-

middle peasants, establishing a tradition of the cadres always making a point of requesting the criticism and supervision of the members. When they began to sow the millet crop in the spring of 1972, for example, there was a fairly long dry spell. Some people took a chance and did not sow as deep as they should have. The soil is rich and thick, they rationalized. When 40 per cent of the seed failed to sprout there was plenty of talk and those who did the sowing were upset at having hurt the collective.

Chen Yung-kuei called a Party branch committee meeting to look into the matter. Was it the fault of the brigade members or of the cadres? After discussion, all agreed that it was the fault of the cadres for not advising on how to sow the crop after such a dry spell. At a brigade meeting all seven members of the Party branch committee criticized themselves for failing to do this. Production brigade leader Chia Cheng-jang declared, "I'm the one who must make a self-criticism as I'm responsible for production and Comrade Chen Yung-kuei was away. I should learn from this lesson." But Chen Yung-kuei disagreed. He said that he was the one mainly responsible as he was the Party branch secretary and hadn't made the necessary arrangements for the work to be done properly.

The brigade members were moved by their cadres' spirit of sincere self-criticism and did the extra work of re-sowing all the bare places. It took them only five days. The Tachai Party branch later on its own initiative wrote a self-criticism and forwarded it to the county Party committee with the request that it be circulated throughout the county. The report caused quite a stir

because it was a self-criticism from Tachai, famous as an exemplary brigade. People said that Tachai was indeed worthy of its name as a nationally-renowned model.

The Party branch pays great attention to training successors for the revolution. It constantly educates young people in class and two-line struggles and lets them take on responsibilities to temper them. The young people are growing up sturdy and vigorous with the example and conduct of the older generation. Four of the nine members on the Party branch committee are under 30.

In December 1973, after the Tenth Party Congress, Chen Yung-kuei proposed at a Party branch committee meeting that the young woman Communist Kuo Feng-lien take over from him the post of Party branch secretary. He said: "Our Party is flourishing vigorously and has qualified successors. Our Party branch in Tachai should be the same." His proposal touched off a stir of excitement although this had been mooted many times before at Party branch committee meetings. All eyes turned to Chen Yung-kuei, tumultuous thoughts crowding into their minds—the days of struggle between the "old folks' and children's mutual-aid team" and the self-styled "stalwarts' team" . . . the three campaigns against Wolves' Haunt Ravine . . . the torrential rains and final result . . . and the struggles against the revisionist line of Liu Shao-chi and then of Lin Piao. It was Comrade Chen Yung-kuei who had been at the head, right out in the van leading them. And now he was handing over his post of Party branch secretary so as to ensure qualified successors to the cause of the Party. After the Party branch committee had fully endorsed his proposal Chen Yung-kuei turned and said to Kuo Feng-lien: "A

heavy responsibility now rests on your shoulders. See that you live up to the expectations of Chairman Mao, the Party and the poor and lower-middle peasants of Tachai!"

Comrade Chen Yung-kuei has taken up a leading post at national level because revolutionary work requires it, but whenever possible he returns to Tachai and never fails to join the brigade members in whatever work they are doing. He asks after production and their daily life, but he is most of all concerned about their progress in thinking. He is always impressing upon them that they must never forget the Party's basic line.

Building on the victories already won and continuing along the revolutionary path blazed by its predecessor, the Tachai Party branch is determined to carry on the fight against nature, class enemies, the revisionist line and all wrong ideas, and to strive for still greater successes.

Three Former Grain-Deficient Provinces Show Surpluses

HOPEI, Shantung and Honan provinces, affected through the centuries by frequent natural disasters on top of low yields, used to suffer from serious grain-deficiency. With tremendous changes in agricultural production over the quarter-century since new China's founding, they became practically self-sufficient in grain in 1970. As the cadres and people of the three provinces continued to make big advances by learning from Tachai, the national pacesetter in agriculture, they registered grain surpluses in 1973, contributing substantially to changing the situation in which grain has to be transported north from the south. It is a historic change of great political and economic significance for China.

These three provinces, occupying the Yellow, Huai and Haiho river basins, suffered before liberation from flood alternated with drought and other disasters. Excerpts from local chronicles of the time read: "Big drought leaving thousands of kilometres of cracked, parched and deserted earth." "Heavy rains caused total crop failure with resulting cannibalism in some places." "The river

breached its dykes and swallowed up all dwellings in the area. Countless people drowned or were left homeless." Bringing further ruin to the agriculture were extortionate taxes and levies — the ruthless exploitation by the reactionary ruling classes — plus plunder by modern imperialism and long years of war. The dynasties requisitioned huge amounts of food grain from areas south of the Yangtze and Huai rivers and shipped them to the north in order to maintain their reactionary regime and meet the enormous expenses of their government and army. According to records of the Ming Dynasty (1368-1644) more than 9,000 junks plied the Grand Canal carrying tribute rice to Peking, while in the Ching Dynasty (1644-1911) over 300,000 tons of tribute rice levied in the south were shipped north every year. Saddled for ages in the old society with this situation, the miserable people longed to overthrow the reactionary rule, overcome natural disaster and bury their poverty. They sang such songs as these:

