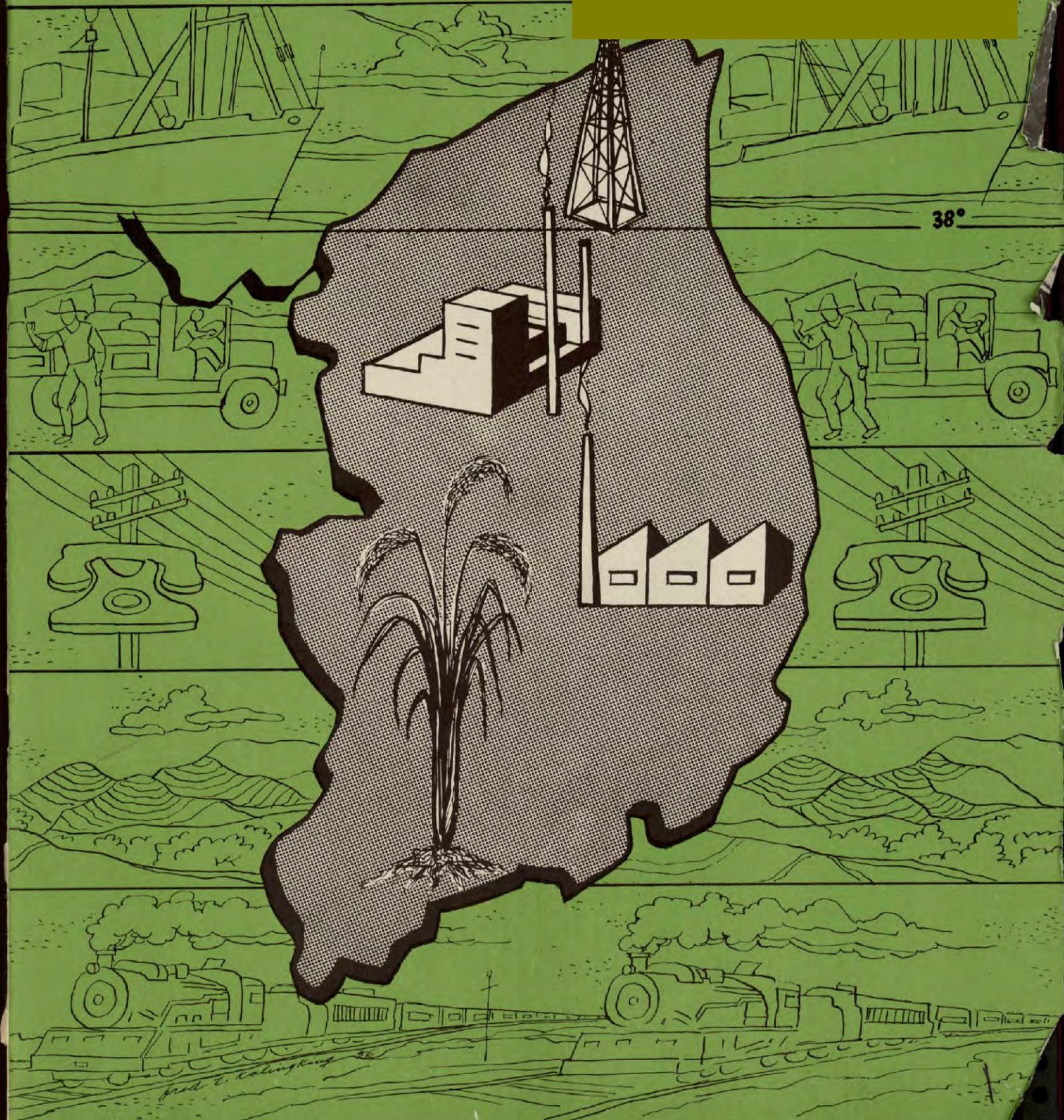
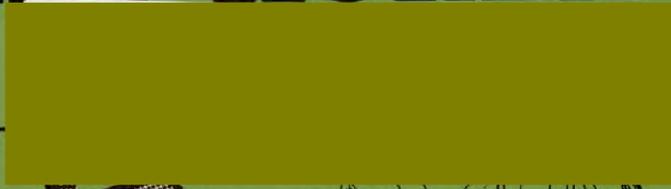


AMERICA AIDS KOREA



38°

Fred E. Koenig



William E. Warne
New United Nations Command Economic Coordinator for Korea



C. Tyler Wood
Retiring United Nations Command Economic Coordinator for Korea

Foreword

The purpose of this booklet is to give an easily understandable picture of what the United States has done and is doing to help rebuild the war-torn Republic of Korea.

Economic aid from the United States to the Republic of Korea in the past five years totals approximately one billion four hundred million dollars. The purpose is to repair the ravages of war and lay the foundations for a self-supporting economy.

In proportion to the size of the country and its ability to absorb aid, this is the greatest foreign economic assistance program in history. It is conducted under the U.S. International Cooperation Administration, represented in Korea by the United Nations Command Economic Coordinator.

This report appears at a time when the direction of the U.S. aid program in Korea is changing hands. C. Tyler Wood, who has been the United Nations Command Economic Coordinator for Korea for three years, is being succeeded by William E. Warne, who has headed the U.S. aid program in Brazil and in Iran.

This brochure is presented in a sense as a tribute to the wise and devoted work of Mr. Wood—and as a card of welcome for his successor. Above all it is a tribute to the Korean people who are working valiantly under great difficulties to build for themselves and their children a sound democratic economy.

GRANT WHITMAN
Acting United Nations Command
Economic Coordinator

Aid to Korea

On a hot, tense day in July 1951, a bulky American freighter appeared over the horizon off the harbor of Pusan. Several hundred Koreans watched anxiously from the bomb-damaged docks as powerful tugs guided the vessel safely to its mooring.

This was the first aid ship organized as such, to arrive in Korea after the communist invasion. It brought desperately needed food, clothing and medical supplies from the United States.

Now, five years later, the number of ships arriving in Korea wholly or partially laden with aid goods has past the 3500 mark. These five years tell the story of a tremendous effort to rebuild a nation that has known the full ravages of communist attack.

During these years, the United States Government has appropriated more than \$800 million for the OEC program for rehabilitating Korea. The United Nations Korean Reconstruction Agency has provided about \$140 million for aid goods, of which the U.S. contribution represented 65 per cent. In addition, over \$425 million worth of relief supplies has been brought to Korea by the civil assistance branches of the US army. And private agencies, including the American-Korean Foundation and CARE, have sent \$30 million worth of supplies to this devastated nation.

A major part of these shipments has consisted of goods which the Korean people urgently required for their daily living during and after the war. Food, clothing and medical supplies were high on the list of priorities. Then came construction materials, machinery and fuel to keep Korean railroads and utilities running and to rebuild Korean industry.

Since 1953, OEC has provided hundreds of millions of dollars worth of wheat, cotton, barley, fertilizer, pesticides, oil, coal, lumber, cement and other raw materials to be used wherever needed.

The United States and the United Nations have provided materials and technical advice to Korea in order to help Korea rebuild itself. In the following pages we shall see that much has been accomplished—and that much still remains to be done. There is every reason to feel confident that, with assistance, the Korean people can look forward to a new and better life.



This dam like many scores of irrigation dams of the same type throughout Korea bring hundreds of thousands of acres of new land under cultivation. Here Korean and foreign aid officials are inspecting the new dam at Namkok, about 25 miles south of Seoul. The dam-building program, begun in 1953 by the United Nations Korean Reconstruction Agency, has now been taken over the Office of Economic Coordinator. The OEC has allocated \$6 million for this work during the next two-year period.

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From the Soil

The farmers at In An, near Seoul, are blessed this year. Their paddies are producing two and a half times as much rice as before. The miracle was wrought by a newly constructed irrigation system which turned their often parched and barren land into a sea of verdant crops.

A group of young 4-H club members in a southern village are happy, too. This year they won a prize for raising the fattest pig in their province.

And Kim Song Ho, a fisherman in Pusan, is boasting to his friends that he can catch more fish than ever before with his new boat and nets.

These things are happening all over Korea. They illustrate the striking progress this country has made in boosting its food production since the lean days of the war.

For example, consider the following facts:

—Annual rice production rose by one and a half million suk (polished) in two years—over 200,000 metric tons.

—Damage to crops from insects and diseases is now well under control.

—Production of wheat, barley, and other fall grains nearly doubled between 1952 and 1954.

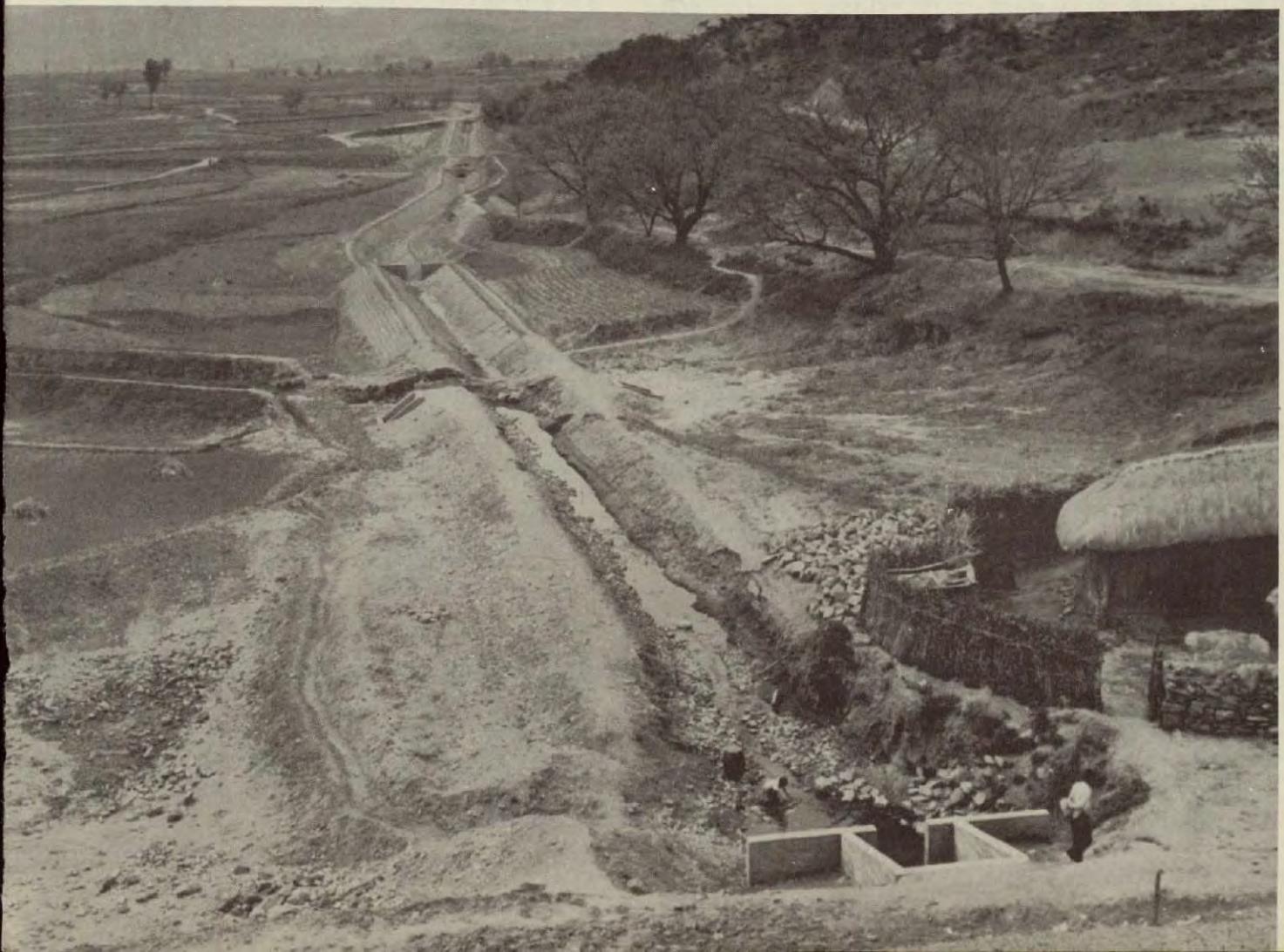
—The annual fish catch, though still not sufficient, has risen above the pre-war level.

—The number of swine has more than doubled since 1952; chickens have increased fourfold, and rabbits by forty percent—all to levels higher than ever before.

The progress is heartening, but it is not enough. Korean farmers, fishermen, and livestock breeders are aiming for a far higher level of production to satisfy their nation's food requirements—and the United States is helping them to do it.

The immediate problem, both during and after the war, was providing enough food quickly to the Korean people to prevent widespread starvation. The United States, the United Nations relief agencies, and private organizations responded to this need with hundreds of millions of dol-

Finger-like irrigation canals like this one near Anyang bring vital water to increase production on fertile Korean farm land. The canals, built with American aid, radiate out from dams being built throughout the Republic of Korea.



5



Raw silk—produced by a fast-growing industry rebuilding out of the ravages of destruction—comes from the farmer to this collecting station at Uijongbu where it is carefully weighed. New facilities for the Korean silk industry are planned under a \$400,000 program of the Office of Economic Coordinator. Silk is expected to become one of Korea's best sources of foreign exchange.



lars worth of basic food supplies.

Simultaneously, to speed home agricultural production, vast quantities of fertilizer were provided. From the beginning of the program through 1955, the United States alone shipped over 1.7 million tons to Korea at a cost of \$89 million. A record of 840,000 tons more is slated for delivery in 1956.

But these shipments were only stopgap measures. Urgently needed was a master plan that would put Korea back on its feet and eliminate its dependence on foreign aid.

Accordingly, soon after the Korean war ended, a vast rehabilitation program for the agricultural community began to take shape, based on two fundamental objectives.

The first, of course, is to assure the Korean people of an adequate supply of food products for their own use. The second is to produce crops, particularly silk and marine products, for sale to other countries. By exporting higher priced agricultural commodities and importing cheaper ones for domestic use, Korea can earn foreign exchange to buy needed raw materials and manufactured goods.

In 1954, the United States began appropriating funds to rehabilitate Korean agricultural research stations, control plant disease and insect damage, build warehouses to protect crops, increase fertilizer production, irrigate dry lands, provide veterinary supplies, and re-equip the fishing industry.

Running across all these fields, a program of education was begun to introduce the latest agricultural techniques to workers in the food-producing community.

Here are the results: A \$19 million urea fertilizer plant is now under construction at Chungju. Scheduled for completion in 1958, it will turn out 85,000 tons of fertilizer each year—about one third of the nation's nitrogen requirements.

Two plants to crush limestone for soil conditioning have arrived in Korea. Each will produce 50,000 tons of crushed limestone annually—enough to boost the nation's yield of rice, barley and wheat by 190,000 suk.

During 1956, an additional 130,000 chungbo (319,000 acres) of rice lands will be fully irrigated, adding 120,000 tons of rice annually to the nation's output. Up to this spring, a steady supply of water had been brought to 82,000 chungbo of rice paddies which are now producing almost enough rice to feed the entire population of Seoul.

This land development program concentrates on making more efficient use of farm lands already in existence. In 1953, less than half of Korea's 1.2 million chungbo of paddy lands were adequately irrigated. About one quarter were partially irrigated, but often lacked enough wa-

Nothing is more popular among Korean farm youth than the 4-H Clubs (Heart, Head, Hand and Health) patterned after those in America. And as in America, raising high-grade livestock is a favorite occupation for youth here. Kim In Tae, who lives near Taegu, fondly caresses a Berkshire sow suckling her brood. The mother sow immigrated to Korea aboard the "Texas Ship"—a gift of American youngsters to their friends—the Koreans.

5



To produce protective vaccine to combat the number one killer of poultry in Korea—Newcastle disease—these doctors infect duck eggs with the disease virus. These three researchers, (left to right) Dr. Yung Moon Lim, Dr. Tae Woo Hand and Dr. Eun Soo Pyun, are harvesting the virus from the duck eggs at a laboratory near Anyang, equipped by UNKRA and OEC.

ter to grow crops. Normal rainfall provides irregular or insufficient moisture for the remaining fourth. New dams and distribution channels are now being built on these partly irrigated farms to bring them up to full production.

The United Nations Korean Reconstruction Agency began the program in 1953 with a budget of \$2.3 million for building materials and equipment. In 1954, the United States pitched in with funds for a soil improvement program stretching from river headwaters through valley farmlands and down to the plains.

In two years, the United States has set aside \$6 million for improvement of Korean irriga-

tion systems. Bulldozers, tractors, rock crushers, cement mixers, steel reinforcing bars, and cement have poured into the country to help Korean farmers do the job.

