

MADRAS WAR REVIEW

A WEEKLY BULLETIN OF THE WORLD WAR

VOL IV

FRIDAY, JULY 16, 1943

No. 44

Complete Confidence in Successful Outcome



GENERAL MONTGOMERY

The time has now come to carry the war into Italy, and into the continent of Europe. The Italian overseas empire has been exterminated. We will now deal with the home country.

To the Eighth Army has been given the honour of representing the British Empire in the Allied force, which is now to carry out the task. On our left will be our American allies. Together, we will set about the Italians in their own country in no uncertain way. They came into this war to suit themselves, and they must take the consequences.

I want to give a hearty welcome to the Canadian troops that are now joining the Eighth Army. They are magnificent soldiers. The task in front of us is not easy. In all our operations, we have always had the close and intimate support of the Royal Navy and the Royal Air Force, and because of that support, we have always succeeded. The combined effort of the three fighting Services is being applied in tremendous strength, and nothing will be able to stand against it. I have complete confidence in the successful outcome of this operation.

The eyes of the whole Empire will be on us once the battle starts. We will see that they get good news, and plenty of it. To each one of you, I would say: Good luck and good hunting in the home country of Italy.

GENERAL MONTGOMERY, *in a message to his
invasion troops on July 14*

CONTENTS

	PAGE		PAGE
Running Commentary	3	Chinese Industrial Co-operatives	13
Sicily—The Beginning of the End	5	Progress in Free China	14
Elegy for A.G.	6	China Goes "Co-op"	15
Chemicals in War: There is romance behind their production	8	Life in China's Wartime Capital	16
Allies now Calling the Tune	9	Aerial Spearhead of Invasion	17
In a Bomber on an Operational Flight	10	Bombing to Shorten War	17
Indians deliver the Goods	11	Germany faced with Crucial Decision	18
German Railways pounded by R.A.F.	11	Germans to adopt Defensive Policy	18
Maker of Modern China	12	Indian Blinded Soldiers to be Trained	18
		War Diary	19

THE FIRST STAGE

"To Frenchmen of Metropolitan France: United Nations armed forces have to-day launched an offensive against Sicily. It is the first stage in the liberation of the European continent. There will be others. I call on the French people to remain calm and not to allow themselves to be deceived by false rumours which the enemy might circulate. The Allied Radio will keep you informed of military developments. I count on your *sang froid* and on your sense of discipline. Do not be rash, for the enemy is watching. Keep on listening to the Allied Radio and never heed rumours. Verify carefully the news you receive. By remaining calm and by not exposing yourselves to reprisals through premature action, you will be helping us effectively. When the hour of action strikes, we will let you know. Till then, help us by following our instructions. That is to say, keep calm and conserve your strength. We repeat, when the hour of action strikes we will let you know."

General EISENHOWER, in an announcement to Frenchmen in Metropolitan France on 10th July 1943.

FRANCE WILL BE LIBERATED

"I think we can almost say that this action to-night is the beginning of the end. We are going to be ashore in a naval sense, air sense and military sense. Once there, we will have the opportunity of going in different directions and I want to tell General Giraud we have not forgotten that France is one of the directions.

"One of our prime aims, of course, is the restoration of the people of France and the sovereignty of France. Even if the move is not directed at the moment to France itself, General Giraud can rest assured that the ultimate objective—and we will do it and in the best way—is to liberate the people of France, not merely those in the southern parts, but the people of northern France—Paris—and in this whole operation, I should say that in the enormous planning, we have had complete co-operation with the French in North Africa, and gradually the opposition has cooled.

"The older regime is breaking down. We have seen what has happened or is happening at the present moment in Martinique and Guadaloupe. That is a very important point towards the big objective. We want to help rearm the French forces and build up French strength so that when the time comes from the military point of view and when we get into France itself and throw out the Germans, there will be a French army and French ships working with the British and ourselves."

—Mr. ROOSEVELT, at a dinner to General Giraud at Washington on 9, July 1943.

INDIAN TRAINEES IN ENGLAND

"The people of India have always shown very great natural technical skill, chiefly in art. Those same hands which have shown such skill in art will now, in an increasing measure, be devoted to India's industrial development, to raising the standard of life for your fellow-men.

"We believe that the more prosperous the four hundred million people in India are the more prosperous we ourselves will be. We think that it is a great opportunity with our scientific and industrial development here—and which you can spread in India—to raise the economic status of India, so benefiting us and, in the end, helping to make the great partnership between India and ourselves work and more smooth."

—Field-Marshal WAVELL in an address to Indian Trainees in London on 10th July 1943.

Madras War Review

A WEEKLY BULLETIN OF THE WORLD WAR

VOL. IV

FRIDAY, JULY 16, 1943

No. 44

RUNNING COMMENTARY



MAN BEHIND ALLIES' AIR VICTORIES IN PACIFIC—Lieutenant-General George C. Kenney, under whose command the Allied Air Forces in the South West Pacific are taking a heavy toll of Jap planes, has a long record of achievements in aviation. He is credited with being the first to instal machine-guns in airplane wings and also with being the inventor of parachute bombs.

India and the South-West Pacific—General MacArthur's Offensive.

What is happening in the South-West Pacific is of direct interest to India and her safety. For Japan's plans of mastery of the whole of Asia will remain a mere midsummer dream of madness, unless and until she defeats the Allies in the string of islands which skirt the north and eastern littoral of Australia. Japan's one great desire is to complete an outer chain of defences stretching from the Celebes in the West to the Solomons in the East. That desire has been shattered to the dust by the blows dealt by the Allies to the Japanese at Buna in New Guinea and at Guadalcanal in the Solomons. And now General MACARTHUR has launched a great offensive which is intended to strike at the very heart of the Japanese defence system. This was started on the last day of last month (June 30), but only two days previously,

Major-General YAHAGI, Director of the Japanese Army Information Bureau, said in a speech at Kyoto,

"Japan is ready to swing into a new major campaign."

Tokyo radio continued to broadcast summaries of YAHAGI's speech even when Allied transports were approaching Rendova Island, Nassau Bay, the Trobriand and Woodlark groups. On June 29, an English summary of the speech broadcast by Tokyo ended by saying,

"These were the words of reassurance coming from the spokesman of the Japanese Army."

The next day when the Allied offensive started, Tokyo gave out in English the declaration of another Japanese military observer that

"the Japanese forces have now completed all necessary preparations from strategical bases from where an all-out offensive against Australia can be carried out at any moment. It is recalled that the Japanese forces, since February, have been carrying out readjustments of their operational bases for new actions."

Where are these operational bases? Nobody knows. It may be recalled that it was in February that the Japanese evacuated Guadalcanal. On February 10, Tokyo said, evidently with the object of softening the Guadalcanal blow, that the Japanese forces had secured, "several firm footholds further down towards the south." Five months have passed, and yet Tokyo has not given the exact location of these footholds. It can never give—because they do not exist anywhere except in the imagination of Tokyo propagandists!

* * * * *

Recent Operations—Japan Now Talks of "Defence System!"

Coming to recent operations in the South-West Pacific, it is of interest to note that Japanese broadcasts made no mention of the capture of Woodlark and Trobriand groups of islands, or of the landing at Nassau Bay, for four days, though the Tokyo Imperial Headquarters issued a brief communiqué on the Rendova Island operations on the evening of July 1. Tokyo has completely ignored the New Guinea operations and has referred only to the fighting in the Solomons area. The first comment, as distinct from the communiqué, came from the Japanese-controlled Batavia radio on the evening of July 2. Batavia said in an English broadcast,

"Characterising the Rendova development as typical American guerilla operations, military circles stated that others would be made in future from island to island in the Solomons area. They added, however, that the enemy invariably would find the

operations not only exceedingly difficult, but also highly costly, as the Japanese defence throughout the South-Western Pacific was impregnable."