*Long is the Haiho River,
Myriad years it has raced away.
The poor, with their blood and tears,
Long for the day when the sun will rise in the east.*

*

*Day and night people yearn for the time
When the Huai River does not flood,
For a liberator to come one day,
To harness the river and ensure their livelihood.*

After the birth of new China our great leader Chairman Mao and the Communist Party showed deep concern for the people, Chairman Mao making on-the-spot inspections of the three provinces. The spring after the Huai River

flooded seriously in 1950 he issued the great call: **The Huai River must be harnessed.** In 1952 Chairman Mao inspected the Yellow River and at once instructed: **Work on the Yellow River must be done well,** while concerning the Haiho he said in 1963: **The Haiho River must be brought under permanent control!**

Chairman Mao's great calls inspired the fighting will of the cadres and commune members in their battle against nature. Under the leadership of the Party, the people of the three provinces in the past quarter-century have relied on the socialist collective economy, worked hard and waged a tenacious fight against natural disasters. Each winter-spring season, tens of millions of people braved the biting wind and snow and worked on irrigation projects. They raised and reinforced 1,000 kms of dykes, putting an end to the Yellow River's breaching them an average of twice in three years before liberation. Several thousand rivers and tributaries have been drained or dredged in the Huai and Haiho river basins, freeing more than 6.6 million hectares of low-lying land from the threat of flood and waterlogging. At the same time the inhabitants went in for water conservancy and other farm improvement projects, concentrating on fighting drought. Reservoirs and terraced fields were built and trees planted in the hilly areas of the upper reaches of the rivers to prevent soil erosion. Wells and ditches were dug on the plains and alkali leached from the soil, all of which involved a tremendous amount of work. By 1970, however, the three provinces were in the main self-sufficient in grain, while their record output in 1973 was 2.5 times that of the liberation year, 1949, and an increase of 16,500 million kgs over 1965, the year before the Cul-

tural Revolution began. In 1973 they delivered to the state 500 million kgs of grain as agricultural tax after deductions for their own and urban consumption, seed, fodder and collective reserves. The change in grain situation in this important economic region has great impact on the development of the national economy. Formerly the state had every year to send in relief grain from the south against calamity. Now, with the continuous increase of grain output and all-round development of forestry, animal husbandry, side-occupations, fishery and industrial crops production, the region has added considerably to state grain reserves, while the people's communes and production brigades have augmented their collective stores.

These three provinces' achievement of self-sufficiency in grain is a victory of Chairman Mao's proletarian revolutionary line and fine result of the Great Proletarian Cultural Revolution. In the 17 post-liberation years before the Cultural Revolution the three provinces' total increase in grain output was 13,500 million kgs, with an annual average of 750 million kgs, while in the following eight years, after the Cultural Revolution began, the increase was 16,700 million kgs, a yearly average of 2,085 million kgs. The increase in the eight years of the Cultural Revolution was, therefore, 3,200 million kgs more than the total in the 17 years before it, 2.5 times the pre-Cultural Revolution annual rate of increase, and nearly equivalent to the three provinces' 1949 total grain output.

Acute struggles between the two classes, two roads and two lines marked the entire period of developing agricultural production in these provinces. Taking the direction of socialism as indicated by Chairman Mao, the

people went all out and with high aim to develop agriculture substantially, rapidly increasing grain output in the period from agricultural collectivization to the setting up of people's communes in 1958. During the following years of temporary difficulty in the national economy, Liu Shao-chi and company pushed their revisionist line, preaching the sinister *san zi yi bao** and spreading the fallacy that "since the north is subject to frequent natural disasters it's reasonable for the people there to be supplied with food from the state." They also whipped up the evil wind of individual enterprise, spouting, "Like the Eight Immortals soaring over the ocean, each showing his worth," inflating the capitalist tendencies in the countryside and deflating the people's socialist enthusiasm for developing agricultural production. Grain output in the three provinces slumped, demonstrating the truth that wherever there is the poison of capitalism agricultural production drops, while the healthy wind of socialism brings rapid increases.

During the Cultural Revolution, led by Party committees at various levels, the cadres and commune members launched a tremendous drive to learn from Tachai in agriculture. Following the examples of the Tachai Brigade and the entire Hsiyang County, they conscientiously carried out Chairman Mao's proletarian revolutionary line and policies while repudiating and resisting the capitalist tendencies, so as to develop the socialist collective economy. In recent years thousands of communes and brigades as well as counties, such as Linhsien, Huihsien, Hsinhsiang, Tsunhua, Chengting, Yutai, Chiaonan and Huanghsien have emerged as advanced

units in the movement to learn from Tachai. In 1973 the average per-hectare grain output of 166 counties and cities reached or exceeded the state targets. The movement to learn from Tachai has been carried forward in a deep-going way, greatly speeding the agricultural progress of the three provinces.