The largest irrigation project is at Kyung Nam where four dams are being erected to supply water to over 10,000 chungbo of paddy land. Another is located at Bo Un and will serve 7,000 chungbo. At the moment 176 projects are underway throughout Korea.

A program aimed at protecting over 40,000 chungbo of farm lands from periodic flooding by swollen rivers was begun in late 1954. This continuing battle against nature's destructive forces involves constructing levees and revet-

Five years ago thousands of hen eggs were flown from the United States to Korea. These eggs hatched into baby chicks to increase Korea's ever growing poultry industry. Kim Song Tae watches a new chick emerge from its shell—a descendant of those "air mailed" to Korea five years ago. He is an agricultural technician at the Anyang livestock and poultry breeding station where this photo was taken.





American aid has built new warehouses to store Korean grain and American technicians have developed special processes to prevent weevil and other insect losses. Dr. Hugh Carroll, head of the OEC agricultural chemical section, saved 300,000 tons of grain in one year by the process demonstrated in this picture. Infested grain is covered with a plastic tarpaulin which is then filled with the fumes of deadly methyl bromide gas.



Korean soil leached by more than 5,000 years of cultivation, requires large amounts of fertilizer. The ammonium sulphate which this farmer is storing temporarily beside his house is part of 840,000 tons of fertilizer which is being imported into Korea with U.S. aid this year.

ments, and straightening river channels—with the aid of U.S.—supplied equipment and materials.

To store the ever-increasing grain crops safely, the United States has provided Korea with 298 prefabricated steel warehouses for farm co-operatives. By harvest time this year, dozens more will be erected, ready for use. They can also be used for storing chemicals and fertilizer.

Because of an urgent need to protect Korean crops from the ravages of plant diseases and destructive insects, tons of sprays, powder, and disinfecting equipment have been provided.

With the help of \$110,000 of new equipment imported through the U.S. economic aid program, the war-damaged Korean Agricultural Chemical Company in Inchon has begun producing the peninsula's most important agricultural insecticide, a form of benzohexachloride, at a rate to meet overall farm needs. This permitted cancellation of this year's plans to procure this chemical from abroad, allowing a net saving in Korean foreign exchange of \$70,000.

With the great bulk of Korean farmland devoted to growing vegetables and grains, little is left for pasture land. But because the Korean diet is still not adequate in terms of animal protein, livestock production is an important part of the food program.

And it is forging ahead rapidly. Korea now has eight times the number of swine it had in 1950. Chickens have multiplied five times. Goats, sheep, and dairy cattle are increasing rapidly in number.

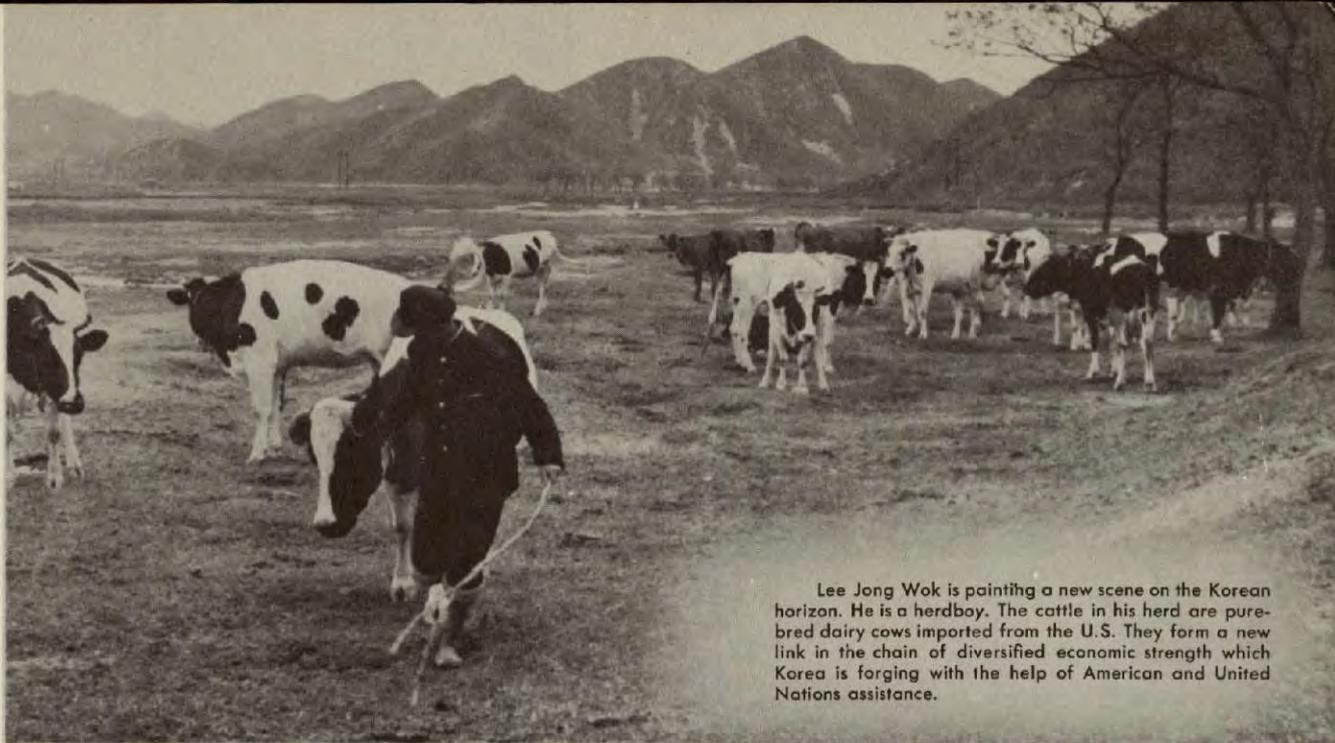
The United States program to aid in the rehabilitation of the Korean livestock industry centers on prevention of disease, improvement of feeds, and instruction in approved methods of animal care and breeding.

Chiefly responsible for the sharp rise in livestock population are the large quantities of veterinary supplies and better feeds provided by American relief agencies. During 1955 alone, 6.6 million heads of livestock were vaccinated against such diseases as hog cholera, rabbies, Newcastle disease and anthrax.

In March 1955, an UNKRA-donated freeze-drying vaccine machine installed in the National Veterinary Research Institute at Anyang began production of longer lasting, high quality vaccines to ward off disease.

The United States has also supplied materials to build cattle barns, poultry coops, and feed warehouses. Thirteen hammer mills to grind feed and 1000 incubators are also now in operation.

C



Lee Jong Wok is painting a new scene on the Korean horizon. He is a herdboys. The cattle in his herd are pure-bred dairy cows imported from the U.S. They form a new link in the chain of diversified economic strength which Korea is forging with the help of American and United Nations assistance.

The 1956 program includes rehabilitating the Seoul Veterinary College and providing additional equipment to produce vaccines. One hundred and sixty seven hammer mills and ensilage cutters will be delivered to Korea to boost feed production.

The marked reduction of disease has not only directly expanded the livestock population, but has also generated more confidence and interest among Korean farmers in raising animals. Research now going on in thirteen breeding stations, rehabilitated with American aid, should contribute much to the improvement of methods and to the continued rapid growth of the livestock industry.

The 4-H club members mentioned earlier are part of a three-pronged offensive to raise the overall competence of Korean agricultural workers. In this vital educational process, too, United States aid is playing a major role.

For example, agricultural experts from the ROK Government and the OEC are instructing farm youth in improved agricultural techniques. These young people will then take their places as 4-H club leaders throughout Korea.

The 4-H movement itself was initiated by an American—and grew so popular that 125,000 farm youths are now organized in 2,000 clubs. Its objective is to teach rural youth—the farmers of tomorrow—better farming methods, sound health habits and a greater sense of community responsibility.

American aid officials in Korea regularly send out 4-H news to local newspapers and circulate pamphlets, posters, project suggestions and instructional material to all clubs. The 4-H projects include raising pigs and chickens, cultivating silk worms, making butter and cheese and growing a variety of vegetables.

The 4-H movement is only one aspect of the farm extension program aimed at bringing knowledge of the latest and best farming techniques to Korean farmers.

The instruction may range from setting up farm bookkeeping systems to improving feeding methods for hogs. In home economics, such subjects as preparing and preserving foods and making family clothing are covered.

American aid is helping establish a farm extension training headquarters at the Central Agricultural Technical Institute in Suwon. Besides the physical reconstruction of classrooms and offices, the program envisions bringing American technicians to the institute to conduct courses in extension work. Several American experts will also travel through the Korean countryside, giving lectures and demonstrations to farmers and village leaders. During the first two years, the training program will be directed toward creating a nucleus of qualified Korean instructors for field work.

To improve farming techniques, Korea also requires competently staffed, fully equipped research centers. The nation's largest experimental station, the Suwon Central Agricultural Technical Institute, was three-quarters destroyed during the war. Practically all the equipment and most of the technical books were lost.

In 1955, the United States provided nearly a quarter of a million dollars to restore these facilities. This year, eight branch agricultural stations, a fiber breeding station, and a rice experimental station will also be rehabilitated.

These centers will wrestle with such important problems as increasing crop yields, determining the best strains of crops for upland farms, and diversifying agricultural production—all aimed at producing more and better crops.

From the Sea

Since marine products provide 85 percent of the animal protein in the Korean diet, an abundant fish haul is basic to national health.

In 1950, fishermen caught only 219,000 tons of fish—about half of what the Korean people required. Last year, the haul was more than 260,000 tons, a substantial improvement—but still not enough to meet the nation's needs.

As early as 1952, civil assistance agencies of the U.S. Army began bringing in fishing boats, nets, ice-making equipment and other supplies to put Korean fishermen back in business. United Nations Korean Reconstruction Agency stepped in at the same time with a \$3.6 million program to provide fishing craft, construction materials, modern canneries, and renovated fish markets to the hard-pressed industry.

Last year, the United States provided enough funds to add 16 vessels to Korea's decimated fishing fleet. And now an additional one million dollars has been allocated for boat construction materials. Up to now, the United States has supplied a total of 74 fishing craft and materials for dozens more. Small manufacturing plants producing ice, wire rope, nets, and other products used in the fishing industry will also receive new equipment to increase their output.

At present, Korea still has only 70 per cent of the vessels she had in 1940; old ones are wearing out faster than they are being replaced. However, materials flowing to Korea for additional boat construction should give the program an added boost and put the fishing industry well on the road to recovery.



Rows of freshly caught fish line the counters of this Inchan retail fish market as proof of the importance of Korea's growing fishing industry. With the aid program technical and material assistance in the form of boats, nets and equipment plus building and repair facilities, Korea's fishermen are bringing in an abundant haul to feed their nation.

The Barren Hills

On a bright, sunny day in early April, the people of a small village south of Seoul gathered to listen earnestly to the advice of their town leaders. Later, they moved off into the bare hillsides encircling the village—to spend the rest of the day planting tiny trees.

This scene was repeated in sleepy hamlets and busy cities all over Korea as the nation turned out for one of its most important holidays—Arbor Day.

It is a day that reminds the Korean people that one third of their forests are already barren and that if they don't do something about it, the remainder will soon become wastelands.

Something is being done. The hills in Cholla Pukto, for example, where forests have been levelled and fertile top soil has completely washed away, are once more turning a youthful shade of green in the spring. Thousands of seedlings planted by local villagers have done the trick.

The denuded Korean hillsides symbolize a serious agricultural problem. Without forest cover and the sponge-like accumulation of leaves and twigs on the ground, rain water runs off quickly, leaving streams dry for months at a time. A healthy upland forest will retain moisture for long periods and send water down gradually all year round to nourish crops in lowland areas.

By the end of 1956, hundreds of village forestry associations will have planted more than 900 million seedlings since the program began in 1954.

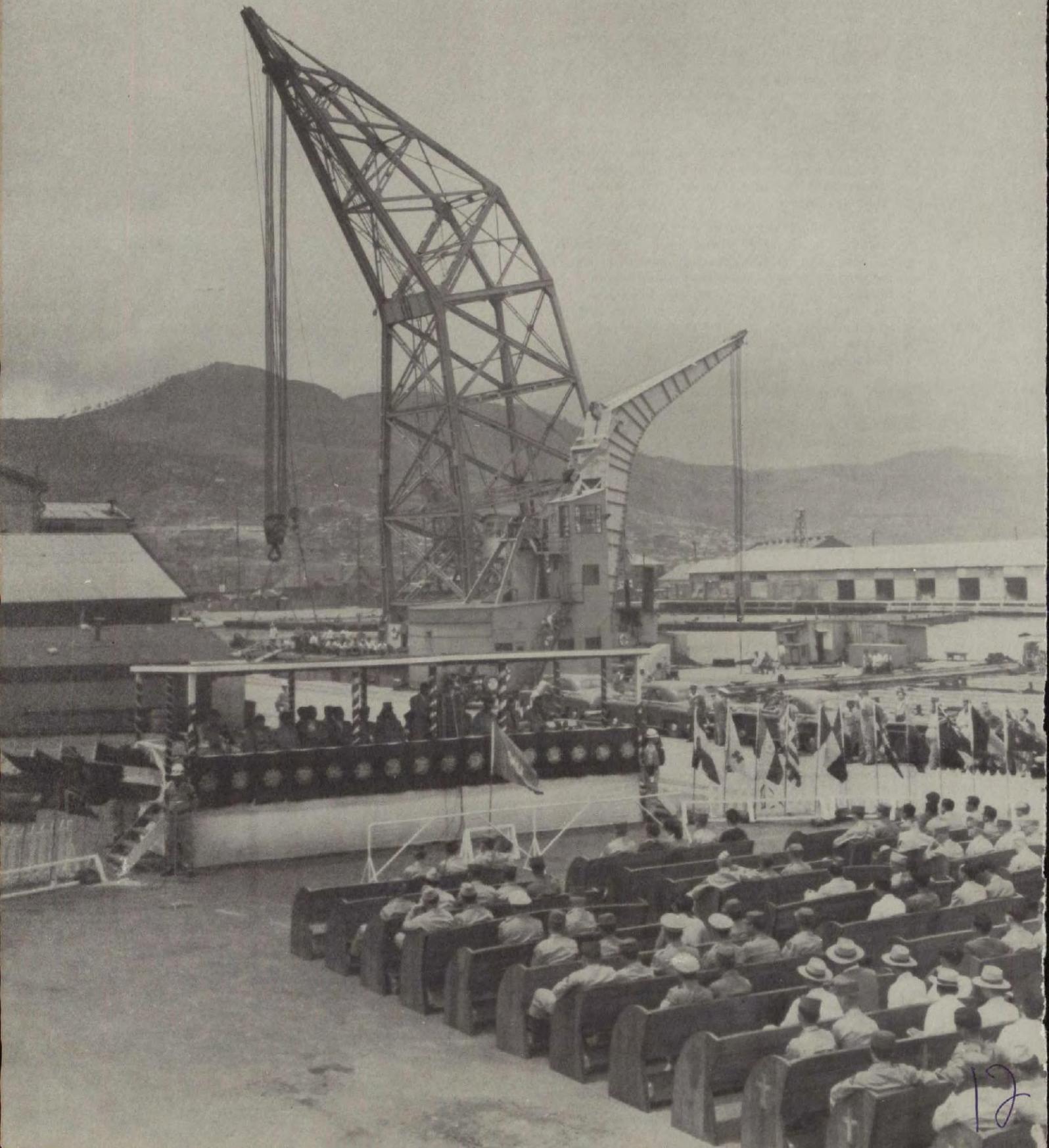
Fast growing species, like alder and acacia, have been planted to supply firewood. Other varieties will provide lumber for houses, telegraph poles and railroad ties.

Here, too, the United States is helping with technical assistance in forestry management—a program that will simultaneously bring water to crops, provide wood to build a house, and furnish fuel to heat it.

The last World War and the Korean War saw Korea lose well over half her forests. Only in the last two years has reforestation been able to overtake the destruction of trees. In the two years ending in December, 1956, more than three quarters of a billion seedlings will have been planted by ROK forestry associations. These pictures show a denuded hill coming to life again with terraces planted to trees.



The most spectacular single piece of transportation equipment which U.S. foreign aid has presented to Korea is perhaps this giant floating crane in Pusan harbor. It is capable of lifting up and putting down 150 tons of freight—equal to several box-car loads—at one time.



Tracks, Rudders and Wings

A 65-year-old farmer was squatting precariously on one of the many dike-like sod rows which separate Korea's rice fields into jig saw-shaped paddies. His ancestors had been sitting on the same dikes cutting herbs with the same type of a knife for hundreds of years.

Suddenly a shrill, clear whistle shattered the quiet of the countryside.

A diesel-powered freight train raced across the countryside. It glided along on tracks as straight as two arrows. And these rails of the machine age in contrast to the rambling contours of the rice paddies showed Korea building.