The emphasis of Japanese broadcasts now is on the defensive rather than on the offensive. They do not refer nowadays to the "imminent" invasion of Australia, but rather draw attention to the likelihood of the Allies "inching forward" from island to island and penetrating the Japanese defensive zone. In a typical broadcast in English on July 3, Tokyo said,

"Although the enemy might be intending to penetrate into our occupied areas in the south by their stepping-stone tactics over the Pacific islands, the enemy should remember, that they would always fall a good prey to our Imperial air forces."

As usual, Tokyo has put exaggerated claims in support. It told the world on July 2 that Japanese navy planes alone had sunk or damaged 81 cruisers and 86 destroyers since the outbreak of the war in the South-West Pacific area. In the Rendova island fighting, its claims are one cruiser, 5 destroyers and 3 transports sunk, one cruiser, one destroyer and 3 transports heavily damaged, and 77 planes shot down. It is the same old technique of exaggeration which was previously followed in the case of Guadalcanar and Attu. Tokyo says that the Japanese are holding air and naval superiority and inflicting diastrophic casualties. But one may ask why the Japanese High Command thought discretion was the better part of valour, and ordered evacuation or surrender of the islands attacked by the Allies!

* * * * *

Three Months and Now—Perceptible Change in Pacific Situation.

The perceptible change in the Pacific situation from that of offensive to the defensive deserves further emphasis. Only three months ago, that is, in the middle of April this year, leaders of public opinion in Australia made public statements referring to the danger of a Japanese attempt to strike at the Australian mainland from the ring of island bases in the north and north-east. Mr. CURTIN, Mr. DRAKEFORD and General BLAMEY discussed possible enemy moves in the South-West Pacific. And these were made much of by Japanese propagandists and held up as indications of Australia's helpless and panicky position. If Australia was really helpless, why did not the Japanese attack it then and neutralise the biggest base for the counter-offensive of the Allies against Japan? One would have thought from the tone and trend of Tokyo broadcasts that the Japanese Military Administration was almost very near control at Canberra or Melbourne! It was no doubt true that large forces of enemy troops and aircraft were concentrated in the islands in the Arafura Sea off northern Australia. But at the time, Col. KNOX, U.S. Navy Secretary, pointed out that the distance between Port Darwin and the Arafura islands was about 315 miles, and doubted whether the Japanese would be able to find the necessary shipping to cross the distance, and preserve it from Allied attacks during the course.

* * * * *

General MacArthur's Analysis—Air-Power, Strongest Counter.

In a sound analysis of the strategical situation, General MACARTHUR stated that Allied air-power in the area was the strongest counter to the Japanese threat. It was this air power particularly which enabled the Allies to pin down the Japanese and prevent them from consolidating their conquests. The whole strategy of the United Nations was to restrict themselves to a holding war in the Eastern hemisphere, while nourishing Russia and hitting at the Axis in the West. They wanted to avoid dispersing their chief resources at widely-scattered centres of danger, because they would have then run the grave



INDIA'S THIRD V.C.—At a ceremony held in the shadow of the massive walls of the Red Fort built in Delhi by Shah Jehan, His Excellency the Viceroy on July 1 presented the Victoria Cross to Havildar Parkash Singh of the 8th Punjab Regiment. The ceremony was attended by His Excellency the Commander-in-Chief and other high military and civil officers, and was watched by large numbers of the public.

Havildar Parkash Singh on three separate occasions recovered several Bren carriers in the face of heavy enemy gunfire at Donbaik in the Mayu Peninsula, Burma.

Photo shows Havildar Parkash Singh's father congratulating his son after the ceremony.

risk of piecemeal reduction. This wise policy has brought in the rich dividends of Stalingrad and Tunisia. Not merely that, it has also robbed the strategic initiative of the Japanese in the Far East and strengthened the defence position of Australia.

The Australian Minister for External Affairs, Dr. EVATT, has paid a great tribute to the tremendous job of mobilization accomplished by Australia in the face of the deadly menace and the great help she has received from Britain and America. In a speech in London on June 28, he said,

"The last twelve months have been months of stress and strain for the Australian people, but to-day there is a notable improvement in the situation. . . . The position in the Pacific has changed from one of deepest gloom to one of hope and reasonable confidence. . . . What we have done we could not possibly have done alone."

In recent statements of Australian spokesmen also, there has been a marked note of renewed confidence. This is largely due to the fact that there has been a steady increase in Allied air reinforcements going to the South-West Pacific.

* * * * *

"SUBEDAR OF SWING"

Every night in a jungle clearing on the Burma border dance music played on a piano comes drifting melodiously from a soldiers' bamboo canteen—but the pianist is not the usual British soldier. It is an Indian V.C.O. who is known as the Subedar of Swing.

Before the war he was in a dance band in India—now he is in the office of an R.A.I.S.C. unit.

Every night British troops gather in their canteen to play the sentimental popular tunes which remind them of home. One night the Subedar shyly asked if he could play the piano. When he sat down they expected Indian music, but instead he struck up the latest syncopated hits. He was easily the best pianist among them.

SICILY—THE BEGINNING OF THE END

IN his topical talk in English from Berlin on July 5, Lord Haw Haw said, "I think that in Britain many people are sick and tired of the promise that a Second Front will be set up in 1943. . . . In Germany the subject commands very little interest. It is realised and understood that the toughest, the best armed and the most experienced troops in the world are perfectly ready to destroy any expeditionary force that lands, and the result of any attempt to carry the war on to the European soil is taken as a foregone conclusion." But barely five days after this boast, an expeditionary force has landed in Sicily and an attack on Hitler's *Festung Europa* has begun. Allied forces under the command of General Eisenhower are operating in Sicily from the early morning of July 10. Allied assault troops preceded by air and naval attacks began what is considered to be the greatest and most hazardous and daring operations ever undertaken since the battle of Gallipoli in 1915. The Battle for Europe has started in right earnest; and the Second Front about which Axis propagandists were making fun has now come into being. In a broadcast to the people of France, General Eisenhower said that the invasion of Sicily was "the first stage in the liberation of the European Continent." It may be said to be the beginning of the end of the Axis-infested Europe.

THE downward trend in Axis fortunes is now more perceptible than ever before. From triumphant offensive Germany has come to inevitable defensive action. Three years ago, in June 1940, there was Dunkirk, and then the collapse of France. Next year, June 1941, saw the German invasion of Russia. In June 1942 Berlin entertained dreams of conquering the Middle East and reaching India by way of the Caucasus and Egypt. But June 1943 saw the lull before the storm. The Germans were kept guessing and were waiting with feverish impatience to see where the Allied blow would fall. They did not know whether the Allies would land in Norway or the Low Countries or in the Bay of Biscay, the Riveira, Corsica, the Italian islands, or the Balkans.

End of Axis Suspense

THEIR suspense has ended, and the storm has broken out where it was naturally most expected—on Sicily. After the great victory in Tunisia, the first natural stepping-stone to Europe is, of course, Sicily. And the Allied forces have not only landed there, but also advanced inland and captured three air fields. The Italian naval base of Syracuse has been occupied, and the important naval towns of Licata, Avole, Pozzallo, Ispica, Noto and some coastal towns have also been captured. The Allies have occupied the entire Florida district and have fanned out into the Central Catania plain. The G.H.Q. of the Axis defence forces in Sicily has been completely demolished.

IT is of interest to note that strong British, American and Canadian forces are engaged in the Sicilian operations, and General Montgomery, who won everlasting fame in the North African campaign, is now in command of the British forces in the area. General Eisenhower who visited Sicily, paid a great tribute to the co-ordination of the Allied forces. He said, "It could not have been better if it had been one and the same nation."