Since the Cultural Revolution began, the concerned Party committees have been more aware in carrying out the general policy of developing the national economy by **taking agriculture as the foundation and industry as the leading factor**. They have correctly handled the relations between agriculture, light industry and heavy industry by giving priority to agriculture and sent in cadres to strengthen leadership in farm production. At the same time ample local reserve funds have been earmarked for agriculture and great efforts made to organize all trades and departments to serve it. Hopei Province in 1973 used 70.5 per cent of its provincial reserve funds to finance agriculture, while over 80 per cent were used in the various administrative regions and counties. In Shantung and Honan provinces cash investments in agriculture in 1973 were twice those in 1970, and the rolled steel allocation for agricultural use increased by over 70 per cent.

The over 1,000 small factories developed systematically in recent years by the three provinces have helped greatly in speeding the development of agriculture. In areas subject to drought, industrial support has centred on producing pumps and other equipment for fighting this threat. Many more diesel engines have been produced and have swiftly expanded the acreage irrigated by

* See p. 165.

pump-wells so that two-fifths of the total tilled land on the plains are irrigated. More than 200 small nitrogenous fertilizer plants and a number of phosphate fertilizer plants have been built during the Cultural Revolution. These, together with the large numbers of tractors and millions of other farm machines supplied to the rural areas, have promoted the mechanization of agriculture in these three provinces and provided favourable conditions for developing socialist agriculture with greater, faster, better and more economical results.

Inspired by Chairman Mao's great call to **change the situation in which grain has to be transported north from the south**, the people have displayed great socialist enthusiasm and strength in the battle against natural disasters and in the struggle to speed up agricultural production. In the course of learning the revolutionary spirit of Tachai's poor and lower-middle peasants they battled against nature and class enemies, spurring the development of the collective economy of the people's communes. In naturally more favourable areas grain yields have risen steadily, with increasing quantities of marketable grain supplied to the state, while some former disaster-ridden and low-yield areas have achieved self-sufficiency or surpluses in grain.

Located in the Heilungkang River basin, Hengshui used to be the worst disaster-ridden and lowest-yield region in Hopei Province. During the Cultural Revolution the Party committees at various levels here led the masses in the battle for permanently controlling the Haiho River and the work of large-scale construction of water conservancy and other farm improvement projects, so that by their own efforts they changed the traditionally

grain-short area into a self-sufficient and then grain-surplus area. The Shihpaheng Production Brigade in Tsaochiang County had from 1959 accepted 95,000 kgs of state grain. But, after suffering natural disaster and crop failure in 1972, the brigade Party branch secretary said: "The Tachai Brigade pulled itself up by its own bootstraps in the lean years. How can we go on relying on state grain after having Tachai's example already for several years!" After a few evenings spent in discussion, the Party branch decided to try to change the situation so that they could return to the state in a year all the grain they had received from it in the past ten. Following Tachai's example, they led the masses in braving wind and snow to improve the farmland. They sank two 300-metre-deep pump-wells and turned 70 hectares of land into irrigated fields. The brigade's total grain output increased from 215,000 kgs in 1972 to 590,000 kgs in 1973, and it delivered 120,500 kgs, 25,000 kgs more than it had taken from the state. In addition, it stored 122,500 kgs of collective grain. Seeing the change from poverty to prosperity in this brigade, people were delighted saying, "The people of Shihpaheng were poor and the soil, too, in the past. But they had high aims and 'cleared the debt' to the state by one year's effort. They are prepared against war and natural disasters and store ample grain."

Many places in Hopei, Shantung and Honan have likewise brought about tremendous changes in a short period of time and once low-yield, waterlogged land now gives high and stable yields. Areas where water was as precious as oil in the old days now have irrigation. Gullies with alkaline and saline soil producing nothing nine years out of ten in the past are now rich producers of grain. Yutai County on the western bank of the Grand Canal,

famous in history as an artery for grain shipment, was known in the past for its many beggars, peasants old and young there before liberation having to desert their villages in flood and go with broken baskets over their shoulders to seek a livelihood by begging. Before the Cultural Revolution, farm production had still made little progress, and it tended to rely more on state grain than other counties in Shantung. During the Cultural Revolution the county started a vigorous mass movement to learn from Tachai, the commune members declaring: "If Tachai could assail Wolves' Haunt Ravine three times to build farmland, can't we change our Yutai!" Beginning in 1971, the commune members each winter braved biting cold and icy water to dredge river channels and excavate new canals, turning marsh into paddy fields. The county's per-hectare and total grain outputs rose by 150 per cent in the past four years, and the grain sold and delivered to the state in this period totalled 100 million kgs. Yutai led the whole Shantung Province in providing on a per capita basis marketable grain to the state.