The keen young engineer waved to the farmer with his left hand as he throttled the engine on with his right. He marked a contrast with the farmer just as sharp as the arrow straightness of the tracks over which he raced did with the rice paddy contours.

Forty minutes later the engineer eased the powerful engine into the Pusan freight yards—to set a new freight train record of thirteen and a half hours from Seoul to Pusan.

Breaking travel time records between coal field and power plant or inland city and port are becoming commonplace accomplishments for the Korean National Railroad. But that isn't the only place where records are falling.

In all phases of rebuilding, repairing and improving the country's transportation, the Koreans with the help of American aid are piling achievement on top of achievement.

Already, more than 2,500 freight cars have been supplied to KNR. These cars—enough to make a train 44 miles long—have been supplied by the United States.

Two new rail links have been completed to make the nation's rails link ROK east and west as well as north and south.

Thousands of tons of steel rails, ties and other materials have gone into rehabilitation of war-damaged railroad lines making new tracks heavier and sturdier than ever before.

Workshops in principal rail centers have been renovated to handle major repair work on rolling stock.

On the sea and in the harbors the story is the same. Wharves have been rebuilt, channels dredged and navigational aids installed. The 132 harbor craft ranging from tug boats to floating cranes which have been turned over

to Korea by the United States ply the harbor waters with greater ease. Ocean craft, both Korean and from other nations, move more efficiently into port to load or unload.

New equipment is being brought into Korea under the aid program and ground crews trained to make air travel in and out of the nation safer and more reliable.

Everywhere modern Korea is rising out of the ruins of war destruction.

The railroads, which were operated by the U. S. Army during the war, started repairing main lines in 1953. The United Nations Korean Reconstruction Agency gave \$1.5 million in cross ties and other construction materials.

But the bulk of the aid to railroads came through the United Nations Command Office of the Economic Coordinator—the American aid arm in Korea.

Rehabilitation equipment and supply appropriations totaled \$18 million in 1954. In the next two years even larger sums swelled the total railroad expenditure by the United States in Korea to more than \$100 million.

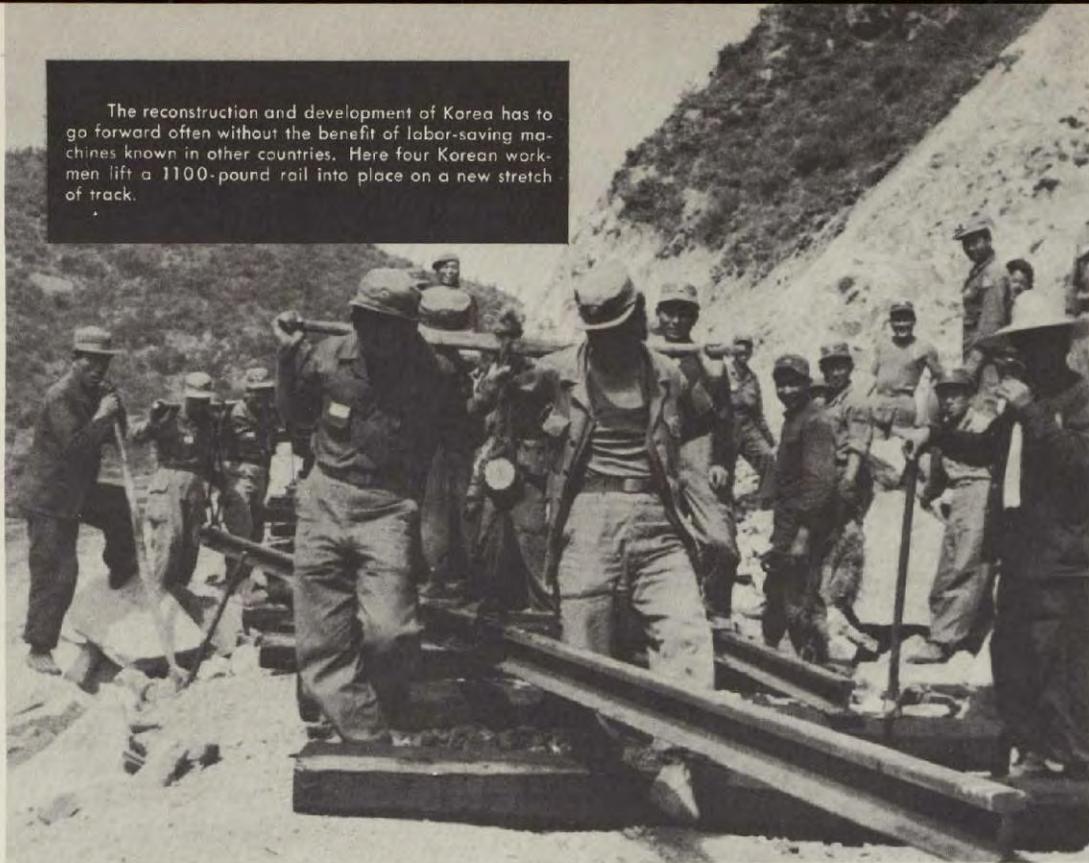
Korean workmen knifed their way through 52 miles of tortuous terrain using American machinery and supplies to complete the Ch'oram-Haesong line. Over this line the Changsung coal mine—largest in the Republic of Korea—can send its coal directly across the peninsula to Seoul in ten hours. Coal from this mine and others in the area went via rail to an east coast port and then by ship to Inchon and then to Seoul taking ten days.

While the Ch'oram-Haesong line was progressing another rail link construction project was initiated to connect Yongwol, scene of Korea's major steam power plant, with Songhak. This allowed Yongwol to increase current output because it could get needed coal faster.

Meanwhile a 16-mile rail spur is being pushed from Yongwol into another and nearer coal field. This spur, scheduled for completion this fall, will open a new coal supply for Yongwol as well as to coal-consuming industrial centers in other parts of Korea and the new fertilizer plant at Chongju.

Still another rail extension was recently opened between Unsong coal field and Chomchon, the site of a new cement plant, now under construction. This means the power producing coal for this big plant can come from field only

The reconstruction and development of Korea has to go forward often without the benefit of labor-saving machines known in other countries. Here four Korean workmen lift a 1100-pound rail into place on a new stretch of track.



12 miles away.

Over the past three years, the United States has allotted \$8 million to help build these and other new trackage in Korea.

At present, the Korean National Railway has nearly 11,000 freight cars. The OEC financed the purchase of some 1300 box cars, gondolas, tank cars, hoppers bottom and refrigerator cars from the U.S. Army in Korea. Another 825

box cars, 565 gondolas and 50 hopper cars were supplied directly from the United States.

In March 1956, 32 passenger coaches arrived in Korea and an additional 67, plus several dining and sleeping cars, are on the way. UNKRA has supplied 30 hoppers to the Korean National Railway.

To assure sufficient traction power, United States aid has provided the Korean National

A party of ROK and American aid officials inspect the entrance to a 225-meter tunnel on the Naesong-Ch'oram rail construction project. This line was completed in 1956 with U.S. help. It extends across 52 miles of rugged mountain terrain.



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Railways with 41 steam and four diesel locomotives, with ten other new diesels to be added this year.

With this equipment the KNR last year carried 10 million tons of freight and 58 million passengers. The passenger load was the largest in Korean history and the freight tonnage was only slightly below the peak figure for the war year 1953.

The Korean National Railway system has 3,500 kilometers of main line track which crosses 1644 bridges and runs through 264 tunnels. At the end of the Korean war, the entire network required extensive repair and improvement. This rehabilitation is being done with an eye toward making the rail system better than it was originally.

The railroad communication system, virtually wiped out during the war, also has been restored to a high level of efficiency. Last year, ten tele-

type machines converted to Korean characters were installed in the regional communications centers. The United States will supply equipment for two additional carrier circuits between Seoul and Pusan. Since each carrier can transmit four telephone conversations simultaneously, this project will greatly speed the flow of traffic, maintenance and dispatching information along the main supply routes.

The backbone of any railroad is its repair and maintenance facilities. With this thought in mind, American economic officials set about providing \$760,000 worth of materials and equipment to rehabilitate three railway workshops nearly leveled during the war. At the end of the 1956 program, 70 per cent of the reconstruction work on these shops in Seoul, Yongdongpo and Inchon will be finished. Already the Seoul railway shop is able to handle major locomotive repairs, and all three will soon be able to manufacture their own spare parts.



The coal-burning steam locomotive continues to be the mainstay of the Korean National Railways for tractive power. But low-volatile Korean coal is unsuitable for burning in locomotives and railway coal has to be imported under the U. S. aid program.



Chai Jai Yun, a diesel engineer, turns a new 800-horsepower diesel electric locomotive up to full speed under the supervision of Charles Smith, OEC railroad equipment advisor. The engine can pull a 600-ton freight train 40 miles per hour and is valued at \$100,000. It is one of four imported under the American aid program with ten more to come.

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This is one of eight small diesel coastal freighters which ply their way along the Korean coast as far away as Manila. Given to the Republic of Korea under the American aid program, these ships carry out goods produced in Korea and bring in needed materials. They form the nucleus of a growing merchant fleet which will carry the Korean flag around the world.

Most Korean railway engineers are well-trained, but require further instruction in the operation of modern machinery. Three diesel technicians were recently sent to the United States for such training. Seven more will go for training in rail operation and maintenance. These returning technicians together with American experts in Korea will do much to keep the Korean National Railway operating effectively.

Tugs and Wharves

A growing and rehabilitated industry demands more raw materials and markets more good abroad. To keep pace with this developments harbors are being expanded, wharves are being enlarged and warehouses built.

In 1953, UNKRA provided nearly \$2 million worth of harbor rehabilitation and equipment. The following year, the United States allocated \$3.7 million to bring in gantry cranes, air compressors, concrete mixers and cargo handling equipment.

Last year, the flow of aid goods to rehabilitate harbors increased sharply. The program included repair or construction of breakwaters, wharves, and port warehouses. Navigational aids such as buoys were rehabilitated and lighthouse lanterns were procured for installation in lighthouse structures, together with a million dollars worth of fork lifts, slings, and other cargo handling equipment. The program also calls for supplying Korea with eight dry cargo vessels worth \$6 million.

The United States has turned over to the ROK Government 132 harbor craft formerly used by

the U. S. Army in Korea. These vessels include tugboats, barges, floating cranes, tankers and a floating machine shop. In addition, aid funds were used to purchase an army 20-inch pipeline dredge, the Raymond.

The Raymond has completed filling in Lake Success, a disease-infested pond near Pusan. The channel at Masan has also been dredged to enable tankers and coal ships to supply the new steam power plant near that city. Similar operations are going on at Inchon to deepen the channel.

Machinery and tools to repair five small shipyards are gradually arriving in Korea. And a \$2 million rehabilitation and expansion program for the Pusan Iron Works is designed to raise the standard of work at this important ship repair point.

Korea's airfields are also receiving a share of American aid. A program to improve civil aviation facilities began in 1955 with an allocation of \$111,000 for aviation communications equipment, and \$165,000 for an instrument landing system—the first of its kind in Korea.

Technical advice is being given the ROK Government for improvement of the nation's civil aviation system. Seven Korean technicians are in Formosa for training in communications, traffic control and maintenance. A communications school in Korea staffed with OEC aviation experts now has 22 students enrolled. And the United States will soon furnish equipment and instructors for an Aeronautical Training Center—to be established.

Power for Factories and Homes

A Korean college student fumbled for matches and a candle as the electric lamp in his room flickered and died; a Seoul street car, jammed with commuters returning from work, stalled on a busy thoroughfare; a railroad mechanic looked up from his work in disgust as his electric drill went dead for lack of current.

These incidents were symptomatic of a paralyzing post-war problem in Korea—lack of enough electric power for industries and homes.

Today, thanks to a coordinated effort between Koreans and Americans, the power resources of the Republic of Korea have been developed to the point of meeting all requirements, and continuing progress will assure a strong flow of electricity all year round.

The recovery of Korean power is a dramatic story of a long, painful climb, punctuated by crises, and finally driven to success by perseverance and hard work.

When the Communists took control of North Korea, they also took over most of the hydro-

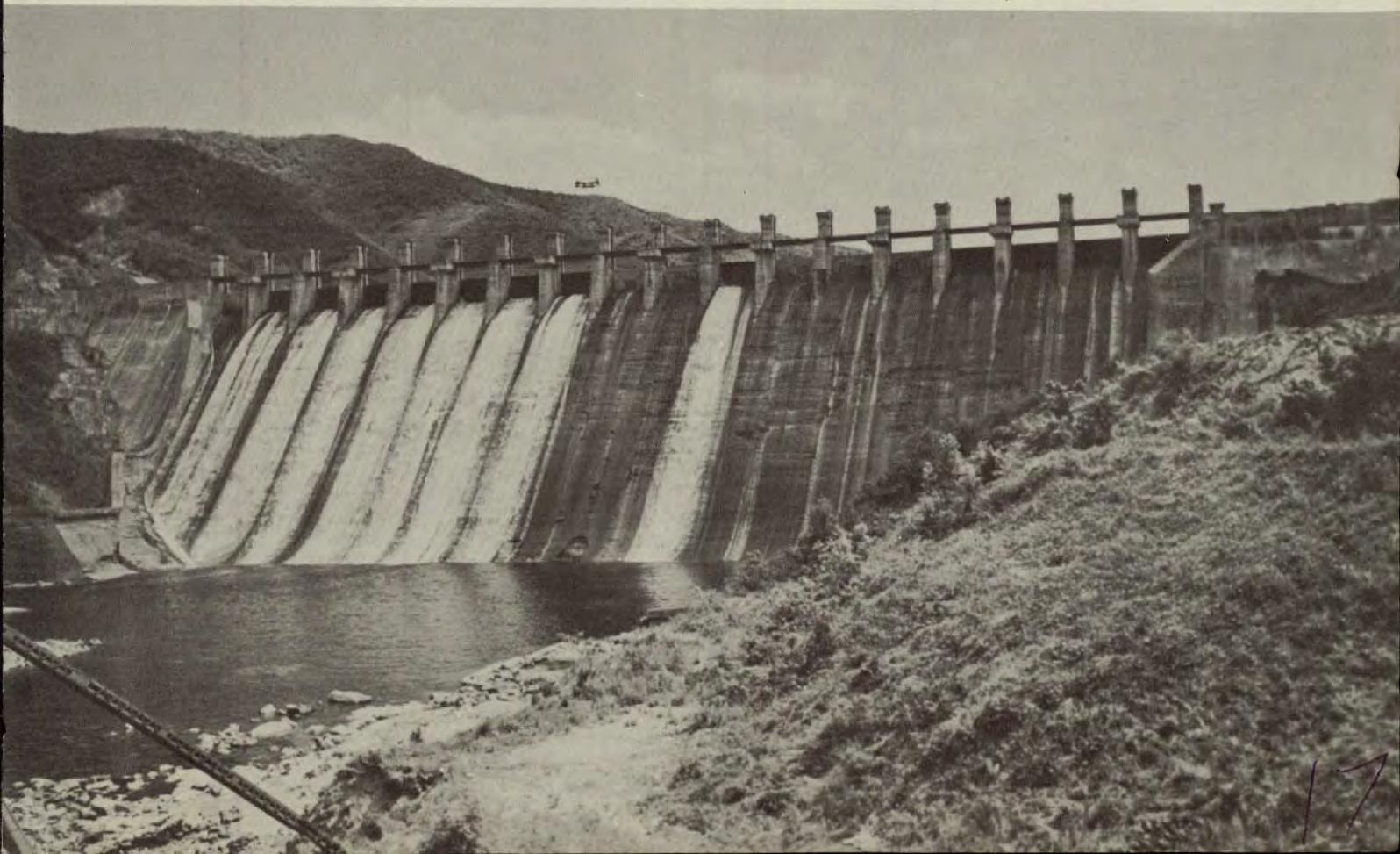
electric plants that had been supplying electricity to the entire peninsula. In 1948, when the Republic of Korea was formed, the Communists cut off all power transmitted south of the 38th parallel. This resulted in a loss of 100,000 kilowatts of available electricity for the new Republic—leaving no more power than is required for a American city of 200,000 people.