Wrested the initiative

THE Allies are making progress in the Sicilian operations and the great point to be noted is that in Europe they have definitely wrested the initiative from the hands of the enemy and carried the war into the enemy's camp. The German mind which has become accustomed to victory by offensive action is now reconciling itself to the idea of protective defence. A typical line of argument used in German propaganda is followed in an article in the official Nazi journal *Schwarze Korps*. "No other country," it says, "can endure the war so long as we can. Actually we have nothing else to do than defend ourselves, and in defence inflict the hardest blow on the enemy and continue this until he collapses. He will collapse at a stage of the war when his offensive power weakens." This is a vital doctrine which compares almost word for word with statements of French and some British commentators during the winter of 1939-40. It was this which wrecked France and brought Britain to the edge of destruction.

GERMANY has been showing a definite change of policy and outlook in regard to its propaganda. This is intended to be an effort to maintain German prestige abroad. The basic argument is that Germany has the immense advantage of interior lines of supply, and so can put up an unbreakable defence until the Allies are exhausted. It was stated that the strongly fortified belt around Europe could prevent the establishment of a bridgehead, but the landings in Sicily have established a bridgehead which may well be the beginning of many similar offensive approaches to the heart of Europe.

German Defences and Allied Air Tactics

THE point that should be noted in this connection is that whatever may be strength of the German defences in Europe, the new air tactics, which have borne such fruitful results in Tunisia, are capable of neutralising the strength of the fortified positions. The Germans expected that their coastal zones would hold the invading troops long enough to inflict heavy losses till their own forces at carefully selected points would concentrate their attack before the invading troops have time to consolidate their position. But direct air support to the assaulted troops can help to break up armoured formations of the enemy and overrun the whole of the coastal area before he can gather and concentrate his forces for attack.

IT is significant that Dr. Goebbels who was harping on the impossibility of Allied troops landing on Axis territory at the present time has been forced to admit its possibility. Writing in *Das Reich* very recently he said,

"THAT the Allies possess enough tonnage and forces to land at some point or other in Europe, we do not want to doubt, nor can we . . . We are perfectly aware that a British-American invasion attempt can, under certain circumstances, lead to the decision of the war."

THIS admission stands in glaring contrast to Lord Haw Haw's cynical reference to the possibility of Allied landings in Europe. Now that the largest amphibian operations ever attempted have met with appreciable success, it would be of interest to watch the future trend of Axis propaganda about their "impregnable" defences.

ELEGY FOR A.G.

[The Officer in whose memory this elegy is written, was killed in action with the Fourth Indian Division in Tunisia. He was born in Ootacamund.]

Was it for this, my brother, that you were born and bred
So large of heart, so fleet-foot, so clear of eye and head,
That you should lie so early among the unstirring dead ?

Your brow was yet unlaurelled, your major's crown still new ;
Your day was in its morning and stars still shone a few
When burning Death passed by and scorched the lifting dew.

No more you lead the battery you trained and led so well ;
No more your men will follow through storms of earth or hell.
The house of man the hopeful falls crumbling to a shell.

No more your laughing children shall run to take your hand,
No more the wife you cherished on windy quayside stand
To welcome you, long looked for, home to hearth and land.

Remembering now our childhood, when on the Nilgiri steep
Your foot was ever foremost to climb or run or leap
And we would rise together, together fall asleep.

Remembering too our schooldays, when your long tireless pace
Won prize and cup and trophy in many a hard-run race
Yet modesty still wreathed prowess with brighter grace.

Remembering oars in summer swinging down Severn tide,
Or lithe threequarter swerving untouched through half a side,
Or horseman one with hunter of earth-disdaining stride.

Remembering last the snatches of time when we would meet,
Whom years and seas had Sundered, and the old names repeat
With which so long before we two were used to greet.

I see the sinewy figure, the mouth a trace awry,
The broad and steady shoulder, the frank and cheerful eye,
A pattern for the living, that was so soon to die.

A pattern of men English who choose the soldier's trade,
Not passionate for glory nor vain of sword and braid,
Afraid of staining honour, not otherwise afraid,

He in the day of judgment, when tyranny was grown
From chick to monstrous eagle and England fought alone,
Glowed brighter as the gold glows when touched upon the stone.

No fear nor doubt nor question his resolution marred ;
Beside his peers he battled with fortitude ill-starred
To cleanse the world of horror and all its good to guard.

The vultures of the Atlas wheeled down the battle lines
Where rows of clamouring cannon challenged among the vines
And ere the echoes answered bombs roared the countersigns ;

Behind the hastening columns, beside the pitted road
They laid him with his fellow dead, a lifeless load,
And for a solemn tombstone a little cross bestowed.

Though thousand times ten thousand in year-long fighting fall,
Some darlings of their nation, and many brave and tall,
Death will not noose a better among those thousands all.

If after death, my brother, is any sight or sound
And you can hear our voices in your Tunisian ground,
Or any consolation in memory is found,

Take this 'our latest greeting, sharp-voiced with sadness sore
And endless bitter yearning for you who come no more,
No more to lovely England nor any human shore.

Remembering hearts shall be your enduring monument
To mark the life you borrowed and in your duty spent.
You quit you well, my brother ; farewell, and sleep content.



THE FIRST MOUTHFUL!

CHEMICALS IN WAR

THERE IS ROMANCE BEHIND THEIR PRODUCTION

By F. C. CROSS

I fear that to a great majority of people the word 'chemicals' still conjures up a mental picture of those rows of small bottles which line the chemists' shops.

For me to say that those bottles do not contain chemicals would, of course, be nonsense—but they are pharmaceuticals or pharmaceutical chemicals—and they are dealt with in pounds or ounces. Real chemicals, the chemicals which are the basic raw materials of water industry, are thought of in thousands of tons.

Now, so that you can understand just how greatly war is dependent upon chemicals I am going to run through a list of the basic equipment of the fighting services. First of all our soldiers, sailors and airmen alike are dressed in clothes of cotton or wool. Chemicals are needed to make that cloth and more are needed to make the khaki dye with which they are coloured. Then there are leather belts and boots and so on. Leather cannot be made without chemicals. Each man is concerned with the firing of some gun or weapon which is made of various metals and these metals cannot be refined without chemicals. To fire the gun some explosive is needed, and all explosives are merely mixtures of chemicals.

Guns and soldiers are dependent upon transport which runs on rubber tyres; rubber cannot be made without chemicals, and don't forget that the guns and the transports are painted with paints which are dependent upon chemicals for their production.

I could go on with the list by mentioning every single item of equipment if I had the time, and in every case I should have to tell you that production at some stage or another is dependant completely and utterly upon certain industrial chemicals. There is not an industry that I can think of which does not handle bulk chemicals in some part of its process and which, in fact, could never live without such chemicals.

This may surprise some of you, but it may make you realize just how fundamentally an important part chemicals do play at all times, particularly in times of war. No vital industry such as those which refine the natural products of the earth and shape them into weapons of war—iron and steel—none could operate successfully without there first having been manufactured the chemicals with which they carry out their work.

EQUIPMENT OF THE FIGHTING SERVICES

I am going to go back to that list of equipment I mentioned and show you just what I meant. Briefly the list was composed of the following: cotton cloth, woollen cloth, dyestuffs, leather, metals, explosives, rubber and paint. Those can be taken as a basic list of the materials which form the equipment of an army, a navy or an air force, and I want to show you briefly just how chemicals play their part in the production of those things.

My first example is actually the least important. Cotton cloth which is later to be dyed a colour has less to do with chemicals than any of the other items, but remember, if cotton cloth is required white it has to be bleached and bleaching is done only with chemicals. There are various ways, though the most common is by using bleaching powder, chloride of lime solution.

In the case of wool, things are different. The natural wool when taken from the sheep is extremely dirty and also contains a very large quantity of natural grease. The dirt and a large proportion of the grease must be removed before the wool can be spun and woven. This is done again in numerous ways, but rinsing in a solution of soda, which is sodium carbonate or soda ash, is the simplest.