Three counties in Honan along the old course of the Yellow River in an area with poor soil covering either sandy and saline-alkali land or fields liable to drought or waterlogging, waged stubborn struggles against the natural disasters of flood, salinity and alkalinity, drought, and sandstorms. In 1968 the Yenchin County Revolutionary Committee led the people in digging irrigation canals, draining waterlogged areas, leaching alkaline and saline soil, and planting trees. They fixed 179 large sand dunes. During the Spring Festival of 1974 the Yuanyang County Party committee secretary organized

over 300 cadres and 70,000 commune members to have a go at large tracts of frozen earth. Wielding picks and spades they dug irrigation canals in sleet and snow in order to divert the water of the Yellow River where it would irrigate farmland and transform the low-lying and waterlogged land into fertile soil. Thanks to several years' efforts the grain output of these three counties increased each year, and their marketable grain contribution to the state reached over 50 million kgs in 1973. In 1974 they had a good wheat harvest. When they were enthusiastically delivering and selling surplus grain to the state, news came that the grain from the three counties would be consigned to Peking, which meant that the old disaster-stricken area would deliver its bumper harvest to the capital for the first time. People got busy and excited, selecting their best grain and transporting it by trucks, tractors, horse and push carts all loaded and headed for the grain station. Old peasants said with emotion: "We used to eat grain sent by Chairman Mao from 20 provinces—rice from the south, maize from the north and sorghum from the northeast. Now it's time for us to contribute our share. Send this best-quality grain of ours to Peking for Chairman Mao and the people there to see that our three formerly destitute counties of Honan have changed."

Development in Science and Technology

A research institute of the Chinese Academy of Sciences recently made a new film. Recalling their hard work day and night in researching and producing it, the makers felt that a splendid-sounding name should be given to it.

In the sphere of science, *cheng chi* or *cheng kuang* (meaning "win honour") are often used to name the fruits of scientific research, such as the "Win Honour Steel," the "Win Honour Computer," the "Win Honour Antibiotic," etc. Every such name embodies an unusual experience and implies the lofty aspirations and high aims of the Chinese people who have developed science and technology independently and with the initiative in their own hands and through self-reliance.

The discovery of rich petroleum resources in China is also inseparable from the efforts to "win honour."

The imperialists and revisionists claimed for a long time that "China is oil-poor." Their "experts" and "authorities" said that since the oilfields that had been discovered were mostly in marine strata, oilfields of industrial value were not to be found in China which

consists mainly of continental strata. According to their assertion, China had no alternative but to depend on foreign oil. In the early 60s the social-imperialists vainly attempted to strangle China by cutting off oil supplies, dreaming that she would bow to their baton. For some time they gloated over the big coal gas bags attached to buses in Chinese cities.

To be at someone's beck and call and to rely on others for a living is not the disposition of the Chinese people nurtured by Marxism-Leninism-Mao Tsetung Thought. On the contrary they are determined to march boldly along the path charted by Chairman Mao of **maintaining independence and keeping the initiative in our own hands and relying on our own efforts.**

With vast territory and rich resources, China has rich mineral deposits. Wang Chin-hsi, the well-known "Iron Man" and vanguard fighter of the working class, said: "Nobody is going to convince us that oil is only under foreign soil and there are no rich oil deposits in a country as large as ours!" Neither the outstanding scientist Li Szu-kuang nor the young geologists believed the imperialists' assertions. They said with full confidence: "Petroleum runs everywhere in the earth. It's difficult to find, but there must be laws governing the formation and distribution of deposits. We'll rely on our own efforts and take our own path to find it!" In the light of the special characteristics of China's geological structure, Li Szu-kuang applied the method of geomechanics to study the law of crustal movement and came to the conclusion that there were good conditions for oil formation and accumulation in the subsidence zone of the "Neocathaysian system." Basing himself on this

completely new theory, he said pointedly that it was metaphysical and premature to infer that "China is oil-poor."

Guided by the principle of independence, initiative and self-reliance, Chinese geological workers decided to speed up oil exploiting by good prospecting work. For several years they carried out large-scale geophysical prospecting over vast areas according to Li Szu-kuang's idea. Thousands of wells were drilled and a number of promising oil-bearing areas were found thanks to extensive exploration and prospecting, proving China to be rich in oil resources.

Their search was by no means easy going. There was certainly oil in one area in the subsidence zone of the "Neocathaysian system," but none was found in the first years because some comrades were still taken in by the allegation made by certain foreign "experts" that "China is oil-poor." They became discouraged and said prospecting should be given up in that area, so that the work went on by fits and starts. Workers undertaking the oil survey, however, had confidence in their own knowledge of geological science and insisted on continuing the fight. Li Szu-kuang backed them up. As early as 800 years ago petroleum was discovered in China by the scientist Shen Kuo of the Sung Dynasty, who said that there was infinite oil under the soil. "Now, living in the age of socialism, with its superior conditions, we will find this oil," said the oil workers. Then, drawing on actual data they had collected, Li Szu-kuang indicated the places where wells might be drilled. A big oilfield was discovered in the area within a year.

The new Taching, Takang, Shengli and other oilfields were successively discovered.