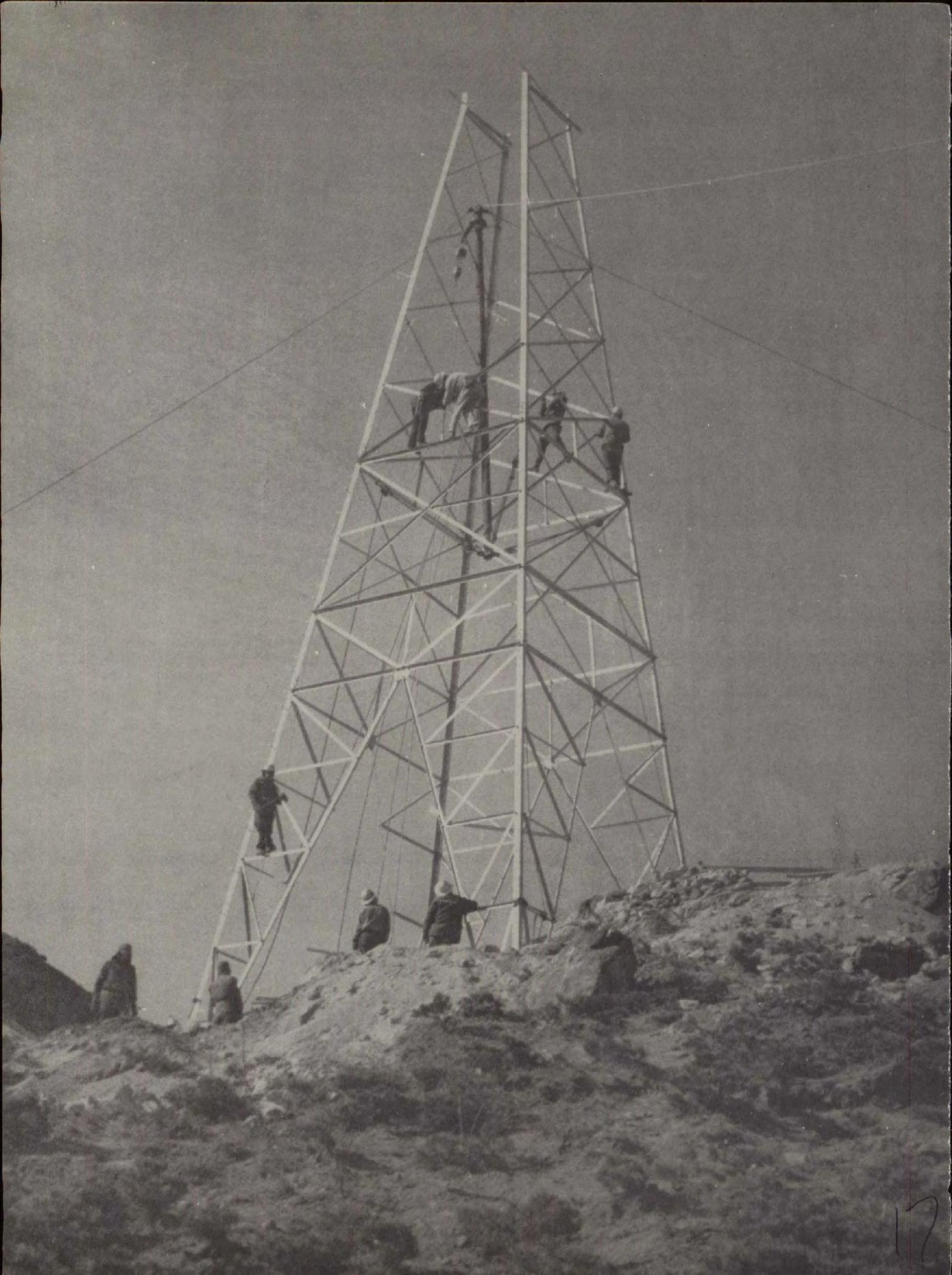
But this was only the beginning of Korea's power troubles. During the bleak days of the Pusan beachhead, output dropped to a scant 7,000 kilowatts. It rose to only 20,000 kilowatts during the drive into North Korea.

For the next few years, the acute power shortage greatly impaired the ability of the nation to manufacture what it needed for the agonizing period of reconstruction. Factory workers napped by their machines during the frequent power failures, ready to spring up again as soon as the current was restored.

Despite the extensive war damage to plants, by the fall of 1955 electric power capacity had gradually risen to more than 100,000 kilowatts, boosted by two U.S. Army loaned power barges

The torpedo-damaged H'wachon Dam on the headwaters of the Hwan River just north of the 38th parallel but within the Republic of Korea is being repaired under a \$7 million American aid project. The Morrison-Knudsen International Co. Inc., is adding a one-meter thick steel reinforced concrete face to the down-river side of the dam, repairing the gate structure, rebuilding the dam top and restoring two power generators.





with a combined capacity of 50,000 kilowatts.

When in September 1955 the floating power plants were withdrawn for urgently needed repairs, the nation's electric power was drastically reduced. And in October, the failure of a transformer at H'wachon hydro plant on the Han River left Korea with a bare 61,000 kilowatts of output. Manufacturing plants throughout the nation found they could no longer operate and began to close down. Hundreds of factories in Seoul alone were threatened with shut-downs; electricity in homes was due to be shut off entirely. This was the signal for an all-out drive to increase Korea's own power-producing capacity.

The first step—and a major one—was to put into operation two units of the Yongwol steam power plant. This plant, damaged by bombs, machine gun bullets, fire and flood, had been under repair by Korean workers for more than a year under the direction of a "retired" American engineer.

Yongwol, originally built with four 25,000 kilowatt units, had been so heavily damaged that its output was down to 8,000 kilowatts when the power crisis struck. The American engineer and his Korean staff worked feverishly and raised production to 40,000 kilowatts within one month.

And they redoubled their efforts to push the plant's output still higher. By the middle of December, only a coal shortage prevented Yongwol from transmitting a peak of 60,000 kilowatts.

This sharp effort pushed the nation's power output by the end of 1955 to 100,000 kilowatts—equal to what North Korea had been sending south of the 38th parallel up to 1948.

A second 154,000-volt transmission circuit connected to the nation's power system and a new transformer added in February boosted Yongwol's peak output to 70,000 kilowatts—and Korea's available electric power to 130,000 kilowatts.

More power—much more—was on the way. In 1954 the U.S. foreign economic aid office in Korea had agreed to finance four 25,000-kilowatt steam power units. One was to be at Tangin-ri near Seoul, two at Masan on the south coast and one at Samchok, in Korea's "little Ruhr," on the west coast. The contract for the plants, to burn low-volatile Korean coal kindled by jets of fuel oil, was awarded to the Pacific Bechtel Corporation, one of America's foremost industrial builders, with home offices in San Francisco. The cost was to run to a total of approximately \$34,500,000.

Construction started promptly and work was rushed. The first of the 25,000-KW units, at Tangin-ri, came on the line in April, 1956, and the first unit at Masan came into production in May. The two others were to take on their share of the Korean power load before the end of the summer.

With a new boiler and further repairs, Yongwol will be able to shoulder an additional 10,000 to 20,000 KW of load. H'wachon Dam, on the Han River—actually north of the 38th parallel but (due to a curve in the boundary) in South Korea—will receive an \$8 million face-lifting to repair damage inflicted by shells and torpedo bombs, and an additional generating unit will be installed.

Its peak capacity will become 27,000 KW larger than it is now. Chungpyong power plant, 40 miles down the river toward Seoul, will be repaired and modernized at a cost of \$2,000,000.

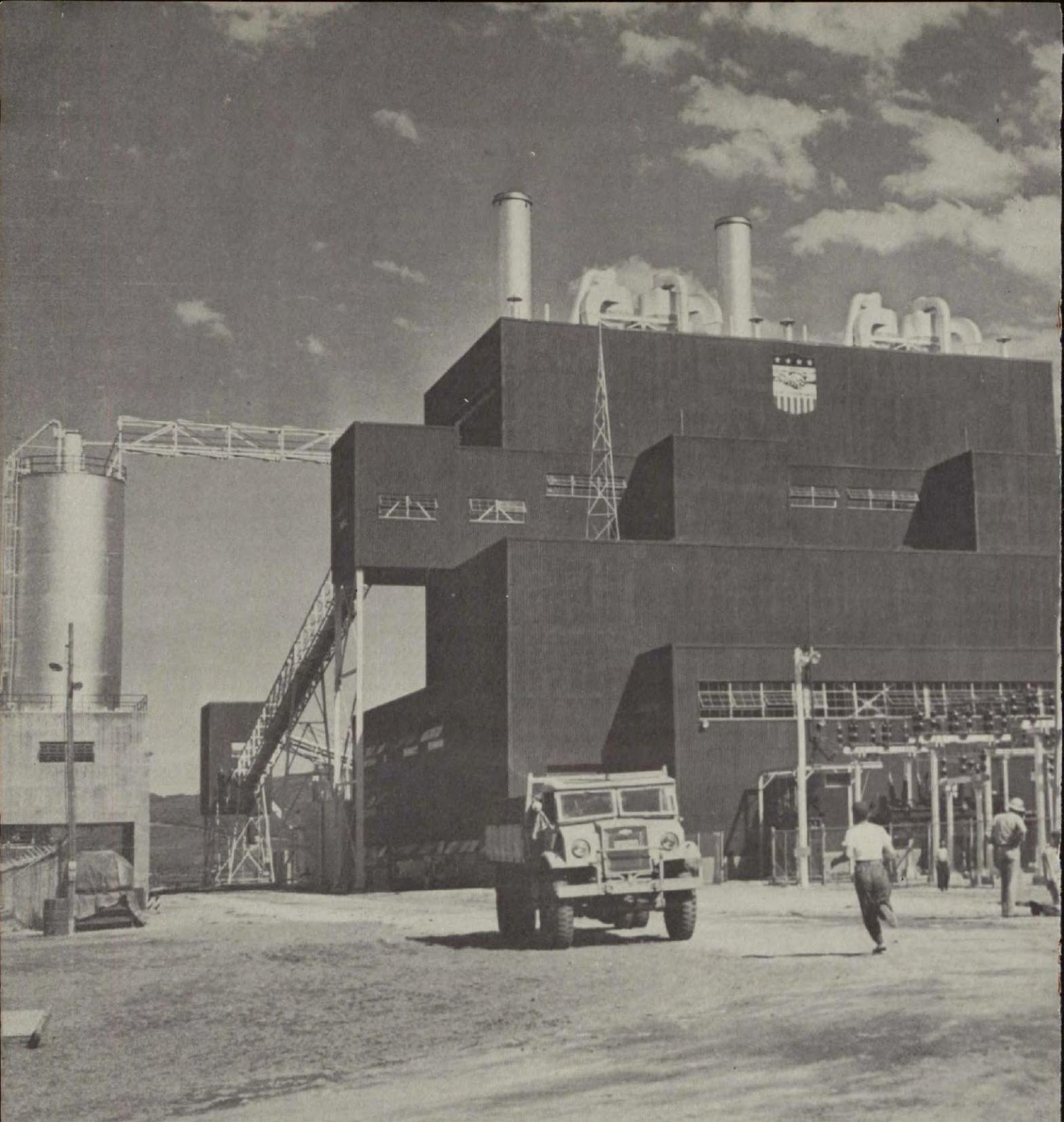
The whole Korean power program will have received in all \$50 million of American aid. Full-time, year-round power capacity will be in excess of 200,000 KW and a peak load of 300,000 KW can be attained, at least when hydro power conditions are favorable. And there will be American-trained Koreans to run the plants—men trained on Technical Assistance Teams in the United States or under American engineers in Korea.

Outlined against the Korean sky, eight structural steel men rush work on a transmission line tower on Korea's rocky south coast. This line will feed the new Masan steam power plant's 50,000-kilowatt capacity into the national network.

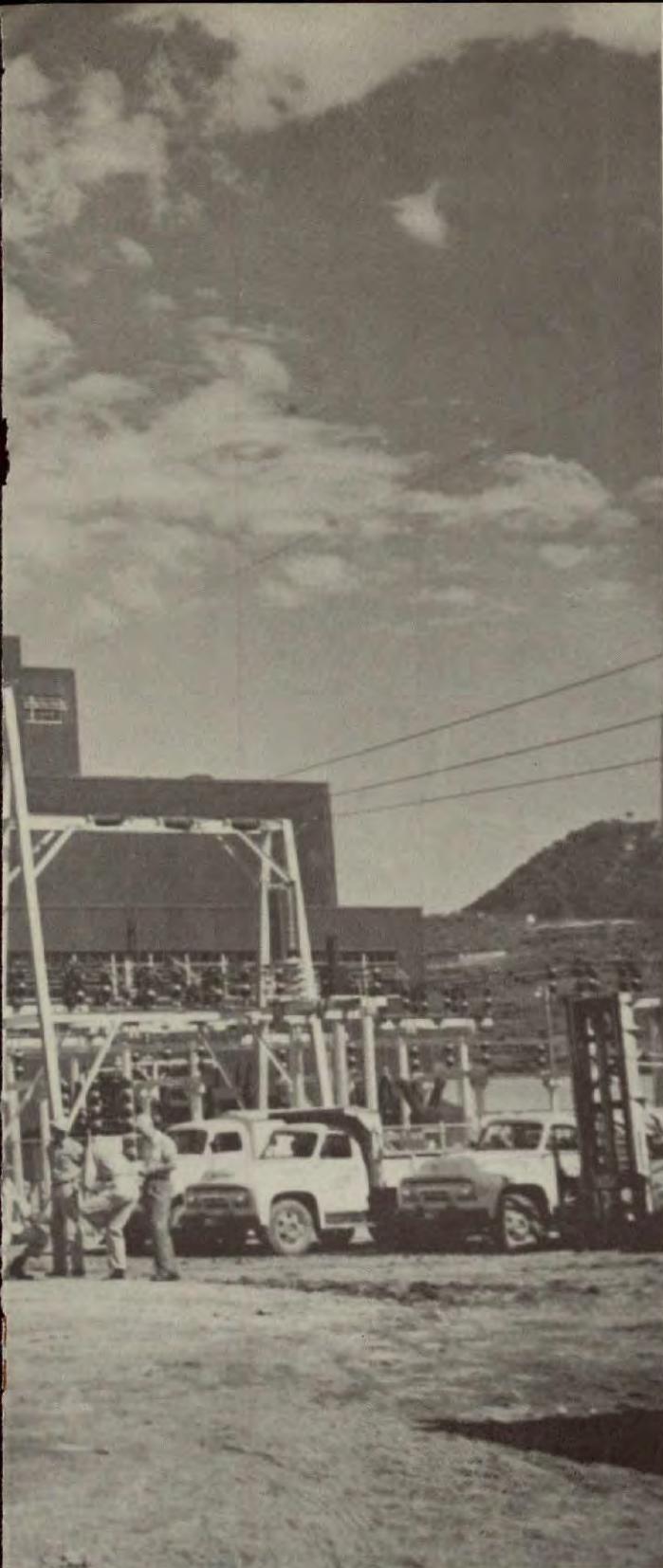
This is the turbine-generator control board at the new steam power plant at Samchok, in Korea's east coast industrial area. The man at the switch has at his command 25,000 kilowatts of power, one-eighth of all the electric power in the Republic of Korea.



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This new OEC-built steam power plant at Masan will account for one-fourth of the total regular power capacity of the Republic of Korea. One of the plant's 25,000 kilowatt units already is in operation. The second will go on the line in a few weeks.



A new note of optimism is sweeping the business world of Korea. The reason is simple—new factories are being built, old ones repaired, and small ones expanded. The nation is in the process of having its industrial face lifted.

American aid is helping—but Korean industrialists and technicians are doing the work.

Raw materials are an important part of this aid. Hundreds of millions of dollars worth of every conceivable industrial materials are entering Korea in a constant flow to feed Korea's youthful, but growing, industrial plant. They include everything from rubber to caustic soda and rayon yarn to steel shapes.

But perhaps no American assistance to Korea is more needed than the massive \$40 million program to rehabilitate Korean manufacturing industries.

The program, now getting into full swing, provides for the reconstruction of 48 plants in 28 important industries—industries which will lessen this country's dependence upon imported manufactured goods and thus heighten the nation's self-sufficiency.

The largest project, and one on which work began recently, is the erection of a \$19 million fertilizer plant at Chung-ju. This factory, which will be completed in 1958, will supply 85,000 tons of urea-type fertilizer per year—one-third of Korea's total requirements for nitrogen fertilizer.

An automobile tire plant in Pusan has been rebuilt to lessen the nation's 100 per cent dependence on imported tires. A new reclaimed rubber plant will start operation soon, turning out 1,000 tons of rubber a year, salvaged from scrap. Nearly completed is the repair of a leather plant which will produce 50,000 pairs of shoes for the ROK Army annually—more than twice its present capacity.