Next I come to dyeing. I know that to the housewife who is tired of the colour of last year's frock the dyeing of that frock with another colour is a simple business; either she sends it to the dyers or she buys a little packet of powder which she dissolves in a basin and then she pops the frock in. Now real dyeing—the dyeing of millions of yards of cloth with a colour which has to be reasonably fast to fading from sunlight, is a very complicated business. To start with, the manufacture of the dye colours themselves is one of the most intricate chemical processes known, but once the dye is produced the dyeing of the cloth becomes intricate too. To explain this I think I must turn to something quite different to give a parallel example.

You know that when you are developing a photographic negative you first wash the film in a developer solution—chemicals again—and then, when you have got the right degree of development you must 'fix' the film by washing in yet another solution or, on exposure to light, you would lose all the developed picture. In the dyeing of some dyestuffs there needs to be a very similar process. In others the dye is applied in a certain way and gives a certain colour and then the right colour originally wanted is developed by washing in a chemical bath.

The process of dyeing is intimately wound up with the use of chemicals such as hydrosulphite of soda, sodium sulphate, sulphate of alumina, caustic soda and a dozen others.

LEATHER

Now I come to leather. I suppose you all know that leather is the tanned hides of animals. Well, let me start with the skin of a cow which has just been killed. It has got hair on it which must be removed. Cutting it off will not do as there would be bristles left, so a chemical is used. The hide is soaked in a solution of sodium sulphide which rots the hairs off quickly. Then the hide is ready for tanning and there are a variety of processes by which this is done, all of them, depending upon chemicals. The most popular now-a-days is probably that which is known as chrome tanning which depends almost entirely on the use of bichromate of soda or some other chrome compound. Then, of course, after tanning we come to just the same processes of dyeing as I have described with cloth.

Next come metals and there is scope for hours of talk upon each one of those in turn. But I must dismiss the subject with only a brief reference to the most important—iron from which steel is made. In the refining of iron chemicals play a large part and, curiously enough, that same sodium carbonate I have already mentioned comes into the picture again. In the final production of finished metal goods even more chemicals play their part.

RUBBER

Next comes rubber. As we know it this is the sap of a tree which grows in India, Ceylon and Malaya. That sap is suitably treated with various chemicals such as ammonia and is then passed to the factories where it is processed—again the chemicals—to make tyres and a thousand other important war materials. But with the loss of Malaya the United Nations have had to turn more and more to synthetic rubber to replace all the natural production which was lost. Synthetic rubber is entirely chemical, made with chemicals in chemical factories. Germany has relied upon this synthetic rubber for the greater part of her requirements in this war.

In all cases, both German and Allied, the process is secret. So I cannot tell you much of the chemicals used, but I have given you yet one more example of how vitally important chemicals are in war.

EXPLOSIVES

Now explosives. Surely I hardly need to tell you anything about the use of chemicals here, because explosives are chemicals or chemical mixtures and nothing else. Take the simplest gunpowder that everyone knows, it is a mixture of chlorate of potash, sulphur and carbon. Going up the scale there is the famous T.N.T. which is short for Tri Nitro Tolol—a nice chemical name for you. To-day there are the new and secret explosives which are blasting the towns of Germany off the map—these are all results of the chemical industry of Britain. And here let me interpose a curious fact, the main artificial fertilizer known in India—sulphate of ammonia—is an immediate necessity to the production of certain explosives in war time.

Lastly paint, a not very important item on the list, but most certainly not unimportant. You just think of how many of the things around you and of the things used by an army, that are painted, and you will see what I mean. Paint is a colour, fixed into a basic material which is mixed into a liquid in such a way that it can be applied to any surface and will then stick there and not change.

When you look at it in that way paint becomes a pretty complex business, and let me assure you that the manufacture of paint certainly is complicated. Like everything else it is dependent upon chemicals. To start with, it obtains a great majority of its colours from the dye-makers, but the mixing of these colours into paints is not just a matter of a little white lead and a little linseed oil. Without the aid of chemicals paints would be a sorry set of messes; and mind you, I refer to the ordinary oil paints here. The cellulose paints and lacquers which particularly interest the air force in war are entirely chemical in composition, cellulose being a particularly obtruse chemical compound.

BASIC CHEMICALS

Well, there is a brief statement of the use of chemicals in the basic needs of war, but I wonder if anything had struck you about the names of the chemicals which I have mentioned. Have you noticed how sodium, sulphur and carbon seemed to crop up in nearly every name in one way or another, with chlorine tagging along very close? Sodium carbonate, sodium sulphate, sodium sulphide, chloride of lime, those were the names which kept cropping up. There is romance behind the production of these important products.

You might never believe that the most important basic chemical in the world, the one from which nearly all the others are eventually manufactured, is that common salt which you eat with your food, the salt which is in the sea, sodium chloride. It is from the vast accumulation of salt throughout the world that the great chemical industries have been built. Upon that foundation is based all the great manufactures of to-day. Caustic soda, without which you cannot make soap, and

most of the more important chemicals have as one ingredient sodium which has been extracted from the sodium chloride which is salt.

Mind, you, it is not only the sodium of common salt which is a valuable. I have said that salt is sodium chloride, that means that it is a compound of sodium and chlorine. The chlorine is also a vital product. It is a poisonous gas which was used in the last war, but more important still it is gas which is used to purify drinking water supplies. Wherever our armies go they carry chlorine to make the water they find fit for human consumption. It is the chlorine which is the important part of the chloride of lime, or bleaching powder. Chlorine does the bleaching and yet, in this same form as bleaching powder it is the great disinfectant in unhealthy districts and is used by the army everywhere to combat disease.

Next in importance is another natural product, sulphur, the valuable gift of those deadly things, volcanoes. Next to sodium, sulphur probably appears in one form or another, more often than anything else, in the important industrial chemicals. Sulphuric acid, which is a necessity to almost every industry is the first example which jumps to my mind. Yes, there is a romance behind the production of the world's industrial chemicals and I hope, too, that you will realize that there is more depending upon the production of those chemicals than meets the eye in these days of war.

Perhaps what I have said may help you to understand why some of those simple chemicals which you are accustomed to using in your own home are not now available. They are being conserved as they are vital necessities. Therefore, by going without them you, too, are joining in the common cause.

—A recent broadcast from A.I.R., Madras.

ALLIES NOW CALLING THE TUNE

By WICKHAM STEED

MANY signs now suggest that large-scale Allied operations are impending. From London, New York and Algiers all Frenchmen have been warned by the Inter-Allied High Command to be ready to assist Allied forces at the moment of invasion and meanwhile to watch over their own safety and the safety of their families. Similar warnings have been addressed to Belgians living near factories working for the Germans.

Destructive Allied raids on Le Creusot, Friedrichshaven and Krefeld in the Ruhr continue to cripple Germany's war industry. Sicily and Southern Italy are being intensely bombarded. In the Atlantic German submarines are being destroyed with unprecedented thoroughness. The Allied armies in North Africa await the next move. Equal eagerness prevails among the large Allied armies in Britain.

Hardly less significant are authentic reports of underground resistance in occupied Europe. In the first four months of this year more than 500 Gestapo agents noted for their crimes against subjugated peoples were condemned to death and executed by resistance organizations in Poland, Czechoslovakia, Norway, Belgium, Holland, France and Bulgaria. These organizations are now linked together and united under a central leadership in contact with their exiled governments. German-occupied Europe is threatened not only with invasion from without but with effective opposition from within.

NOT BY AIR ATTACK ALONE

Competent British opinion agrees with General Marshall, United States Chief of Staff, that heavy blows by land forces will be needed to make these threats effective. Aerial bombardment is a preliminary to invasion, not a substitute for it. Yet examination of the results achieved in the Ruhr, at Pantelleria and elsewhere encourages the belief that no material barrier will be impregnable to land attack after concentrated bombardment.