While oil is gushing up from pipes underneath the Pohai Bay area, it is absurd that TASS clings to the long-discredited allegation that "China is oil-poor." Out of its hostility to the Chinese people's revolutionary cause, this Soviet revisionist news agency until recently still quoted a "famous" Soviet scientist who alleged that "according to common geological concepts it is well-nigh impossible to open up oil-bearing formations from continental strata" and "they are making a big fuss by claiming there is oil in the Pohai Bay" and so on and so forth.

In the past century and more imperialists of all descriptions rode roughshod over the Chinese people and dreamed of carving up their country. They alleged that China had no science and that she could do nothing.

In old China, weighed down by the three big mountains of imperialism, feudalism and bureaucrat-capitalism, the Chinese people were indeed poor and backward in science and technique. In weights and measures, for instance, up to liberation in 1949 there were only the foot measure, graduated ruler, two copper standard weights, peck and steelyard, which had existed since the time of Chin Shih Huang (246-210 B.C.), used in the markets. There were no precision measuring instruments to speak of. Big gaps were found in many new-rising branches of science and technology. In the long night of the old society many people dreamed of saving the country through science, but this was impossible. Scientists who had the will to win honour for the Chinese people had nowhere to play their part, but

instead had to stand and watch their country steadily fall behind.

The birth of new China opened up bright prospects for the development of science and technology, and both have taken on a new look in the short span of 25 years. Apart from the research organizations under the Chinese Academy of Sciences, many special scientific research institutes have been set up and expanded in industrial and agricultural departments, provinces, municipalities and autonomous regions. The number of such institutes and personnel in a single province today is several times that of the whole country before liberation.

Despite blockades by imperialists and social-imperialists, the Chinese people have by their own efforts mastered many new scientific and technological techniques such as atomic energy, jet propulsion, radio electronics, computer technology, automatic control and laser.

Successful tests have been made of atomic and hydrogen bombs, guided missiles carrying nuclear weapons and man-made earth satellites. Facts eloquently confirm that **only socialism can save China**. Led by Chairman Mao and the Communist Party, the Chinese people have high aspirations, they have ability, and they will certainly catch up with and surpass advanced world levels in the not too distant future.

Chairman Mao's proletarian revolutionary line guides the Chinese people and scientific workers to **do away with all fetishes and superstitions and emancipate the mind** so as to take paths never trodden before and scale heights yet unscaled. High energy physicists have advanced the new

theory of the "straton model" by applying Chairman Mao's philosophical thinking to the study of the internal structure of elementary particles. Acting on Chairman Mao's teaching that **Chinese medicine and pharmacology are a great treasure-house, and efforts should be made to explore them and raise them to a higher level**, medical workers have explored the legacies of traditional Chinese medicine and pharmacology, achieving such notable results as acupuncture and Chinese herb medicine anaesthesia. Even in the ancient science of mathematics the young mathematician Chen Ching-jun has done advanced research on the conjecture of the German mathematician Goldbach 200 years ago that "every even integer greater than four is a sum of two odd primes," making a breakthrough in mathematics.

Engels pointed out 100 years ago: **Life is the mode of existence of albuminous bodies, and The origin of life . . . must have been the result of chemical action**. Since then, however, cognizance of this phenomenon of life had never exceeded the level of anatomy. To probe the secret of life, a group of young scientific workers took up the heavy task of using chemical processes to synthesize protein. They began their research on the synthesis of insulin in 1958 in the Great Leap Forward. It was named "601," their first research item of the 60s in their effort to catch up with and surpass advanced world levels. Those taking part were mostly graduates from universities after liberation. They were faced with many difficulties, the first being lack of amino-acids, which were indispensable for making insulin and which China had not yet produced. Without imported equipment, they set up workshops themselves in which after several months of hard work they had produced a dozen kinds

of amino-acids. In 1965 Chinese scientists presented to the world its first synthetic crystalline bovine insulin, a biologically active protein. Then, in the high tide of the Great Proletarian Cultural Revolution, dozens of young scientific workers in chemistry, physics, biophysics, computer technology, biochemistry and organic chemistry joined forces to determine the spatial structure of insulin by the X-ray diffraction method. After repeated experiments they succeeded in determining the spatial structure of crystalline pig insulin at a resolution of 1.8 angstroms (one angstrom is a hundred-millionth of a centimetre) within a fairly short period, reaching advanced world levels.