But these projects represent only a start. Here is a preview of what is to come under the industrial rehabilitation program:

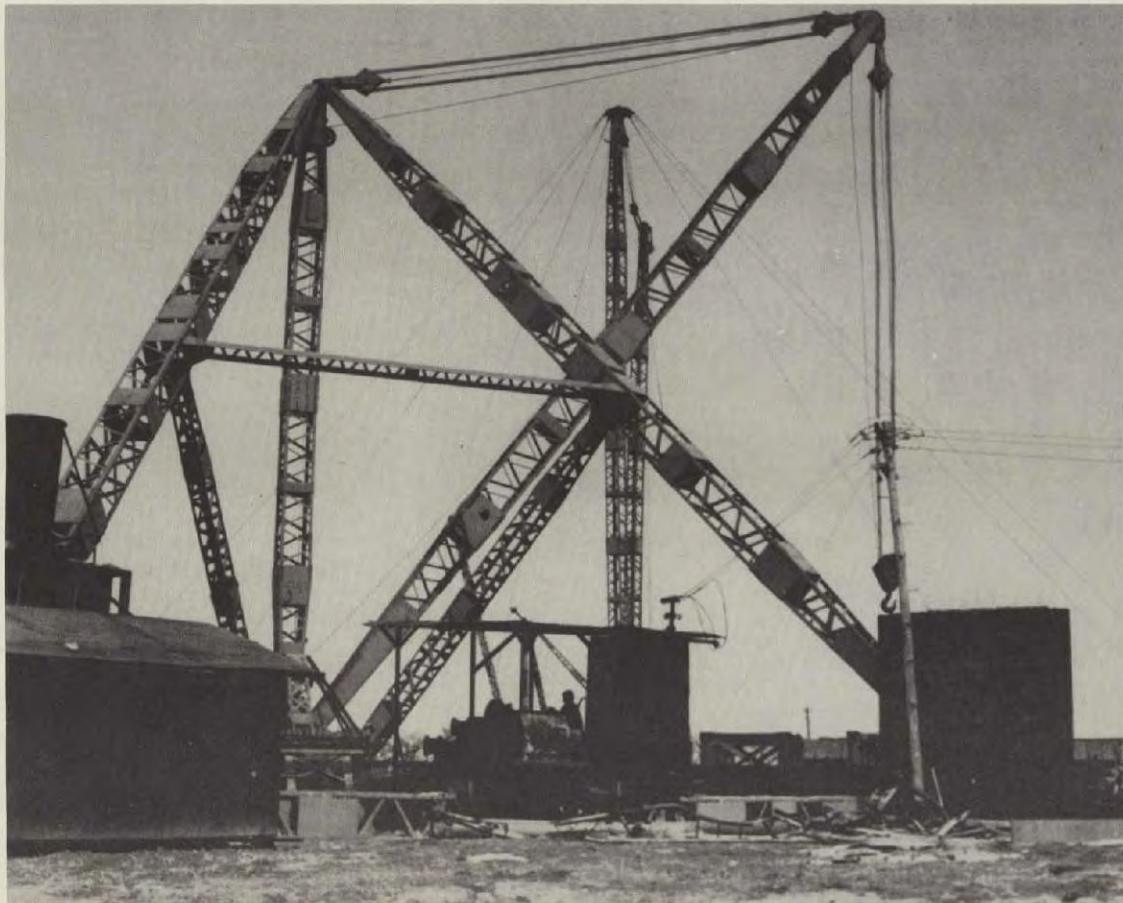
A total of \$2 million has been provided to rebuild the heavily damaged Pusan Iron Works. Upon the completion of the project, a foundry, forge shop, machine shop, testing machinery and other equipment will be in operation in a highly integrated plant. The Pusan Iron Works will then be able to make major repairs on ocean vessels and will manufacture engines, steel parts, mining tools, chemical equipment and metal castings.

A factory now producing bicycles will be converted to the production of three-wheel trucks. Today vehicles transport an estimated 20 per cent of all cargo—and demand for this type of transportation is growing. These small vehicles are ideal for Korea since they consume only a third as much fuel per ton of freight as a two and half ton truck. The new plant in Seoul will turn out 300 tricycle trucks each month, each with a capacity of 1.2 tons.

Three flour mills will add 40,000 metric tons of flour to the nation's annual supply after half a million dollars worth of new equipment and supplies are provided. One has already been furnished with a modern conveyor unit.

Increased production of agar-agar for export, using domestic seaweed as a raw material, will be possible as a result of modernization projects under way for several plants. The quantity of raw materials needed to manufacture \$500,000 worth of agar-agar under ordinary methods will produce \$2.4 million worth after new equipment has been installed.

The rehabilitation and expansion of four starch plants in order to enlarge their output will decrease the amount of starch and starch derivatives that Korea must import. This will also encourage farmers to grow more potatoes and corn in upland areas to be made into starch.



Skilled Korean operators pull the levers on these huge cranes at the Noryangjin bridge steel yard in Seoul to pick up large "I" beams from freight cars. The steel is then fabricated and riveted into girders which are loaded onto flat cars and shipped out to bridge sites throughout Korea.

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The capacity of a bottle glass plant in Pusan will be doubled with the aid of \$335,000 worth of new equipment. At the same time the quality of the glass will be improved.

Over \$300,000 has been set aside to rebuild at Anyang an asbestos products factory which was destroyed during the war.

A metal products plant near Seoul, heavily bombed during the war, will be rebuilt to produce a substantial portion of Korea's requirements for taps, drills and cutting tools. Present production capacity of 120 metric tons will be tripled.

Korea can save considerable foreign exchange if aluminum ingots, instead of sheets, are im-

ported for cooking utensils and other aluminum products. To make this possible a metal sheet plant in Seoul will be equipped with modern hot and cold rolling mills.

Five small shipyards in Pusan will be rehabilitated at a cost of more than half a million dollars. These yards are used primarily for the construction of fishing boats and other small craft and can turn out only six vessels per month at present. When repairs are completed, production will leap to 54 boats monthly—an important gain for Korea's fishing industry which is chronically short of vessels.

Sochung Island, 70 miles off Inchon, has reserves of 110 million tons of highly valued mar-



Korea has a good complement of trained machine shop workers and is not lacking in managerial enterprise. This photo shows a worker shaping aluminum automobile pistons at the plant of the Seoul Piston Industrial Company, which had to be completely rebuilt after the communist invasion. The company financed its own rebuilding. The OEC provides foreign exchange to import the aluminum raw material.

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ble—and a marble plant that was largely destroyed during the war. With American help, the plant will be completely rehabilitated and should be able to earn over \$300,000 in foreign exchange from exports.

Enough equipment will be provided for a printing plant in Seoul to increase publication of technical, scientific and other textbooks by 30 per cent.

An automobile spare parts factory in Inchon will be rehabilitated to produce badly-needed pistons, bearings, rods, king pins and other parts.

A rebuilt plastics moulding plant in Seoul will save up to \$200,000 a year in foreign exchange by producing plastic sheeting and household articles—combs, cups, soap dishes, toys for the domestic market.

And because Korean silk can become a very important export commodity, a silk weaving and dyeing plant in Kyongsan-Namdo will also receive new equipment to double its present output of sateen and suit materials.

Other rehabilitation projects include an electric wire plant, three paper mills, a ROK Army clothing plant, a ball bearing factory and a pigments plant.

Since the Korean war ended, UNKRA has also played a major role in rebuilding small industries in Korea. Material assistance and technical advice have been given to cotton, wool, paper, farm machinery, bicycles and hundreds of other plants. UNKRA has supplied 55,400 spindles which now produce one-fourth of the nation's yarn. Paper production in three plants has been increased and plans have been completed for a new factory to produce all the kraft paper and paper bags Korea needs.

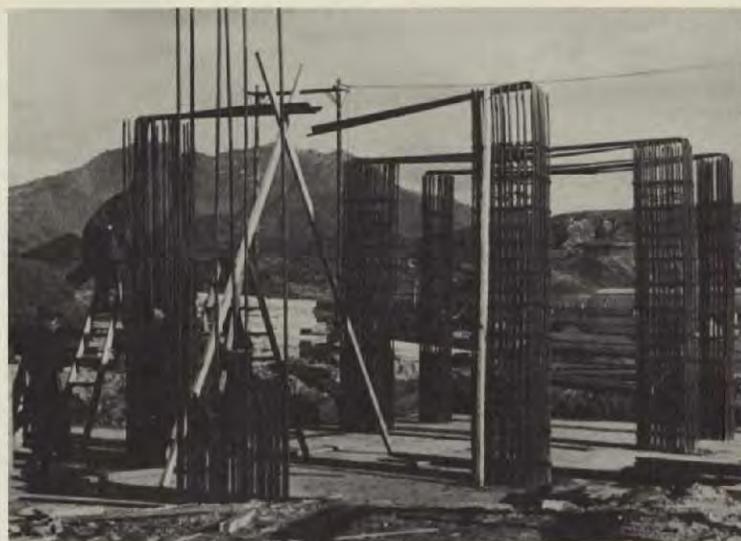
A cement plant currently under construction is UNKRA's largest project. Costing over \$8 million, the factory will produce 200,000 tons of cement a year. At Inchon, work is progressing on a new plate glass plant—for which UNKRA has allocated \$2.5 million. It will turn out 12 million square feet of glass annually, enough to meet all local demands.

In more than 1,000 instances small businessmen have been able to obtain assistance, either by dollar or hwan loans from the UNKRA Small Business Loan Fund. To date this fund has loaned \$1.5 million and 872 million hwan.

An important part of Korea's industrial development lies in the growth of cottage industries—small home workshops where members of one or a few families in a village can engage in useful work in their spare time.

Such industries can produce much of the goods that the Korean people require for daily living. They can make more efficient use of agricultural and other local raw materials. And they can provide increased income for agricultural workers who find it hard to make ends meet.

In cooperation with individual producers and handicraft associations, the OEC is setting up a project to assist in developing cottage and handicraft industries in Korea.



This photo shows structural steel going up for one of the buildings for the \$19 million fertilizer plant being built with OEC funds in Chungju, in the north central part of the republic. When completed this plant will produce a third of the nitrogen-type fertilizer needed in Korea.

Particular emphasis will be put on adapting Korean handicrafts for the export market. American designers will be brought to this country to furnish technical advice. Pilot shops will demonstrate modern equipment and methods applicable to these industries. American consultants will also assist in establishing industrial design courses in the College of Fine Arts of Seoul National University and in the Hong-ik College of Fine Arts.

This year, four Korean art students will receive advanced training in the United States, including a period of apprenticeship with top American industrial designers.

The mining industry, too, has received substantial foreign assistance. Reconstruction of this industry has been mainly the responsibility of UNKRA which has spent nearly \$9 million for coal mines alone. A team of UNKRA mining experts has given extensive technical assistance to improve mining methods. At the same time, new generators, hoists, drilling equipment, rails, coal cars, and locomotives have resulted in greater efficiency and higher production in the nation's coal mines. The results are apparent; coal production in the Dai Han mines in December, 1955 was double that of December, 1954.

An extensive drilling program which would be sponsored by the United States to determine the extent of the reserves in the Hambaek coal fields has been proposed and is now being reviewed in Washington. The target for Korean coal production in 1960 is 3 million tons—twice the present output.

For Increased Knowledge

A young primary school teacher listened intently as a Korean interpreter translated the remarks of an American educator before a class of Korean instructors. She bent over her pad to make a few notes and then attentively straightened up again. The ideas were new—but they made sense.

The American teacher had come to Korea to help in an important project—upgrading the qualifications of Korean teachers and improving the methods of instruction.

In 1945, there were about 50,000 qualified teachers in Korea. Fifty per cent of them were Japanese, who returned to their country after the surrender. The resulting gap could be filled only with untrained Koreans who themselves had to be taught how to teach.

The United States program to assist in educational development in Korea is divided into three major projects: in-service training of primary teachers at eighteen teachers' high schools, rehabilitation of public schools and university buildings and facilities, training teachers and providing equipment for vocational and technical instruction.

In 1952, the U. S. State Department launched a program to bring qualified instructors from teachers' colleges in the United States to assist in training Korean teachers. In 1953, the United Nations Korean Reconstruction Agency (UNKRA) recruited another team of six Americans to continue this work.

In the following year, UNKRA and the American-Korean Foundation sponsored a group of fourteen American educators, recruited by the Unitarian Service Committee, who worked in key teachers' colleges in Korea for ten months.

Several gave instructions at the College of Education of Seoul National University. Others assisted the Textbook Bureau of the Ministry of Education in developing curricula and textbooks. Still others helped the Central Educational Institute in solving general educational problems.

The Republic of Korea now has eighteen teachers' schools—all of high school level and all designed to turn out instructors for elementary schools. But half of Korea's primary school teachers had only a regular high school education. The ROK Ministry of Education called these in by the hundreds to attend four to six weeks teacher training workshops conducted by the team members.

UNKRA's education team thus served a basic need in Korea during its tour of duty. The Office of the Economic Coordinator entered this program in 1956 with a plan to bring another American education team to continue this important work.

A project under OEC's wing from the start is the rehabilitation and improvement of the engineering, agriculture, and medical colleges of Seoul National University.

Under a three-year contract with the University of Minnesota, faculty members of these three Korean colleges are traveling to Minnesota, and other institutions to take courses and to become familiar with American educational policies and methods. At the same time, instructors from the University of Minnesota are being sent to Korea to provide assistance in setting up laboratory and classroom facilities, improving courses of instruction and developing research programs.

So far, 60 Korean educators from Seoul National University have gone to the United States for study courses and observation of American educational method. Under present plans an additional 35 will leave by this fall. In addition, the United States has provided more than \$3 million for the physical rehabilitation of the university's buildings and facilities and the purchase of new laboratory and classroom equipment.

In Korea, there are 115 agricultural, 26 commercial, and 28 engineering high schools. A majority of these were damaged or destroyed during the war. Many continued to operate in the open air during and after the hostilities. In 1955, 24,000 students graduated from these schools—double the number in 1953. There is a great need for additional well trained instructors for the growing number of vocational students.

UNKRA has helped develop seven vocational training centers in Korea. Five buildings at the Taejon Vocational Training Center have been rebuilt and fully equipped. The Pusan Voca-



Miss Dorothy Simmons and Miss Lee Yong Ok, both representing the OEC Agricultural Division, inspect a traditional Korean kitchen in the home of Kim Chung Sook. Miss Simmons is one of three members of the University of Minnesota Institute of Agriculture studying the possibilities of Korean farm and home development through research and extension programs.

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tional Training Center has received \$150,000 worth of technical equipment. And classrooms and a new electrical shop have been provided for the Seoul Electrical Technical High School.

This year, \$760,000 of United States aid was allocated to furnish additional materials and equipment for these schools and to finance the costs of bringing American instructors to Korea to help train teachers for Korean trade schools.

The OEC will soon conclude a contract with a ranking American teachers' college—probably George Peabody College of Nashville to aid further educational progress in Korea. The contract to run three years and to cost \$900,000 will cover the organization of teachers' colleges, textbook revision, and curriculum development.

Meanwhile, many young Koreans, not a few of whom will become teachers, were studying in foreign colleges and universities. In the last school year, these students numbered 3,000 of whom all but about 200 were studying in the United States. Eighty of these were on OEC scholarships, 27 had scholarships from the U. S. State Department, and several score of others were aided by UNKRA, the American-Korean Foundation and other organizations.

Running through the entire United States aid program for Korea is a project to furnish Koreans in public or private enterprise training in the latest technical and administrative methods.

Specifically, this involves sending hundreds of Korean technicians and students to the United States and to other countries for study periods ranging from two months to one year. The American OEC technical training program for Korea is one of the largest in the world.

A total of 233 Koreans have gone to the United States, and 18 to other countries to take such training.

The program was established to permit the international exchange of technical skills which could contribute to creating higher living standards, developing new sources of wealth, raising productivity, and expanding purchasing power in recipient nations.

The Republic of Korea, whose economy has been predominantly agricultural is in particular need of such a program. Limited in its industrial experience, the nation does not have a sufficient number of technicians and engineers to



Another modern school building is going up to meet the growing educational needs of the children of Korea. Here is the new Chungang Girls' High School, Seoul, which is being built under the Armed Forces Aid to Korea program. This school will have 22 classrooms.

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Yong Nae Rhee, Korean architect who studied school design in the U.S. under the Technical Assistance Program, is shown here at his drawing board. One of the schools he has helped design is shown upper left. He is working now on a combined academic and vocational school for Pyongtaek, a city of 18,000 about 50 miles south of Seoul. U.S. aid provides \$3,000,000 for Korean school construction in the current year.

design, construct, operate and maintain the many new industries being developed under the American aid program.

The program for Korea embraces seven major fields: agriculture, industry, transportation, health, education, public administration and community development. Participants receive formal instruction in the United States, enter on-the-job training and pay visits to American enterprises in their particular fields.

Seventeen Koreans, so far, have been included in the agricultural program—to learn about irrigation development, flood control, crop and livestock development, and farm extension work.