Where and when the invasion of the European continent will begin is a riddle which Hitler is most anxious to read. Until invasions actually begin Allied commanders and Governments will not help him. Nor is he likely to know which of the several possible points of attack will be the most important.

Three years ago Hitler missed his first and greatest opportunity by failing to attempt an invasion of Britain

immediately after the fall of France. Two years ago he believed that the overthrow of Russia must precede the destruction of Britain. The Russian counter-offensive in December 1941 upset this plan. Simultaneously the Japanese assault on Pearl Harbour ruined the prospect of a German victory by bringing the immense resources of the United States to the support of the Allied cause.

The crushing Russian victory at Stalingrad, the counter-offensive in the Caucasus and the British and Allied triumph in North Africa progressively demolished the whole German strategic conception. To-day the Allies hold the initiative. The Axis is on the defensive against the Allied strategic conception. Coming weeks and months will show whether Germany now possesses enough strength to resist it.

NO LIGHTHEARTED OPTIMISM

Confident though the Allies are of complete final victory they are free from lighthearted optimism. They expect a struggle long, hard and costly. No losses or obstacles will deter them from pursuing to the end their supreme object, which is the total annihilation of Nazism and Fascism as an indispensable preliminary to the creation of peace and freedom. Among them there is no warweariness. There is a grim determination sustained by overwhelming strength.

Nor is this strength intended for military purposes only. It is meant to nourish and succour stricken peoples when Allied arms shall have liberated them. These humane and redeeming aspects of war are even now receiving careful attention and are being provided for as thoroughly as the needs of the armed forces. Vast fleets of merchant shipping will be required for these purposes. Allied successes in the Battle of the Atlantic are, therefore, pledged both to swifter military victory and wider and swifter succour to famished and ravished peoples when fighting ends.

British opinion understands the necessity of maintaining international forces for police work after victory. But it foresees an equal need for international peace forces to help in rebuilding the welfare of the countries and peoples shattered by the war. The scheme for relief and rehabilitation contains the germ of those peace forces. If armed victory has still to be won a greater victory over war itself beckons the Allied peoples even while they prepare for the decisive onslaught on the evil foe.

IN A BOMBER ON AN OPERATIONAL FLIGHT

[The Editor of the Madras War Review had the privilege of flying with the Royal Air Force on a practice bombing raid during recent Air Force and Army exercises somewhere in South India. The following are his impressions of the flight.]

PEOPLE talk of getting a kick out of life. I always had some hazy idea of what it meant. But I never knew what it really meant till I got into a bomber of the Royal Air Force on an operational flight from Madras. It was during the recent Air Force and Army Exercises in South India.

It happened on a Sunday—June 20, 1943, and I shall never forget the date. How can I? I got a real kick out of life that day. When I returned home, and told my people—whom, of course, I had kept in blissful ignorance of my bold adventure—they cursed me—and blessed my stars—implying "You got a kick out of life all right! But supposing you got kicked out of it?"!

When I got back, I felt as if I had a Victoria Cross pinned on to my chest for bravery! So proud was I. And who wouldn't be? It was my first flying experience—and it was in a bomber of the Royal Air Force! Moreover, it was not just a joyride for journalists, but a practice operational flight in which pressmen were given the privilege of participating—the first time such a thing has been done in India, and therefore, an historic occasion for Indian journalism!

True, pressmen have flown before. On Tunisia Day, for instance, Madras journalists were taken in a plane and shown what Madras and the Tunisian Victory celebrations looked like from the air—a conducted tour in convenient, cushioned seats and without the slightest inconvenience. But not so with us. "Our" planes were to carry out "bombing operations" somewhere in South India, and we were "part of the show"!

AT EARLY DAWN

At early dawn, two officers of the Public Relations Directorate of the Royal Air Force came, and took us in a motor truck to the aerodrome. The ride in the moonlight with the early breeze was bracing and exhilarating and I took in deep draughts of the cold morning air.

When we arrived at the aerodrome, it was light. Everybody was up—observers, pilots and gunners, seated in armchairs around tables chatting, smoking and laughing. The C.O. was seated on the front mudguard of a stationary military car, blotting out with a 'hanky' the sanguinary effects of an early morning shave—a nice man with a genial face, to whom everyone took. While we waited anxiously the leader of our press squadron, Flight-Lieut. Perry, went and spoke to him. Was all "right"? Could we go? Yes, we were to fly!—but in our happiness there was also a tinge of nervousness, almost real fear. When strange adventure comes near, they do bring fear, and I am not ashamed to admit it.

We sat down on the steps in one corner of a verandah—and waited. Nothing happened. The pilots smoked and chatted. Some whiled away the time, till the "Zero Hour" came, at dice. I watched them with great interest. They seemed to have not a care in the world. Yet there was an air of expectancy all round, as we waited for the word "Go"!

Then came coffee—that sweet-smelling drink of the gods, and the world took on a rosier appearance! And then that sound from the east! Right out of the morning sun came a fighter plane, with a white band on its tail. We were "Whites", and it was one of our plane come to report. It circled over the aerodrome a few times, and then landed. The C.O. and one or two other officers rushed off to talk to the pilot. Fast in the footsteps of the fighter came other fighters, one after the other, and soon the place was alive with the whirr of engines and the noise of trucks moving hither and thither to meet the landing pilots.

Throughout the exciting scene, my attention was on the C.O. Having called the Wing Commander and one or two others near where we happened to be seated, he held a short discussion, and then shouted, "Everybody in!". Whereupon all the pilots and other Air Force personnel present there disappeared into the Operations Room, evidently to discuss the report just received. When they came out, someone said, "The weather is against us", and we soon came to know that the flight had to be delayed, since weather conditions were not favourable to bombing operations.

PARACHUTE TECHNIQUE

So off came the parachutes—we had put them on before the fighters came. One of the officers had initiated us into the mysteries of this apparatus. It's a funny

looking thing—the parachute! When I put it on I had the feeling I was tying myself into a knot. It's quite a job—but once you learn the technique—1, 2, 3, 4—it's as simple as ABCD.

We took a couple of minutes to get into the harness, but in a second we could free ourselves by simply banging the gadget attached to our chests. Visions of jumping into space from the realm of the clouds gave us alternating feelings of fear and fun. Later, the fun predominated, but I'm not sure that I was ever quite free of the fear!

Then began the waiting game—waiting and watching. We loitered and loafed around. I wanted to play "patience", but there were no cards. I thought some paper or periodical would help pass time, but there were none. I sat in a chair and gazed at the bombers in the distance. On one of them, I had to fly alone, for the other journalists would each go separately in a bomber. Of course, there would be the bomber crew, but a feeling of my own loneliness was rather oppressive.

Chewing the cud of loneliness, I suddenly missed my parachute! Who could have taken it? Had I put it somewhere else? All the three assigned to my brother journalists were there, but mine had gone! Actually it had flown to the clouds ahead of me, and later it flew with me—one of the flight-sergeants had taken it up. When he returned, I retrieved it . . . and hid it in a safer place!

"ZERO HOUR" AT LAST!

"Zero Hour" came at last. At about 12-30, we were asked to stand by. We hurriedly put on our parachutes, looked ourselves over to see that everything was O.K.—and were ready to fly! There was another Royal Air Force "contact". In the Operations Room. And then they all bustled out and got into the waiting trucks in groups of three—observer, pilot and air-gunner, with myself in one of the groups.

To get down from the truck and then get into the bomber didn't take more than a couple of minutes, but by that time, two of my comrades were already in the air. Before getting in, I surveyed the bomber basking in the noonday sun. She was a beauty!—a vehicle of dignity and grandeur, of hauteur and calmness, of confidence and strength. The observer was the first to get in—his seat was in the nose of the bomber—then the pilot and then I. The air-gunner gave me a lift up and I settled in beside the pilot's seat. The air-gunner must have got in behind, but I didn't see him during the whole course of the flight, which took almost exactly two and a half hours. The pilot shouted "contact," the engines roared, and then we were off! It was exactly one o'clock when we took off. I looked at my watch and noted the time. I looked up. The sun was right over my head.