China has undergone one deep-going socialist revolution after another in science and technology in the past 25 years. In the Great Proletarian Cultural Revolution and the movement to criticize Lin Biao and Confucius, the broad masses in this field are further eradicating the slavish comprador philosophy and doctrine of crawling along at a snail's pace. They no longer do research work behind closed doors. Under the leadership of the Party, they go out of their offices to integrate themselves with the worker-peasant-soldier masses to develop science and technology with greater, faster, better and more economical results. China now has a big scientific experiment force in urban and rural areas, composed mainly of workers, peasants and soldiers, as well as professional researchers and cadres. Over 10 million people take part in scientific experiments in the rural areas. Most people's communes and production brigades have their scientific experiment stations and groups actively managing seed-breeding fields, experimental and high-yield plots. In the movement to learn from

Tachai in agriculture, the broad masses of the poor and lower-middle peasants carry out scientific farming, contributing in no small measure to China's bumper harvests for 12 years running. The emancipated serfs in Tibet have achieved the wonder of planting winter wheat that yields 10.5 tons per hectare on the "Roof of the World." At present 80 per cent of the country's paddy-fields are sown to improved rice strains and over 70 per cent in the case of wheat. The first variety of short-stalk rice plant was developed by a peasant in Kwangtung Province. The Shantung peasant Yao Shih-chang found a way to considerably raise peanut yields. Chekiang peasants initiated the method of transplanting rice seedlings together with soil; Heilungkiang peasants started building the round clay granary.

Numerous inventions and innovations have been made by workers, peasants and soldiers who have reported their work for scientific journals which once received the contributions only of specialists. China's scientific journals such as *Zhongguo Kexue* (Chinese Science), *Kexue Tongbao* (Science Bulletin), *Dongwu Xuebao* (Zoological Journal), *Wuli* (Physics) *Huaxue Tongbao* (Chemistry Bulletin) and *Kexue Shiyen* (Scientific Experiment) published 140 articles written by worker-peasant-soldier scientists between January 1973 and September 1974. Scientific experiment in China is one of the three great revolutionary movements in which millions upon millions of the people have taken part.

Recently a new problem cropped up in China's oil-exploiting — the need for a vegetable gum to aid extraction. Was it conceivable that such a big country as China, with many types of climate and rich plant

resources, had no source of this gum? Peking's Institute of Botany research personnel who were assigned to look into this problem went first to the masses to solve it. People in various places reported the existence of sticky plants once they learned that it would help their country's oil industry. Some said: "There's a tree here in the mountains that has such sticky bark that birds get stuck in it," or "The big-leaf birch growing on precipices here exudes a kind of gum." The result of this mass effort was the receipt of many plant samples, one of which proved to contain a gum suitable for the purpose.

The development of China's science and technology had no choice but to start from the very poor base left over from the old society. To catch up with and surpass advanced world levels required extremely hard and painstaking efforts in many fields over a considerable period of time. The Chinese people, who took their destiny into their own hands a quarter-century ago, have marched a good way forward under the wise leadership of Chairman Mao and the Communist Party. If science in ancient China made important contributions to world civilization, then looking to the future, we believe that socialist new China's contributions will undoubtedly be greater.

The "Barefoot Doctor" System Grows in Strength

THE training of China's first group of 28 "barefoot doctors" in 1968 at the Chiangchen People's Commune, Chuansha County, Shanghai Municipality, set a pioneering example that was promptly affirmed by Chairman Mao. In the following six years, with the concern of the Party organizations and support of the poor and lower-middle peasants, and following the road pointed out by Chairman Mao, this medical force has been consolidated and expanded and their skill improved. The vitality of this new socialist entity was demonstrated.

Since 1968 the commune has trained three more groups of these paramedical workers so that there are now over 80. Five have gone to work in army units, another five have been sent for further study in medical colleges, while four are working in the commune clinic. The other 68 serve in the commune's production brigades, three or four in each. Two-thirds are Communist Party or Youth League members, ten have been posted in various leading bodies. These "barefoot doctors" have helped train 142 disease-prevention health workers in the production teams, forming a contingent of rural medical

and health workers which, with these doctors as the main force, serves the poor and lower-middle peasants wholeheartedly.

The barefoot doctors have firmly carried out Chairman Mao's instruction: **In medical and health work, put the stress on the rural areas**, adhering to the principle of **putting prevention first**, combining Chinese and Western medicine and making full use of acupuncture, medicinal herbs and massage therapy. They have boldly worked to strengthen and develop co-operative medical service so as to change the pre-liberation situation in which the peasants had no access to doctors or medicines.

Now every production brigade has its own health centre equipped for simple diagnosis and treatment. The co-operative medical service is improving steadily. With medical service within their easy reach the poor and lower-middle peasants now enjoy a more secure life than ever before.

This again fully demonstrates the superiority of the people's commune system.

Steady Advance in the Struggle Between The Proletarian and Bourgeois Lines

With a strong beginning, is there still struggle in this pioneering work affirmed by Chairman Mao? The answer is, yes, there is. And this medical force is constantly tempered and advancing in the struggle.

The struggle first centred on the question of which class was to lead in rural medical and health work. In 1972 a certain person in a brigade leading body tried to

make a barefoot doctor of a quack behind the back of the peasants and other leading members. This quack doctor had caused the death of a patient to whom he gave false prescriptions and sold fake medicine. Only with the commune leaders' intervention was this quack prevented from worming his way into the barefoot doctors' ranks. The barefoot doctors learned a lesson in class struggle, and the poor and lower-middle peasants gained confidence in their doctors and gave them even greater support.