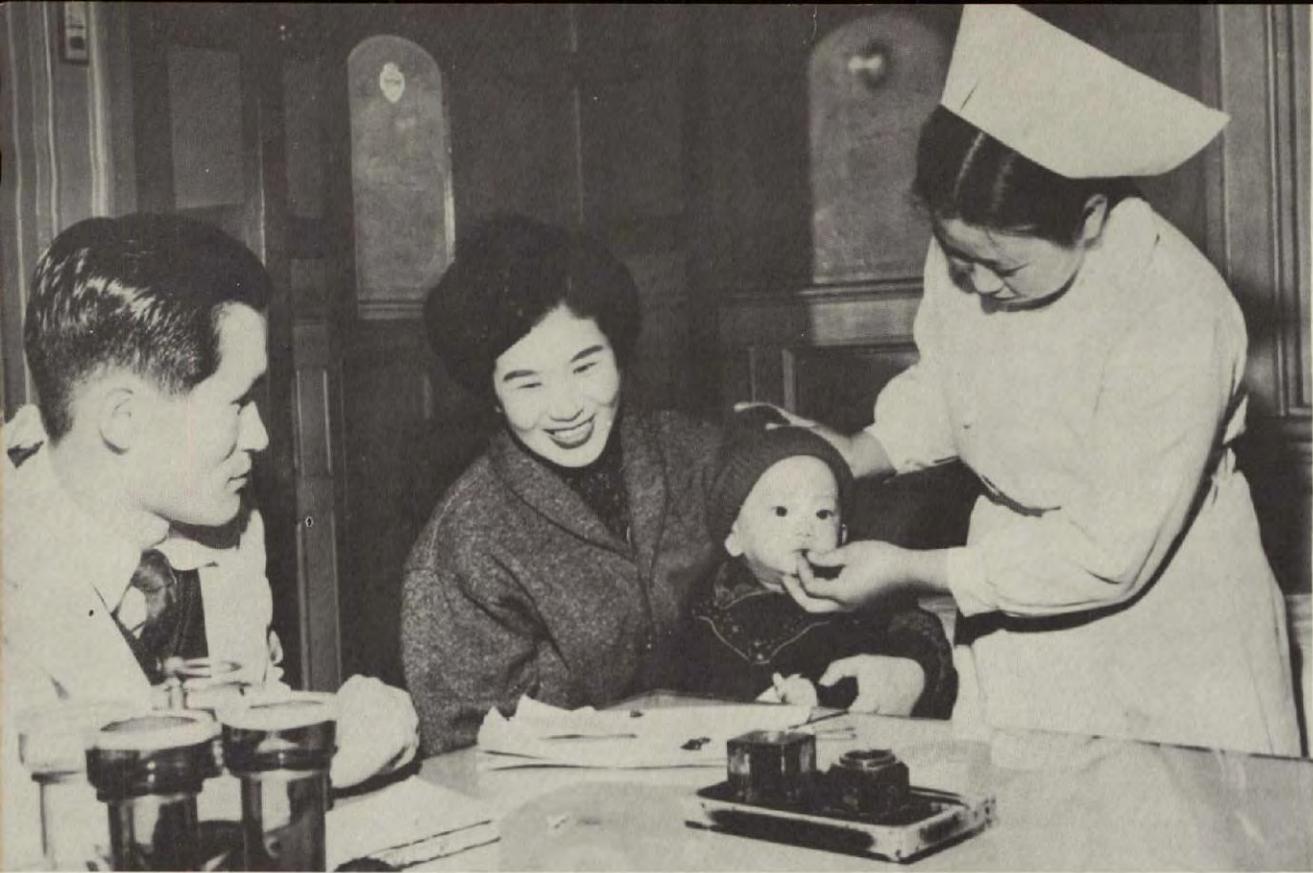
In industry and mining, 90 technicians have received or are receiving American training, 46 have received training in running a steam power plant, 12 are studying other phases of electric power, and 13 are working in the communications field. The remainder are receiving instructions in a variety of industrial skills,

including coal mine operations, steel production, textile weaving and dyeing, paper production and bicycle manufacturing.

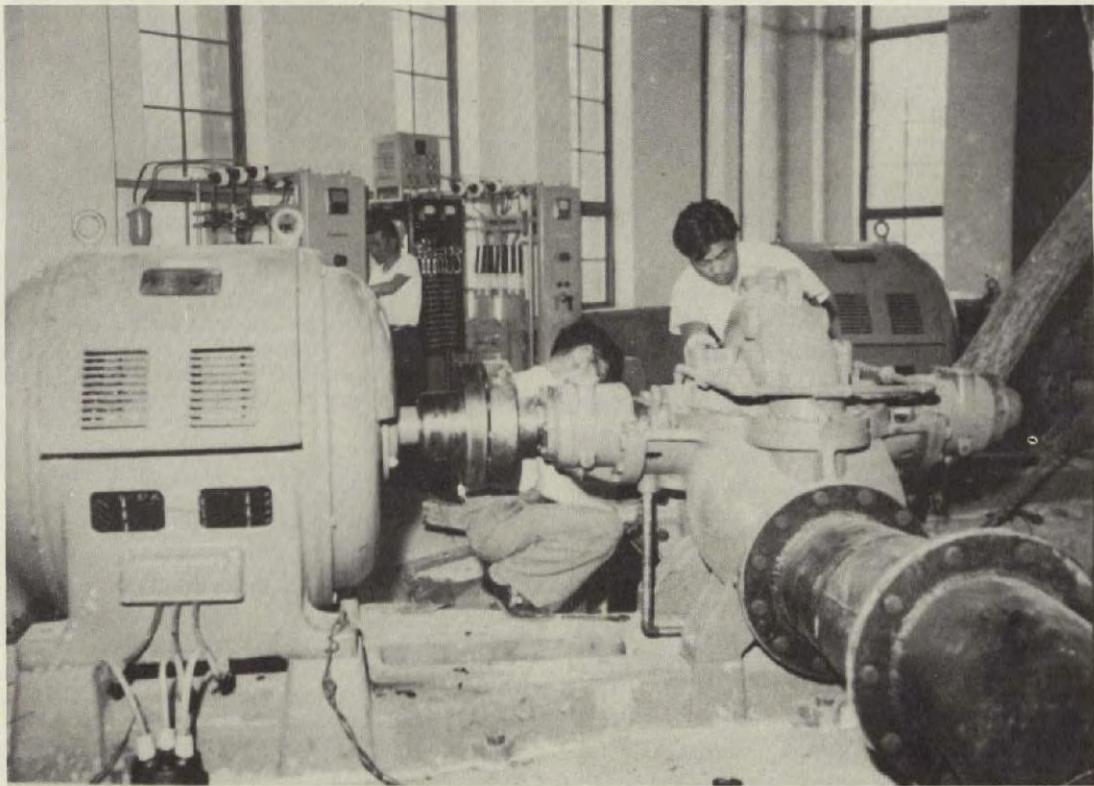
Instructions in modern transportation is being given to 19 students. The subjects range from traffic control to harbor dredging; 4 have been selected for training in health and sanitation, including hospital administration and waterworks development, and 25 Koreans are enrolled in public administration courses in the United States. Their fields range from criminal investigation to treasury accounting.

Plans are now being made under the FY '56 Program, to send 175 participants in most of these same fields of endeavor with an expenditure of \$1 million.

Given the Korean's real thirst and broad capacity for learning, both education and technical training in Korea would appear to be on the good road.



In one of dozens of Korean health clinics a mother looks on while her small son impassively receives a vitamin pill provided through the United Nations Children's Emergency Relief Fund.



To meet increased demands for water, the Seoul Water Supply System is being expanded under a \$1.7 million appropriation of OEC. Here technicians made final adjustments on one of four 350 horsepower electric motors-and-pumps that have been installed in the Wang Shipp-ri booster pumping station. These pumps will transport additional water from Duksum water plant for the citizens of Seoul.

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For a Healthier Population

A young Korean mother led her two-year old son into the treatment room of a clinic near Pusan. Her oldest child had died of small-pox the previous year, she explained to the nurse. Perhaps a vaccination would save this one from the dread disease, the mother suggested hopefully.

The vaccination did save her child—and six million others who were inoculated under a nationwide campaign that still continues today.

The immunization drive is only one facet of an integrated program to stamp out deadly diseases in Korea. It includes construction and repair of hospitals, improvement of sanitary facilities, insect and rodent control, water disinfection, and a program of public health education.

A few figures tell the story of this winning battle against a silent foe. In 1951 there were 81,575 cases of typhoid; last year only 330 people contracted the disease. Smallpox, which claimed 36,066 victims in 1951, has not infected a single individual in the last twelve months.

The U.S. foreign economic aid program has made available to Korea over \$13 million in the course of a three-year project for improved health and sanitation. The funds are going toward procurement of medical supplies and equipment, technical assistance, and construction materials for hospitals, dispensaries, and water systems.

Civil assistance units of the U.S. Army were the first to take part in the struggle against mounting epidemics in Korea. They provided drugs and other medical supplies, dusted thousands of people to rid them of disease-carrying insects, exterminated rodents and provided direct medical care to countless Koreans. With U.N. assistance these activities, as well as training of Korean medical personnel, are still going on.

Before the Korean war, this nation had little experience in preventive medicine. Now, thanks to United States and United Nations assistance, the Korean people are learning to stop disease before it starts.

An important aim of the health program is to make Korea self-sufficient in the production of vaccines and drugs. The National Institute for the Prevention of Infectious Diseases has been furnished with new equipment and is now in production. Thousands of dollars worth of equipment and books are also being supplied to the National Chemical Laboratory. Several other laboratories which produce vaccine, make blood tests, and check water and food for purity have been rehabilitated.



Workmen install a 24-inch valve in the main intake line of the Duksum water purification plant. This is part of the improvement and expansion program being carried on with U.S. foreign aid funds.

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Many diseases are carried from person to person through drinking water or food, or by rodents and insects. Consequently, a vital part of preventive medicine consists in encouraging sanitary habits among the population and establishing good sanitation facilities in cities and towns.

The U.S. is spending over one million dollars a year to improve sanitation in Korea. Three-quarters of this sum is being used for insect and rodent control. About 4.5 million people a year are dusted to rid them of lice, fleas, and mites which carry typhus and plague bacterias.

In order to prevent such diseases as dysentery, malaria, encephalitis and typhoid, chemical sprays have been provided to kill mosquitoes and flies in 550,000 homes each year. Ten thousand pounds of rat poison are being supplied to exterminate one of the most dangerous disease-carriers.

The remaining funds for sanitation are used to aid in the repair of water supply systems. Water connections to a total of 26,500 war-damaged homes in 38 cities have been restored with pipe and fittings supplied by OEC. A hundred tons of chlorine per year are used to make drinking water safe.

Finally, the United States is providing cement, lumber, steel, and hand pumps for the construction of thousands of public wells and latrines.

The accent in the future will be on education—education in the basic standards of sanitation and personal hygiene. Posters, leaflets, booklets and other instructional material is being widely distributed throughout the country to teach Korean people how to avoid sickness.

If the Korean mother mentioned earlier should fall ill, she will find that more medical care is available to her than ever before.

Before 1950, the Republic of Korea had only 54 hospitals, and these were 75 per cent damaged

during the war. Now there are 121 hospitals with 12,000 beds. In addition, 520 dispensaries are scattered throughout the country—many in areas that previously had no medical facilities.

These institutions were constructed by Korean workers—using materials supplied under the U.S. foreign economic aid program. Enough drugs are being provided under the program to treat 3,000,000 patients.

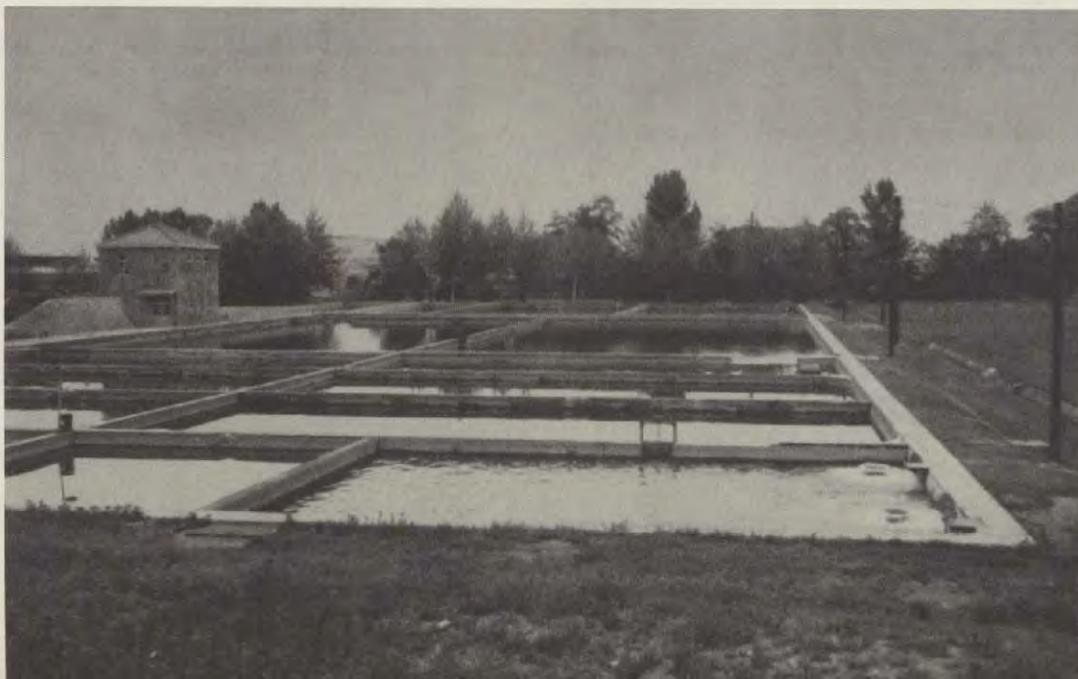
At present, hospital rehabilitation is focussed on a few institutions which will be completely equipped. One such project under construction is a 500-bed tuberculosis sanitarium at Kongju, costing \$500,000. A 500-bed mental hospital is planned. At present there are only two mental institutions in Korea, each with 150 beds.

The Relief Hospital at Yongdong-po and the Red Cross TB Sanatorium For Children in Pusan were completed last year. Sixty-five X-ray machines have been provided to aid in early diagnosis of tuberculosis. Seven quarantine stations at ports and airfields in Korea have been completely repaired to prevent the spread of serious diseases which might be carried from other countries. UNKRA has rehabilitated the Taegu Medical College and teaching Hospital.

Koreans will be able to get better dental care as a result of equipment delivered to the College of Dentistry of Seoul National University to enlarge teaching and clinical facilities.

Lastly, OEC specialists are giving assistance in training competent Korean nurses, doctors, and sanitariums—a project aimed at improving the quality of health services in the country.

These are sedimentation basins of the Duksum filtration plant 5 miles southeast of Seoul. This is one of four plants which purify water from the Han River to supply Seoul with 42 million gallons of pure water daily.