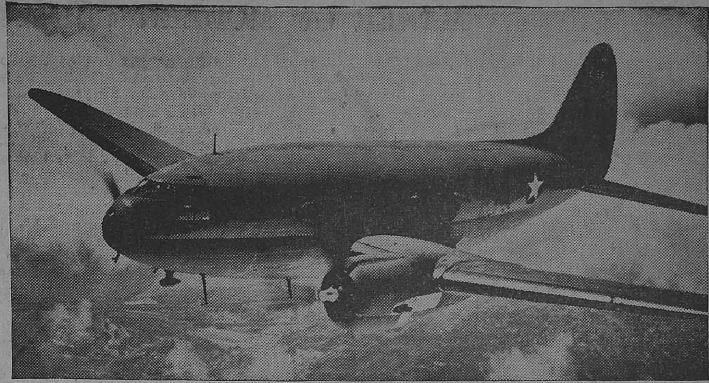
As the bomber was moving along the runway, somebody came up and spoke to the pilot. "You are ten minutes late. Two bombers have already taken off. You've got to catch them up. You're the leader!" So I was in the leading machine of the whole squadron, beside the Squadron Leader of the bomber flight! Here, on the first occasion in India when journalists were taken on an 'operational' flight, I was in the first batch to go; and I was in the first bomber—leading the rest against the 'enemy'! I congratulated myself (and thought I deserved a D.F.C.).

A NUTSHELL IMPRESSION

The bomber went up, and up, into the blue. The mere earth rolled away. The world became a crossword puzzle; plots of land, small squares or rectangles; big trees, small bushes, huge buildings, dolls' houses, roads, ribbons; and rivers, snakes. How's that for a nutshell impression?

When I had filled my eyes with the wonder and beauty outside, I deliberately studied the inside of the bomber. The observer was busy jotting down some points in a notebook and marking the direction of the flight. Then he said something to the pilot through the 'inter-com' tube. Of course, I couldn't hear a word. The noise of the engines was terrific in spite of the fact I had struck two pieces of cotton-wool into my ears. We had all been asked not to 'disturb or hamper' the work of the bomber crew in any way. I decided on a test. I coughed mildly, nothing happened; then loudly, I couldn't hear the slightest sound—and certainly the attention of the pilot beside me was not attracted!

GIANT UNITED STATES' PLANES CARRY 90 TONS OF SUPPLIES TO INDIA IN FOUR AND A HALF DAYS.—A flight of C-46 Commando troop and cargo planes such as the one shown here recently flew from the United States to India in four and a half days, delivering 90 tons of supplies at an Indian base. They made the 16,000-mile flight from America by way of Africa without a loss or mishap. This plane can transport more than eight tons at an average speed of 200 miles an hour or carry 50 fully equipped soldiers. It has a wing span of 108 feet and is powered by twin 2,000-horsepower engines. United States Pilots called them "Dumbos" after an elephant of that name in a recent motion picture cartoon.



The observer clambered up from his seat and put on an electric switch near where I sat. I said to myself, "The moment has come. We are going to bomb an 'enemy' target,"—and looked at my watch. It was 2-15, an hour since we started. Suddenly, the Squadron Leader dived the plane. Down we went. I made an attempt to clutch something to hold on to—but there was nothing at the sides except some mechanical devices and gadgets—and it would be dangerous to touch them! So I just leaned back. I saw the Squadron Leader stretch his hand across my neck, and my heart struck work for a split second. He released a clutch at the side of me . . . and my heart resumed its functions!

WE HIT THE TARGET

The observer looked below, then smiled at the pilot, and at me. Evidently we had hit the target, an aerodrome which was the 'enemy's' headquarters. At this moment, 'enemy' fighters came up, attempting to intercept and disperse our bombers, but they failed, and a number of them were "accounted for" by our rear-gunner.

Time and again we dropped our bombs on the 'enemy's' aerodrome and every time our bomber dived below, my heart applied for leave to stop work. Sometimes a row of coconut trees would suddenly grow bigger and taller, as we drove roaring towards them—and once I really thought the end had come!

The C.O. later told us that the type of low-level attack we carried out that afternoon was the same as that of the Royal Air Force in its bombing operations on France and the Low Countries and on some of the industrial towns in Germany. Talk about being thrilled to the marrow of one's bones!

The bombing was over. Soon I could see the sea again and knew we were nearing home. The runaways and the buildings came into sight, but what was that patch of white thick smoke trailing across the ground? Had our aerodrome

been bombed? No, it was just a trail to show us which way the wind was blowing, and help us safely down—and we made a perfect landing—after a perfect bombing!

Our plane was the first to land. The others followed later, at intervals of a few minutes. We had been up in the air, on top of the world, for more than two and a half hours.

I thanked the C.O. on behalf of his visitors for his kindness in giving us all facilities and we all, including the C.O. posed for a photograph. I shall treasure that photograph as long as I live, as a memento of two and a half times "one crowded hour of glorious life."

A talk broadcast by Mr. T. A. V. Nathan, from A.I.R., Madras, to-day, July 16.

INDIANS DELIVER THE GOODS

FROM a rail-head somewhere in Iraq, Indian drivers of the R.I.A.S.C. serving in Persia and Iraq have been helping to carry vital supplies to Russia.

Laden with food and military stores convoys of heavy army trucks, driven by Indians from all parts of India, from districts as far apart as Madras in the south, to the North-West Frontier in the west start their long journey through Persia to a point far north in the country where the Russians take over the goods. The trucks then return to their starting station, reload and begin again their long journey to deliver to the Red Army weapons which have enabled them to hold the Germans and will eventually enable them to smash Hitler's war machine.

Operating over a route recently brought into use expressly for the transport of Russian supplies, over some thousand miles of rough mountainous country, the work of these Indian drivers is long and arduous.

GERMAN RAILWAYS POUNDED BY R.A.F.

RAILWAYS are vital to Germany for the defence of her vast "fortress." It is unfortunate for her that they are, since they are peculiarly vulnerable from the air—far more than any system of road transport, writes "Scrutator" in the *Observer*. Not only do wrecked rail tracks take longer to repair or to bypass than wrecked roads, but railway engines and rolling stock cannot be "dispersed" as lorries can, whether in movement or at rest. A single bomb on a moving train may derail the whole, and destroy not only the vehicle hit but most of the others. The locomotive itself can be disabled, even totally ruined, by a few shots from an aircraft's cannon.

There is the direction in which Allied aviation, both over western Europe and in the Mediterranean, has during 1943 developed a crescendo of planned and sustained pressure. Besides constantly devoting sorties to attacks on railways and trains, it makes special targets of factories where engines and rolling stock are produced and repaired. Since the thaw ended, the Russians at the opposite end of the "fortress" have started a similar policy.

It is impossible to measure the results statistically, but they must already be substantial. If railway facilities are diminished beyond a certain point, the "fortress" cannot be held save on a shortened perimeter.

But that would mean evacuating territory and enabling the Allies to conduct their general bombing attack on Germany at a shorter range.

Already this general attack seems to be overshadowing all else in German imagination. While nights are short round midsummer, the Royal Air Force has been concentrating on the nearest big targets, that is, industrial cities of the Ruhr and the lower Rhine. One by one these hives of war industry and population are reduced to rubble and ashes. Places spared hitherto—Krefeld, Mulheim, Elberfeld—are added in methodical succession to the list of ruins. The Germans can be under no illusion that they will escape. But their fears go further. They divine that, as the nights lengthen, the Royal Air Force will work east and the ruin of the Ruhr be extended step by step across the central Fatherland.