The struggle also manifested itself in the question of with what ideology to educate the doctors. Some well-intentioned people wanted the doctors to give full time to clinical practice and studying technique at the expense of physical labour, while some with ulterior motives said, "They're always running to the fields, developing brawn instead of brain to do their doctoring."

If the barefoot doctors were not farmers at the same time they would be alienated from the poor and lower-middle peasants and gradually lose the qualities of the labouring people. Viewing the problem from the higher plane of fighting against revisionism, the Party organizations at various levels emphasized that the doctors must persist in collective productive labour and never let themselves be swayed by bourgeois ideas. With the help of the Party branch the barefoot doctors of the Red Flag Brigade correctly handled the physical labour-preventive-medicine-treatment ratio by devoting a third to a half of their working time to farm work, making great progress politically and professionally.

The struggle was also reflected in professional work. Some doctors had been influenced by the revisionist line

of stressing treatment and belittling prevention. The commune Party committee discussed with the doctors the importance of prevention, pointing out the serious consequence of depending only on treatment. The doctors recognized that this was a struggle between the two lines in health work and raised their awareness in carrying out Chairman Mao's revolutionary line. Two barefoot doctors of the Taohsin Brigade led by the Party branch worked in experimental fields while carrying out the principle of **putting prevention first**. They promoted "high-yield paddy fields without mosquitoes," both working three solid years in the fields, collecting data as they did so. They succeeded, on the basis of laws governing the growth of rice and of the mosquito's life cycle, in developing a method of field management that resulted in much higher rice yields, plus the elimination of mosquitoes.

Their experience confirmed the truth that the barefoot doctors, educated in the correct line and preserving and displaying the poor and lower-middle peasants' characteristic qualities, could advance in struggle against corrosion and pernicious influences. In the recent years these barefoot doctors have constantly grown in strength. A doctor who had been swayed by the old education to seek personal fame and wealth delved into big volumes of medical books to the neglect of ideological remoulding. He regained his labouring people's qualities after education by the brigade Party branch and the poor and lower-middle peasants. Once when he passed through a village and saw a child drowning he saved the child's life by mouth-to-mouth respiration. When the grateful villagers asked his name, he only replied: "Barefoot doctor." Since that he has added to his knowledge of the theory and practice of using Chinese herb medicines

in curing common, recurrent diseases. He also collaborated with some other comrades in the medical field in compiling a medical handbook for barefoot doctors' use.

Improving Medical Work by Combining Chinese and Western Medicine

The commune's barefoot doctors have helped improve the health of the rural population and gradually reduced the incidence of disease. They can now handle 95 per cent of the cases, ranging from common, recurrent diseases to dangerous and acute conditions, and their skill is constantly improved.

The Tahung Brigade doctors used to rely solely on Western medicine to treat the common, recurrent diseases, sometimes curing the disease, sometimes failing. After launching the mass movement to make herb medicine self-reliantly, they had some success using single-herb prescriptions, then they went on to making multiple-herb prescriptions, which were more effective. During the busy season when the peasants had no time to brew medicine the barefoot doctors, drawing on their own experience and with the help of concerned departments, made 18 kinds of common medicines in tablets or syrups for cough, asthma, gastric pain, backache, etc. This was convenient for the peasants and the results were good. The doctors realized that in order to better serve the poor and lower-middle peasants they must constantly improve their work and press ahead along the road pointed out by Chairman Mao, namely, of creating a new

integrated Chinese medicine and pharmacology by combining Chinese and Western methods.

The commune clinic, local medical colleges and schools and medical teams touring the countryside constantly help barefoot doctors acquire or improve both traditional and Western skills. To this end, they have sponsored about a dozen training courses in recent years.

For preventive or therapeutic purposes, the barefoot doctors choose either traditional Chinese or Western methods according to efficacy, convenience and economy. For example, a patient who had suffered from migraine headaches for seven to eight years and been sent from hospital to hospital, took a lot of expensive Western medicine but to no avail. The barefoot doctor analyzed the case and concluded that while Western medicine might give the patient some relief, acupuncture would be more effective and less expensive. The result was that before the second course of treatment was completed the patient's illness was cured.

Many medical situations in the countryside are not amenable to either Chinese or Western medicine alone or in alternation. Treatment for snake bite, for example, though somewhat effective when three kinds of herbs were used, was much more so when Western medicine was added. The barefoot doctors felt that they must combine the two methods so as to complement the merits of one with those of the other, and this way they could handle common, recurrent diseases and some serious and acute ones.

On the basis of their practical experience they study medical theory, devoting two days a month to exchanging experience and reading medical literature in order to

clarify problems by combining theory with practice. Not a few barefoot doctors give lectures to training classes. Three teaching manuals for rural barefoot doctors and other health workers were compiled with their participation, the first one running into 1,120,000 copies. There was also a revised edition for advanced training and a handbook for health workers. New-type workers in medical theory determined to scale the heights of a new medicine and pharmacology are emerging from among the barefoot doctors. Their emergence has played and will continue to play a great part in promoting the poor and lower-middle peasants' leadership over rural medical service and in further changing the situation in rural health work.