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For Better Living

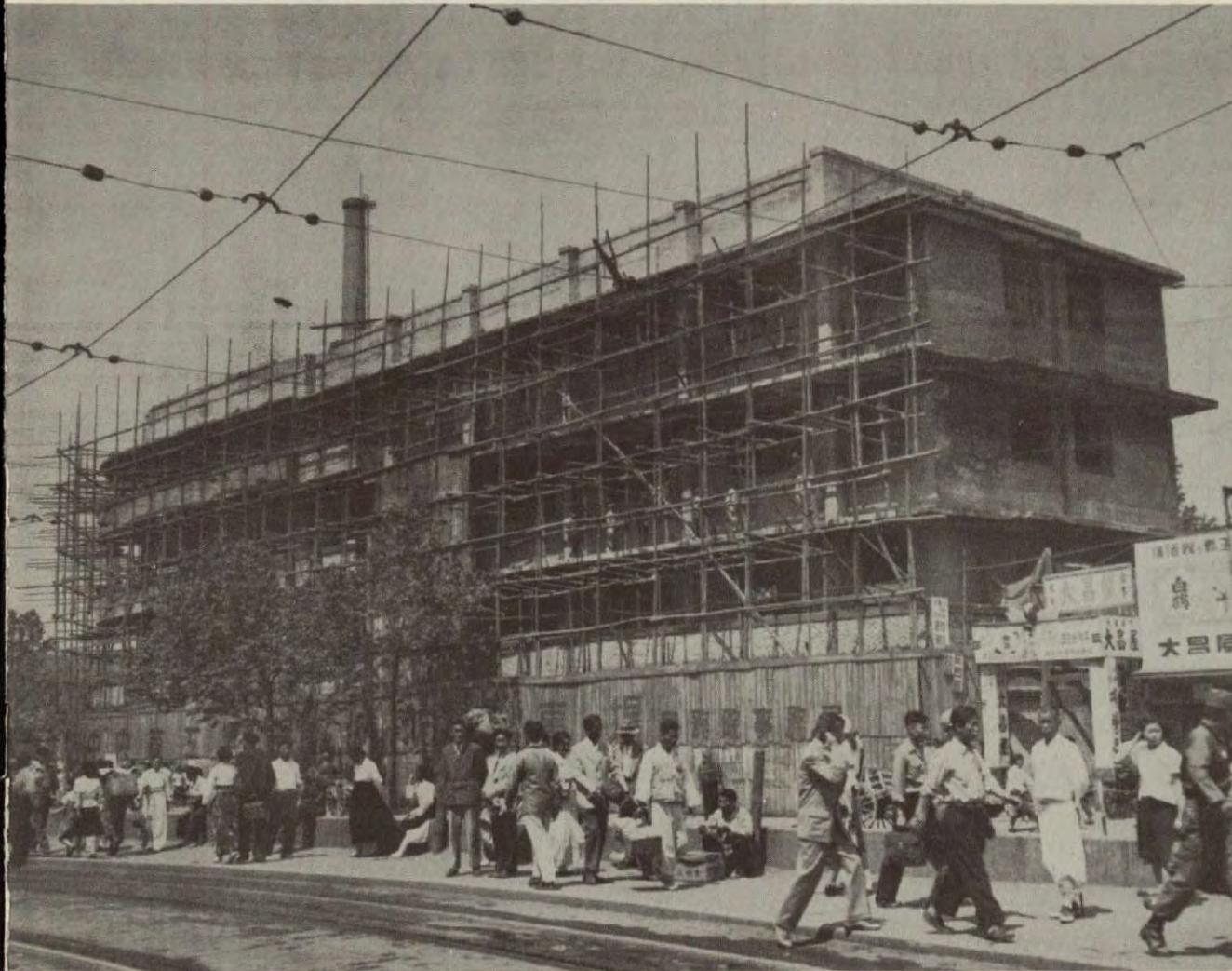
A Korean family living in a Seoul suburb are still talking about 3 pleasant change that occurred in their lives a few months ago.

First they told how they moved from a dilapidated, drafty shack into a modern cozy house. Then they discovered that pipes in their kitchen supplied them with a constant flow of running water—the thing they hail most proudly.

These improvements are all part of an extensive public works program started during the

war by civil relief agencies of the U.S. Army and now under the wing of OEC. It includes the construction and rehabilitation of housing, waterworks, hospitals, public buildings, drainage, roads, highways and bridges.

By the end of March, 1956, \$43 million worth of materials had been supplied by American relief agencies for such projects. Lumber, cement, glass and roofing paper totalling \$13.5 million were provided to help build 32,000 private homes



The Commerce and Industry Exhibition Building pictured here is one of six being rebuilt under a half-million dollar OEC public office building rehabilitation project. It will be used for exhibitions to further the commerce and trade of Korea when it is finished. It will have 31,700 square feet of floor space.

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replacing war-destroyed dwellings. A farm resettlement project supplied building materials to farmers who had fled to the south during the Communist invasion losing everything they owned.

One thousand classrooms have been built and another thousand repaired at a cost of \$3 million in materials. Other supplies have gone toward rehabilitation of hospitals, orphanages, sanitation systems, waterworks, and prisons. The OEC public works program for 1954 through 1956 provides a total of \$17 million to continue and expand a number of important projects.

At present, 15 per cent of the nation's city population consumes water from purification plants at the rate of 12 gallons daily per person. The remaining 85 per cent draw their water from 225,000 wells, and other sources many of which are dangerously polluted.

The goal of the waterworks program is to provide 25 gallons per day for 90 per cent of the city population—actually a four-fold increase in waterworks capacity. Complicating the problem is the fact that the present water distribution system has a rather high leakage rate, in some instances as much as 50 per cent.

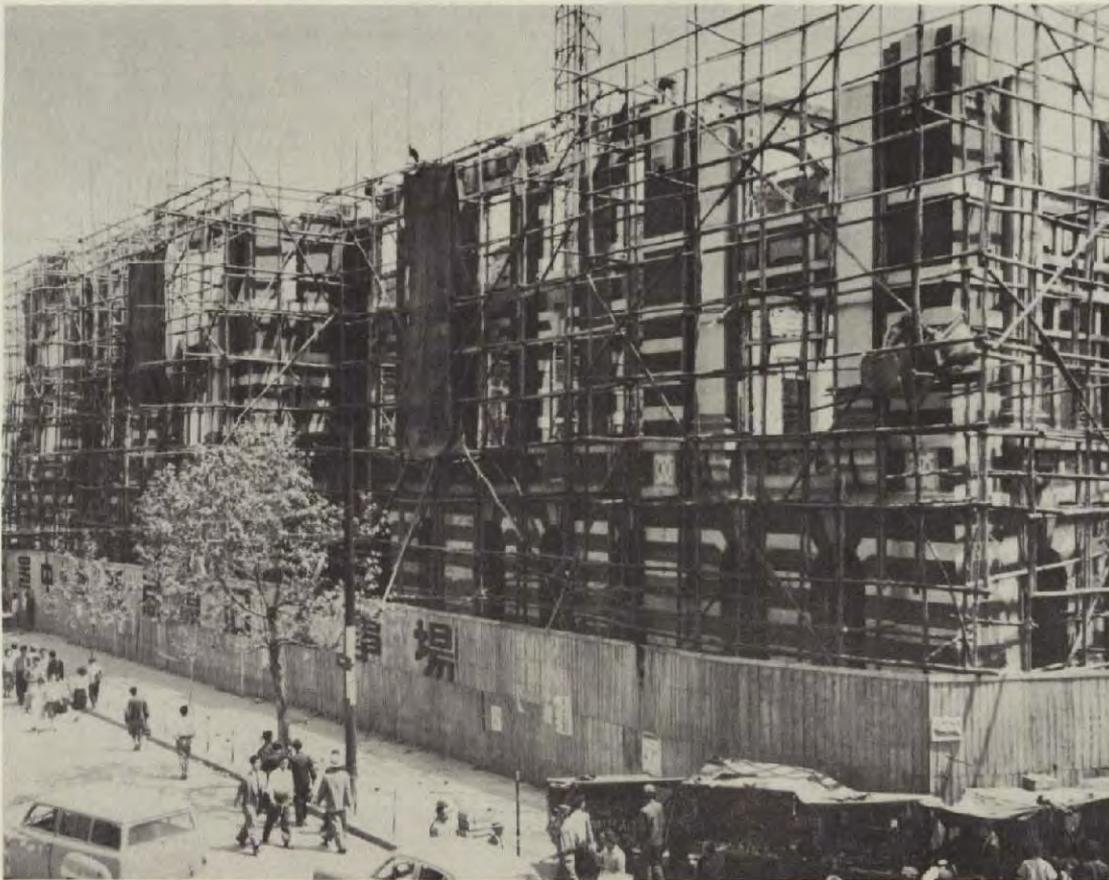
Before the war, Korea has 54 water plants which produced 250,000 cubic meters per day. During the first six months of hostilities, 39 were damaged and water production dropped to 50,000 cubic meters.

By June, 1954, the water supply was back to pre-war levels. However, this was still far below the nation's needs. In the meantime, five million refugees had crowded into the cities—and thousands of homes with built-in water pipes had been erected. Demand had skyrocketed to unprecedented levels.

The United States has programmed \$7 million for the expansion of water systems. When the work is completed, output will be raised by 142,000 cubic meters per day to a total of nearly 400,000 cubic meters—roughly equal to 20 gallons a day per person. By 1960, the expanded waterworks capacity should allow daily consumption of 25 gallons per capita.

Building or expanding a waterworks plant requires skilled engineering and a variety of supplies and equipment—much of which are being provided by the United States.

A total of \$800,000 has been set aside for the repair of government buildings damaged in war-



The bombed out Seoul post office is one of six government buildings being rebuilt with OEC assistance. The structure will again be the city's post office when it is completed. The old walls which are still standing will be used in the rebuilding.

More than \$5 million in U.S. aid has gone into building bridges. This sturdy new eight-span concrete-and-steel bridge across Naktong River west of Taegu connects Kyongsang Pukto and Kyongsang Namdo.

Handwritten mark resembling a stylized arrow pointing right, with the number '27' written below it.

time. Of this, half a million dollars has gone into purchase of materials for six national government buildings—the Central Post Office, the Telephone Building, the National Exhibition Hall, the Chamber of Commerce, a National Police Building, and the National Library. In 1956, the emphasis is shifting to reconstruction of city and provincial buildings.

The Suwon prison is also being rehabilitated at a cost of \$450,000. New buildings are being constructed for housing and trade shops, to include sewing, carpentry and shoe repair to provide vocational training for prisoners.

In the Republic of Korea, there are 5,280 bridges linking 15,000 kilometers of roads. More than one-third of these bridges were severely damaged in the war.

Until mid-1954, the U.S. Army was responsible for bridge and road repair. However, most construction accomplished during that time was temporary; 110 bridges were permanently repaired and 516 temporarily rebuilt.

The OEC program calls for permanent rehabilitation of hundreds more highway bridges. By the end of the 1956 program, 60 per cent of the damaged bridges in Korea will be completely and permanently restored—a great boon to the rapidly increasing number of motor vehicles on Korean streets and highways.

Repair of three spans of the Han River Bridge is a major planned project. Officials expressed hope that actual construction will commence shortly.

Streets in Seoul and other Korean cities were designed for normal civilian traffic. During the war, the constant passage of tanks and other heavy military equipment completely ruined many of these thoroughfares.

The United States has allocated more than \$1 million for repair work on city streets. An important contribution to this program is an asphalt mixing plant recently purchased with \$160,000 of OEC funds. This plant, now being

used to pave 53 kilometers of Seoul streets, will be moved to Pusan and Taegu later for similar work.

Before the plant was acquired, asphalt was hand-mixed at the road construction site. Now, 75 to 100 tons of hot mix per hour can be turned out for transport to any part of the city.

An important job yet to be completed is paving the 560 kilometers of highways leading in and out of major Korean cities. Again, U.S.-shipped materials will be used in this project designed to make long-distance highway transportation more comfortable and efficient.

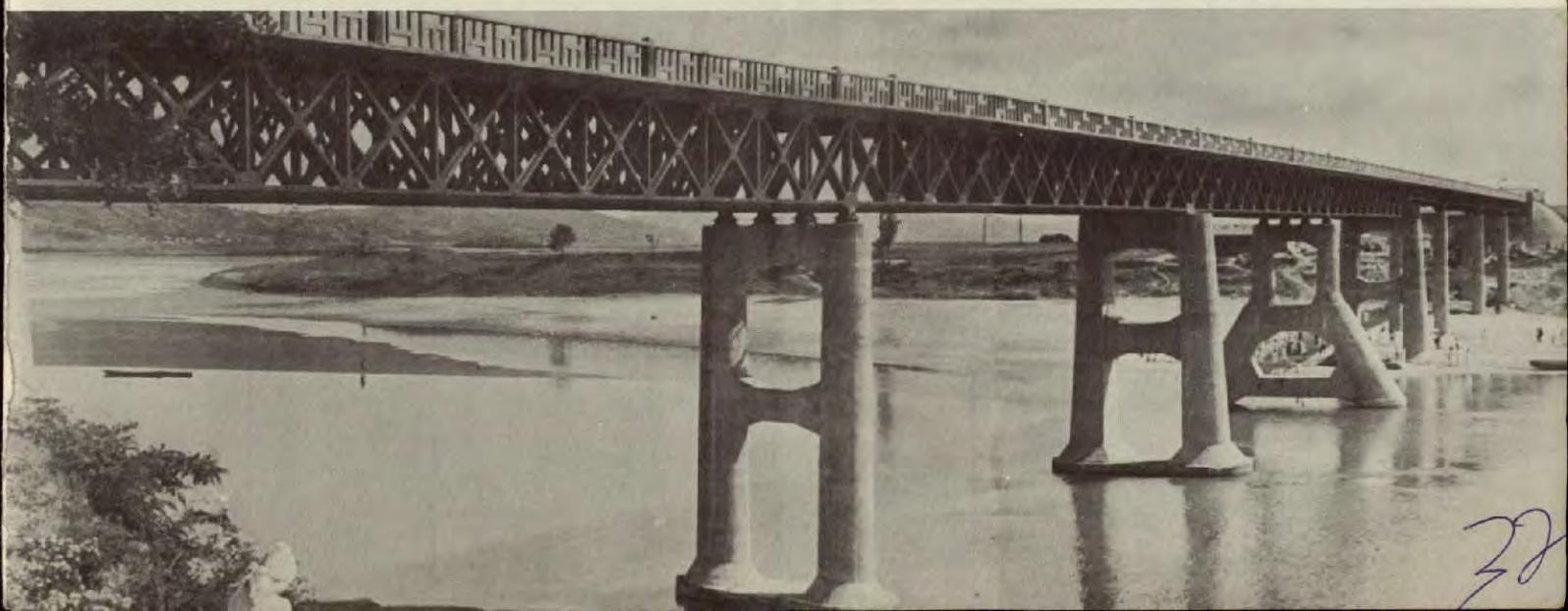
Public works projects require the use of considerable heavy construction equipment. Consequently, a total of \$2.5 million worth of steam rollers, cement mixers, bulldozers, cranes, and power shovels have been shipped to Korea. And seven modern, high-speed rock crushers were put into operation last year.

In order to keep the equipment in good repair, \$115,000 was allocated to set up a maintenance shop complete with drills, lathes, and a forging shop.

The Armed Forces Aid to Korea program has supplied \$15 million worth of construction materials and supplies. About half of this has gone toward rehabilitation of schools, and \$1.6 million for repair of civic buildings. The remainder was divided among churches, orphanages, bridges, highways, and public utilities.

UNKRA is now engaged in a 10,000 unit housing project covering major Korean cities. Over 4,200 homes have already been completed. Three thousand classrooms have already been completed and materials for an additional 1,600 have arrived in Korea. The Taegu Medical and Teaching Hospital has been completely rehabilitated.

A National Medical Center will be established in Seoul as an UNKRA project; costs to be borne by the ROK Government, UNKRA, and three Scandinavian countries.



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Communications

The sales manager of a textile company picked up his telephone, dialed a number, and waited for a response. He tried again and again, without success and finally slammed the receiver back on the hook with exasperation.

"I might as well throw out this telephone," he muttered to himself, "Half the time it doesn't work at all."

The businessman's annoyance was quite natural. Korea's telephone system was heavily damaged in the war, to the extent that 80 per cent of all telephone equipment was destroyed or lost. And service has suffered accordingly.

However, fewer users will experience frustration as the program to repair the telecommunications system gains impetus. And, equally important, there will be more and more offices and homes equipped with telephones.

The first job after the war was the repair and replacement of equipment in ten toll centers in Korea. Next was the establishment of connecting lines to outlying agricultural and industrial districts.

By the end of the program, 24,000 main lines will be in operation, compared with 22,000 prior to the Korean war. The entire network will be integrated to enable a telephone subscriber to reach any connected point quickly and efficiently.

To date, approximately 7,000 dial lines at the Seoul Central Exchange have been repaired and are in operation. By the spring of 1957, an ad-

ditional 8,500 lines will be added. The exchange will then have a total of about 20,000 lines, more than the pre-war number.