The effect of such alarm is to render it very difficult for the German military authorities to shorten the "fortress" perimeter. Supposing, for instance, they abandoned two-thirds of Italy, as there might be good military grounds for doing, they would expose to the Royal Air Force cities like Leipzig, Dresden and Vienna, hitherto unscathed. Can they afford to do that? But equally can they afford, with ever-lessening rail transport to risk their armies on fronts so remote from each other? That is their dilemma. Our business seems to be to go on sharpening both horns of it till by one or both of them they are fairly transfixed.

MAKER OF MODERN CHINA



CHIANG KAI-SHEK

DETERMINED from boyhood to free free China from Japanese aggression, Chiang Kai-shek was encouraged and inspired by his widowed mother in his decision to become a soldier. In 1906, at the age of 19, he entered Paoting Military School. **SOLE QUALIFICATIONS OF A CHINESE OFFICER THEN WERE SKILL WITH SABRES, ABILITY TO LIFT AND SWING HEAVY WEIGHTS!**

Since Japan gloried in war, even as China detested it, Chiang, to learn from his enemies took an advanced course at Tokyo. There he met and became the disciple of Dr. Sun Yat-sen, Father of modern China. But in 1911, Imperial Chinese troops rose against the decadent Manchu war lords. Chiang asked for 48 hours leave, bought a civilian suit, posted uniform and sword to Tokyo Academy—and returned to Shanghai.

In 1923, Chiang went to study the Soviet military system, then returned to China to establish the Whampoo Military Academy. Working from early morning to late night, he planned courses for his men, trained them and turned them into first-rate officers well-versed in modern methods of warfare. Now the Academy produces splendid commanders for China's army divisions.

CHIANG'S GREAT CRUSADE

Elected to the Central Executive of the Kuomintang (China's People's Party) in 1925, a year later, Chiang led a great crusade of the Chinese people in their struggle for freedom. They swept the country. Nanking fell. Shanghai was about to come to terms—when suddenly the People's Front collapsed. Chiang's followers believing that he was about to compromise with the enemy. Actually, he was on the point of raising a loan from the bankers, who, sick of plundering war lords, looked to him to establish peace and order.

For the next ten years Chiang set about a tremendous task—unifying China, which for thousands of years had been split into factions ruled by quarrelsome war lords. A man of iron will, supreme moral and physical courage, he succeeded.

Japan, dreading a united China, struck in 1937. Much territory was seized by the enemy, but Chiang never wavered. Every political group in the country was united behind Chiang, the one man who could command the loyalty of the whole Chinese people.

Great towns fell to the enemy—one after another. But despair never entered Chiang's mind. "My armies will bend but not break, he said. To Japanese peace overtures he replied characteristically: "When I started 15 years ago, I had only 2,000 cadets. . . . And I had no money; and I licked the war lords. Today I have half of China and the friendship of America and England. . . . Let the Japanese come."

MAN OF SIMPLE TASTES

China's great man has simple tastes, lives in a ten-roomed house in a Chungking suburb. Chiang is optimistic, patient, imperturbable. He is one of the hardest working of the Allied war leaders. His day begins at

6-30; at the end of the day, which may be midnight or three in the morning, he writes his diary. He has kept a diary for 27 years.

His wife—formerly Mei-Ling, beautiful, American educated daughter of the famous Soong family—is his constant companion. He says she is "worth ten divisions of troops" to him. Married in 1927, they have rarely been parted. Chiang adopted Christianity—his wife's faith—soon after marriage.

Madame Chiang has proved an invaluable helpmate, devoting her remarkable intelligence, organizing ability and brilliant social gifts to the service of the nation. Thanks to their efforts, China, once undeveloped, now ranks with Britain, America and Russia as a world power.

Generalissimo and Madame Chiang, at Britain's invitation, visited India in February 1942, for conferences with other leaders.

Chiang Kai-shek is far more than a great general and administrator. He is the living symbol of China's epic fight for freedom, he is one of the makers of modern China.

THREE REMARKABLE WOMEN

The Soong sisters are the three most remarkable women in China to-day. They are very distinct personalities, and each has made her special contribution to China in her own way.

Mei-Ling, the youngest and most versatile sister, is known and admired all over the world as Madame Chiang Kai-shek. Her energy, courage and practical ability have been tested in many different fields. She has reorganized the Chinese Air Force, she deals with all the Generalissimo's foreign contacts and correspondence, she directs women's war work, and personally trains teachers to go into the country and organise health centres. She has started war orphanages where thousands of homeless children are growing up in safety and being cared for and educated. Her recent address to the United States Congress has been acclaimed as one of the best speeches ever made by the representative of a foreign power.

Eling, the eldest sister, is the wife of Dr. H. H. Kung, China's Finance Minister. An expert on finance in her own right, she has perhaps a more severe practical outlook than the other two. When the Japanese attacked China in July 1927, Madame Kung threw herself into war work, discovering her marked talent for organization and business. She provided ambulances and trucks for the army out of her private funds, started well-equipped hospitals on her own initiative, organized the sale of Liberty Bonds. When the Industrial Co-operatives were started, Madame Kung gave the movement her full support, and she takes a keen interest in textile and other manufactures. She hopes that in time Chinese women may find greater freedom and leisure when their household work is lightened by running water and mechanical appliances.

Chingling, the second sister, is an idealist, beautiful in character and appearance, who has devoted her life to carry on the work of her husband, Dr. Sun Yat-sen. She married him at the age of 20, when he had only a few more years to live, strenuous years spent in the political education of his people. Chingling worked hard as Dr. Sun's secretary, dealing with his French and English correspondence. After his death she continued his work in the Kuomintang School and served on the Central Executive Committee of the Kuomintang. When the breach came between Chiang Kai-shek and the Communists, she retired from public life, urging in her farewell message that the new China must be built on the foundations of the people and peasants. The guerrilla warfare which the country people are waging everywhere today has justified her prophetic words. Madame Sun was the first of the three sisters to take an active interest in, and give her support to, the Industrial Co-operatives.

SHE GAVE THE JAP A HEADACHE

Somewhere among the Japanese at the foot of the Chin Hills a soldier nurses a very sore hand. He was with a party who entered a village and because the villagers refused to render assistance the headman was tied to a chair while a sentry was posted to guard him.

The sentry walked around, yawned and finally went to sleep. The headman's wife crept up to the Jap, snatched his rifle away from him and hit him over the head with it. She then untied her husband and together they fled into the jungle. The sentry was left unconscious.

CHINESE INDUSTRIAL CO-OPERATIVES

By J. HENRY CARPENTER

Chairman, American Committee in Aid of Chinese Industrial Co-operatives

THE Japanese have destroyed or now control 90 per cent of China's factories and have made refugees of 50,000,000 of her people. How have the Chinese been able to stand up under all this? How can they continue to do it until the United Nations relieve them by reconquering Burma and reopening the Burma Road?

I learned the answers to these questions during my recent trip to China as Chairman of the American Committee in Aid of Chinese Industrial Co-operatives.

Eight Chinese refugees were living in a cave outside of Shillipo. By eating roots and foraging for scraps of food, these men were barely able to keep alive. They were given a loan of 3,000 yuan (about \$150) by the Industrial Co-operative Division of United China Relief. With this they bought wood and made a loom, but then they were stuck.

"Now", they said, "we have to get metal to make the wheels that throw the shuttle and the gears. There was no gray iron available, no steel of any sort. They solved the problem by melting down brass Chinese coins (the kind with the hole in the middle), taking such excellent wheels that their loom proved twice as efficient as an ordinary one. In two years' time, they had built eight buildings with their own hands, had constructed 22 looms, and were feeding 92 other refugee members. They made blankets, canvas, cotton cloth and silk cloth. They had cut school-rooms in the cliff, and many of the refugees still lived in caves. They also had a clinic with emergency medicines and doctor within call.