A Growing Force of New Intellectuals

To meet the needs of revolution in rural health work and medical education, a great number of new barefoot doctors have been trained. The old and new doctors in this commune are now working together, so that the entire medical set-up is reinforced by an uninterrupted supply of new personnel. The Party organizations at all levels and poor and lower-middle peasants see to it that the doctors should be trained in a militant working style. With old doctors helping the young, this new-type medical force will continue to advance vigorously.

The older barefoot doctors who grew out of the acute struggle between the revisionist and revolutionary lines in rural health work take great pride in the revolution in this field and have a strong sense of responsibility towards their work. They teach the newcomers with

words and deeds, bringing into full play the barefoot doctor's revolutionary tradition of "calluses on hands, mud on feet, medicine kit on shoulder, poor and lower-middle peasants in mind." In so doing this medical force has shown that it is permanently and deeply rooted among the poor and lower-middle peasants. The veteran woman barefoot doctor Chang Ta-hsin, who has worked hard and steadily for many years without a thought of reward, has trained a new person in the profession to take full charge in an emergency. One night when seven fishermen suffered from acute gastro-intestinal upset and the old doctor was not in, the new barefoot doctor got all seven back on their feet so that they went out to sea the next day.

The peasants were full of praise for the young doctor. Six years' experience has confirmed that training barefoot doctors, as pointed out by Chairman Mao, is a correct line in bringing up young proletarian intellectuals in the medical and health field. Upon the recommendation of poor and lower-middle peasants the commune sent five barefoot doctors to medical college. One of them who made good progress in ideology and professional knowledge completed a scientific research project in collaboration with four other students after three and a half years' study at a Peking medical college. It was well received by teachers and students and research departments. Later this graduate was sent to teach in a medical college in Shanghai, but he never forgot the poor and lower-middle peasants. During the 20 days of his summer vacation when he went back to the countryside, he spent five days doing physical labour, five making new medicines in the commune's pharmacy and the remaining ten days making daily rounds.

The growth and maturing of this barefoot doctor convincingly show that training these paramedical workers is the right way of bringing up new-type medical personnel.

Playing a Part in Revolutionizing the Superstructure

Barefoot doctors of the Chiangchen People's Commune not only try their best to carry on the revolution in medical and health work in their own brigade or commune, but also play an active part in work in the realm of the superstructure, promoting its revolutionization and tempering themselves in the process.

To make the superstructure conform to the social economic base, the proletariat must seize leadership in the superstructure, including the various fields of culture. The commune Party committee, realizing this, included barefoot doctors in its leading body and those of the brigades, and they exercise leadership over the rural medical and health work. An example is barefoot doctor Wang Kuci-chen, who as vice-secretary of the commune Party committee is in charge of culture, education and health work. With the poor and lower-middle peasants' hopes firmly in mind she takes a strong and clear-cut stand in carrying out Chairman Mao's proletarian line in medical and health work. She never forgets her work as a barefoot doctor and carries on the barefoot doctor tradition, never staying aloof from the masses and physical labour but, with her medical kit on her back, making her rounds in the villages. She also does a good job in the ideological and organizational work among the barefoot doctors.

Barefoot doctors have been continually sent to colleges, and the rural medical and health work has provided the revolution in education in medical colleges a base for practice. Barefoot doctors are an important force in the proletarian revolution in education. The Shanghai Institute of Traditional Chinese Medicine chose the Chiangchen Commune as a base for its educational revolution. Teachers and students go to its brigades to attend lectures given by barefoot doctors and tour the villages with them. Barefoot doctors have contributed fresh experience while taking part in the educational revolution, for they know Western as well as traditional Chinese medicine and so they had the practical experience in combining the two. The new teaching material of the institute has broken down the barriers between traditional Chinese and Western medicine and shows the organic connections between the two. The old method of compilations which separated pathology and pathogenesis from therapeutics has also been changed. Lectures given by barefoot doctors always contain examples of typical diseases and cases, putting an end to the separation of theory from practice.

The growing army of barefoot doctors has helped the commune clinic to persist more firmly in the orientation of serving the poor and lower-middle peasants. The clinic has adopted the following three measures: 1) selecting outstanding barefoot doctors with practical experience for the clinic so as to reinforce its personnel and promote its transformation; 2) sending barefoot doctors by turns to be trained in the clinic so that they play a part in the clinic's political activities and sum up and raise their practical experience and theoretical understanding to a higher level; 3) inviting barefoot doctors

from time to time to take part in treating certain difficult cases. The clinic's surgery department has often asked barefoot doctors to join them in performing operations. Their profound proletarian feelings towards the patients and their high sense of responsibility towards their work serve as a good education for the medical workers in the clinic.

Barefoot doctors as a socialist new entity are growing in strength over China's vast land, making increasingly greater contributions to the people's health.

新中国的二十五年

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