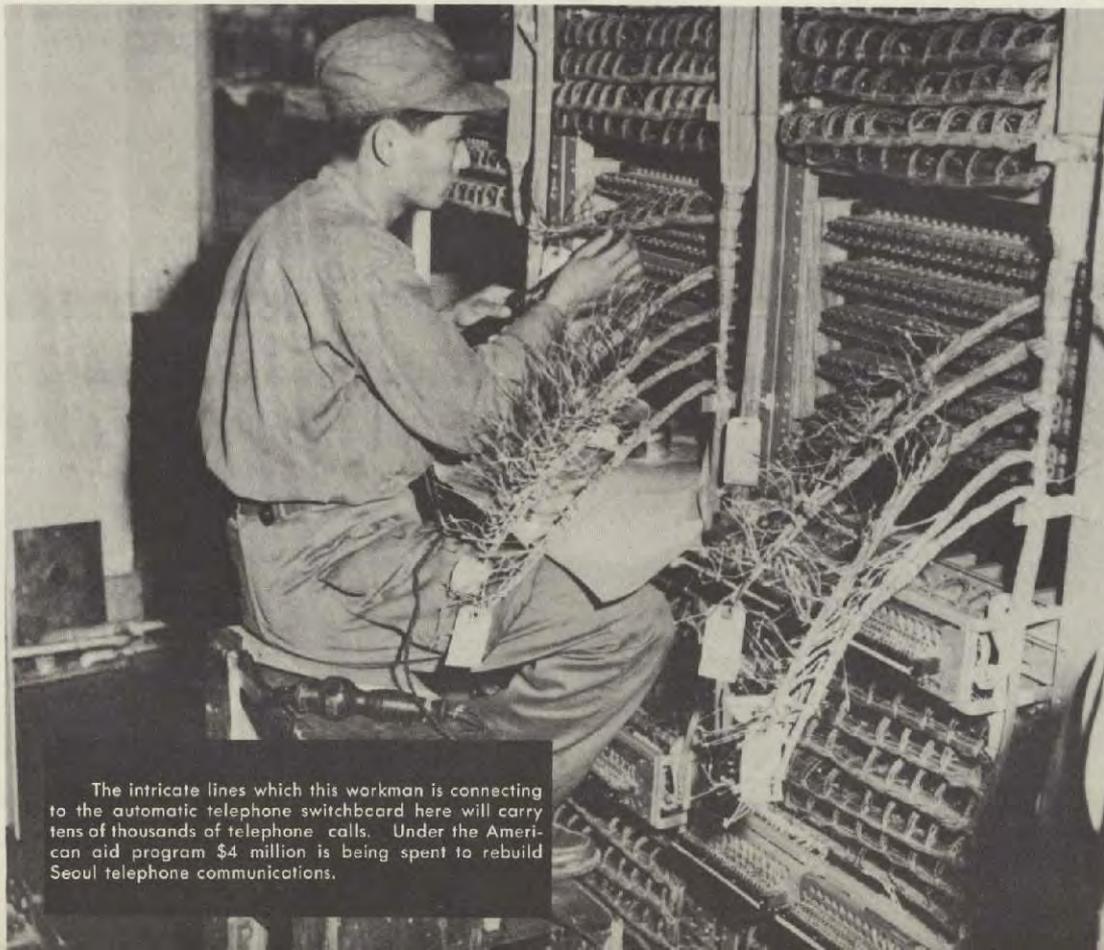
Work on the Masan Central Exchange, another project which is receiving American assistance, is nearly finished. A 1,000-line manual telephone exchange has replaced an old 400-line switchboard.

The major problem in Seoul, Masan and other telephone centers lies in the outside plant—wires and cables connecting the exchanges to telephones in offices and homes. About 7,500 miles of wire needs replacement—and this is the main reason for intermittent service. Many lines are no longer waterproof and do not function properly in rainy weather.

Nevertheless, progress is evident. The work accomplished in the last two years has decreased the number of lines needing repair from 60 per thousand to 36 per thousand in Seoul.

Funds have also been allocated for the purchase of new communications equipment for the National Police Force. In addition, about a quarter of a million dollars has been provided for repair of radio telegraph facilities—both domestic and international.

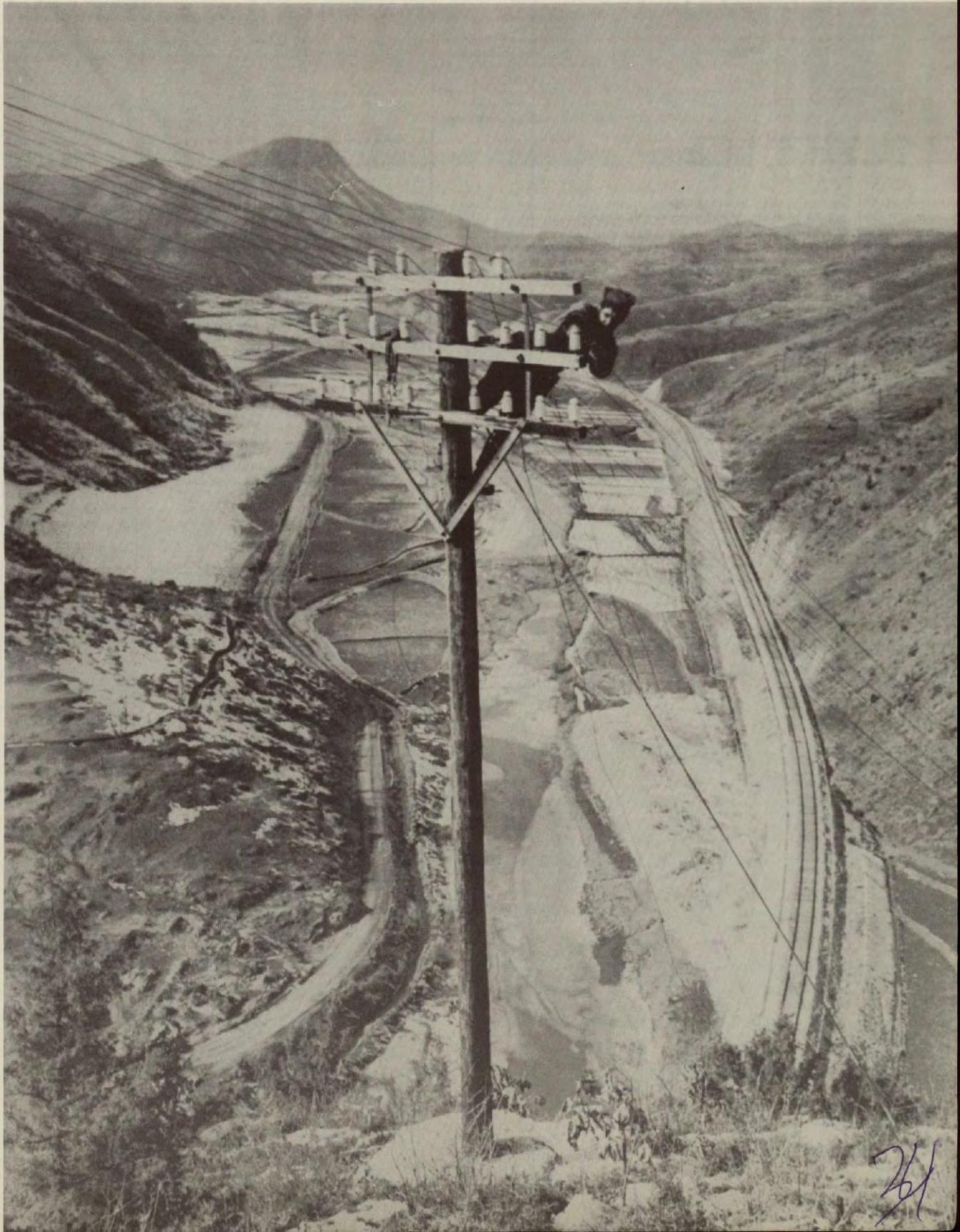
The rehabilitation of domestic radio networks will permit communication with mountainous areas and off-shore islands where installations of telephone circuits is prohibitively expensive. In addition, a coastal radio system is being established to service fishing and shipping industries.



The intricate lines which this workman is connecting to the automatic telephone switchboard here will carry tens of thousands of telephone calls. Under the American aid program \$4 million is being spent to rebuild Seoul telephone communications.

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Korean communications are divided into three parts. One is the public telephone and telegraph system, another serves the railroads and airlines, and a third serves the military and the police. All were damaged by war and required U.S. aid. This photo shows a lineman securing a wire on a tall pole in a gorge near Tanyang, on the rail route to Chechon.



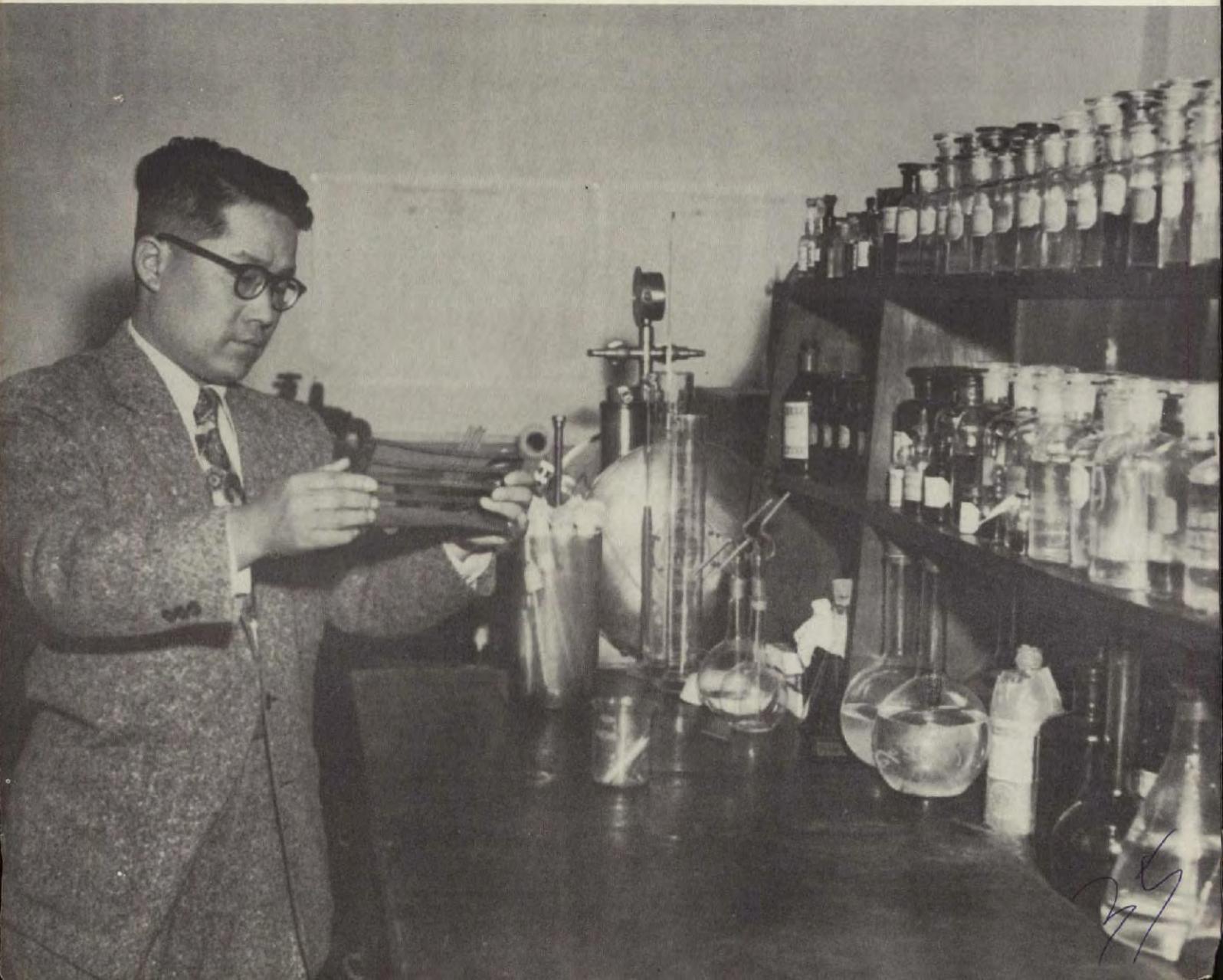
Police and Fire Protection

As a newly independent country the Republic of Korea was without adequately trained police and fire protection personnel. The problem of creating such personnel was compounded by chaos following three years of war.

Into this breach stepped the United States foreign aid authorities with gifts of \$2,000,000 for police and fire-fighting equipment. About \$200,000 more was provided for the training of Korean personnel in the United States. In all, 28 Koreans have been trained in the United States in crime detection, police communications, fire-prevention and fire-fighting.

Head of the OEC public safety division in Korea is Ray W. Foreaker, a native of Texas, and formerly a police inspector in Berkeley, California. Foreaker says:

"Our aim in helping Korea has been to make the police and fire-prevention agencies both efficient and democratic. A year or so ago, with our help, the ROK Government inaugurated a special campaign to make the police arm deserve the respect and confidence of the Korean people. Considering that this had to be carried forward to the same time as suppression of disorder and guerrilla activities, this campaign has



been a marked success."

The nerve system of an efficient police force is its communications network. To set up nationwide police communications the Office of the Economic Coordinator has given Korea \$1 million, divided evenly between telephone and radio communications. About half of this equipment has been installed; the rest will be in operation by the end of 1956. Already 1,500 of the 1,800 police stations on the mainland and adjacent islands can be reached by two-way telephone or radio service.

Fire-protection, a formidable problem in any country, is critically difficult in Korea. The houses, with wooden framing and partitions with a core of bamboo lattice, are highly inflammable—even those that have tile rather than thatched roofs. The houses are heated mostly with flues running under the floors, ending in chimneys which would not always win insurance company approval. No Korean city has a trustworthy system of water mains.

On two occasions since the war a large part of downtown Pusan, Korea's second city, was wiped out by fire. Now the OEC has delivered in Korea 27 fire engines of a type suited to the country. Thirty-five more, costing \$500,000, are to be delivered soon. Three fire-fighting tugs have been provided for harbor cities.

Last winter Korea came through with no fires to be compared with some of the years before.

The Korean National Police is a many-sided agency. Besides providing police and fire protection, it administers sanitation ordinances; enforces conscription laws; licenses restaurants, hotels and places of entertainment; guards against smugglers; takes the census; serves as a combination school-master and foster-father for street urchins, and has charge of the national reforestation program. With professional versatility, the OEC gives aid as it can in the execution of each of these diverse functions.

Scientific methods are being applied to catching criminals by the ROK National Police. Here, Dr. Lieu Hong Ho, chief of the nation's crime laboratory, is making a step by step analysis in the blood testing laboratory to see if some blood stains found on a coat are human or animal. Dr. Lieu studied at Harvard University during a recent tour of the United States.

Since the war, Korea has been burdened with the difficult problem of taking care of thousands of widows, orphans and refugees who have no means of support. In this, too, OEC is lending a strong helping hand.

The first relief supplies were furnished to Korea under the Civilian Relief in Korea (CRIK) program of the United States armed forces. About \$300 million worth of basic necessities like food and clothing were imported with these funds. At the height of the program, 312,000 tons of grains were provided yearly—and distributed among 5 million needy people. Large quantities of building materials were imported for repair and rehabilitation of more than 300 orphanages, old people's homes and other welfare institutions.

Even now, over 1.5 million children and pregnant and nursing mothers receive a daily glass of milk from the 40 million pounds of powdered milk supplied annually from the U.N. children's fund (UNICEF).

In April 1955 the Korean Government took over the primary responsibility of providing food to needy Koreans without income.

The present OEC program is giving major attention to self-help projects. By developing and mobilizing potentialities within the Korean communities it has been demonstrated that many needs can be met through local resources. Korean widows, handicapped and other needy groups are encouraged to become self-sufficient through working together to solve their problems. Technical guidance, instructions, materials, tools and relief supplies are given to aid them in developing self-help projects. Charity and relief in these projects are used only as a means toward independence and self support.

Thus, war widows are taking up sewing, knitting, poultry raising and handicrafts. Various relief agencies are providing the materials they need to get started.

At Tongnae, a project for the rehabilitation and training of physically handicapped has been developed, the United Nations Korean Reconstruction Agency has contributed technical assistance and \$450,000 toward this project. Vocational therapy will be given to enable these people to do useful work. UNKRA has also imported building materials to build hotels for older orphans, and to repair fifty other child-care institutions. More than 1,000 sewing and knitting machines have been furnished to war widows. The U.N. agency has also given \$775,000 in grants to assist foreign voluntary agen-

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cies to develop special projects for the welfare of Korean people.

The war left millions of people without homes—in 1951 there were 6,000,000 refugees in South Korea. Some managed to establish themselves, but about 4 million needed outside assistance.

Today, refugee resettlement continues as a major part of the American community development program in Korea. The \$500,000 budget for 1956 provides enough basic building materials to construct 7,500 family houses. Each family receives 750 board feet of lumber, ten pounds of nails, and 7.5 bags of cement. The remaining materials such as sand, clay, lime, brick and stone are provided by the people themselves. The Korean government provides farm

tools and draft animals. Other welfare agencies assist with additional tools and with supplementary relief supplies.

Since 1952, nearly two million refugees have been assisted directly in resettling—and in getting a new start in life.

Sixty private welfare agencies have imported over \$32 million worth of welfare supplies for Korea. The United States pays the freight bill for relief supplies shipped by U.S. voluntary agencies; \$2 million was set aside for this purpose in 1956.

In addition, OEC is giving technical advice and guidance to Korean welfare institutions, training staff members, and helping to coordinate the entire program for community development in Korea.

These new homes combine traditional Korean features, such as heated ondol, floors with fire-resistance building materials. Some 10,000 such homes in 32 communities are being built under a joint Republic of Korea-UNKRA program.