Give a Chinese a few scraps of metal, some bits of wood and wire and string and, in no time at all, he'll have a defence factory going full blast and growing all over the place. China's 1,600 co-operatives are strictly bad news for Japs.

They had a playground for the children, with swings and slides, and a basketball team that played in sectional tournaments. They have long since paid back the original loan, and their co-operative now has a net worth of more than \$11,000.

ONCE A TEMPLE

At a place called Garden City outside Paoki (pronounced Pow-gee) stands a Buddhist temple. A stone in the entry-way bears witness that it was rehabilitated in the second century, A.D. A robed Taoist priest still remains in the holy place but it has been given over to a co-operative of wounded soldiers. There were originally 35 men cared for there, some with a leg off, a few blind, others with arms missing. They were given a loan of \$1,200 and began weaving. In the course of time, five men recovered sufficiently to go back to the army. Each departed with \$50 as his share of the profits. The co-operative has paid back half the original loan and has added steadily to its equipment.

The greatest of all examples of ingenuity is found on the hill on the edge of Chungking, the present capital. The direst of all Chinese needs, next to food, is gasoline. The Chungking Co-operative found an old marine boiler on the bank of the Yangtze river. It was rusted and corroded and seemingly worthless, but the Chinese began cutting the boiler up by hand. Having no cutting torches, they used cold chisels and sledge hammers.

What they intended to make were cranking plants to transform tung oil into gasoline. They eventually made five cranking plants out of that old wreck.

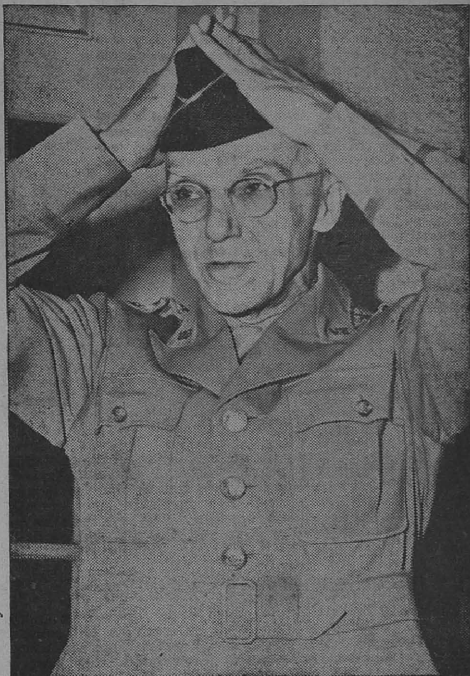
A TOUGH BLACKSMITHING JOB

The hardest job was to bend the iron. They dug a hole in the ground, started a fire, ran a bamboo tube to the hole and forced in air through hand-made bellows. Over the fire they placed the plate they were going to bend, heated it to a white pitch, and then hammered it into shape by hand, using main force and sledge hammers.

"Those five plants now provide 10,000 gallons of gasoline a day," I was told proudly.

Gasoline costs from \$10 to \$20 a gallon, for the poorest quality. Often it is mixed with alcohol. The value of the plant can be measured by these figures.

I rode 1,700 miles through northwest China on a truck. The first carried wool from Lanchow to Paoki. Then from Paoki, I travelled to Chengtu in another truck, this one carrying cotton. The wool had a value of \$500 in Lanchow. It was sold in Paoki for \$1,500. The trip cost \$1,000.



Lieut.-General Joseph W. Stilwell, Commander of United States Forces in China, Burma and India, adjusts his cap as he arrives at the White House in Washington for a lengthy conference with President Franklin D. Roosevelt. General Stilwell returned to Washington from the Far East with Major-General Claire E. Chennault, Commander of the 14th United States Air Force in China, to confer with Mr. Roosevelt and General George C. Marshall, United States Army Chief-of-Staff.

700,000 BLANKETS

The Chinese co-operatives provided the army with 700,000 blankets last year, made on hand-constructed looms under the worst possible conditions. When the big thread-twisting plant at Sian was bombed out of operation, there followed a great need for cotton thread for the warp of the blankets and cloth.

At Hanchung a young Chinese workman made a thread-twisting machine out of wood, the only steel used being two pieces supplied by the "wishbone" of a wrecked American car. The greatest need was for steel for the spindles that held the bobbin, and when that wasn't available, the young genius improvised two small wooden bobbin-carriers that lay flat instead of upright and allowed the thread to come off without the use of a spindle. The machine handled 24 bobbins at a time, doing an estimated 20 per cent better job than was possible with the former equipment.

In practically all cases, the machines made of sticks and bits of wire operate more efficiently than the original installations.

SHANGHAI WORKMEN'S FEAT

When Shanghai was evacuated, one group of workmen carried a planer and a drill on their backs for hundreds of miles until they could get it to a river. Then they carried it by sampan to Paoki—a 1,500-mile trip. When they got to Paoki, they set up the equipment. For power they used an old wooden wheel which was turned by two boys.

"We are about to embark on the most momentous enterprise of the war, striking for the first time at the enemy in his own land. Success means the opening of a Second Front with all that implies and the first move towards the rapid and decisive defeat of our enemies.

"Our object is clear; and our primary duty is to place this vast expedition ashore in the minimum time, and, subsequently, to maintain our military and air forces as they drive relentlessly forward into enemy territory.

"In the light of this duty, great risks must be and are to be accepted. The safety of our own ships, and all distracting considerations are to be relegated to a second place, or disregarded, as the accomplishment of our primary duty may require.

"On every commanding officer and rating rests the individual and personal duty of ensuring that no flinching in determination or failure of effort on his own part will hamper this great enterprise.

"I rest confident in the resolution, will and endurance of you all to whom this momentous enterprise is entrusted."

—ADMIRAL SIR A. B. CUNNINGHAM in a message to all the ships in the Allied Fleet taking part in the Sicilian expedition on 9th July 1943



Later, they took an engine out of an old automobile and geared it to the power shaft. A charcoal burner, made in their own shop, furnished gas to run the motor. The old hand-turned wheel had furnished only enough power to run one machine at a time. The new installation supplied more than enough to run the planer and drill together.

A TRIUMPH OF MANPOWER

When trucks break down, men come forward to carry the loads. Men bear burdens of as much as 150 pounds on trips of 500 miles. With sticks across their shoulders, allowing the load to be evenly distributed, they trudge steadily on as long as daylight lasts, often averaging 15 hours a day. Ancient four-wheeled carts, each carrying about a thousand pounds, are pulled by ropes in front and pushed from behind. They cover amazing distances.

At Shuang-shih-pu is a co-operative coal mine which is 9 miles from the nearest road (in fact the only road in north-west China). The coal is transported that distance, in wicker baskets carried on men's backs, over a mountain pass and by fording two rivers.

Since there is no wood pulp in many sections, paper is being made out of straw. A great source of straw is old straw sandals, and piles of discarded shoes are to be seen around a paper-making plant. The paper-makers put the straw in a large mixer vat with chemicals to soften the fibres. Then a silk screen held by two wooden handles is

lowered into the vat. A thin layer of the dissolved mixture is deposited on the screen. The layer is picked off the screen by use of a piece of felt and then placed on a hot stone slab. When it dries, it is peeled off, piece by piece. This is newsprint, upon which a one-page paper is turned out on a small hand press.

CARDING DEVICE

When the supply of replacement material for the wool-carding machine was cut off from the only source, England, they made a substitute of their own. The original carding device was small wires held in a heavy belt. It combed out the wool being drawn through it. Lacking this "card clothing" the Chinese took the steel bands that often come on packing cases, hacked notches in them and substituted them for the carding wires. Then they needed nails to put these strips on a revolving drum—but had none. They sent from Paoki to Chungking, 1,200 miles, to get 10 pounds of nails. The finished machine was a triumph. It was entirely hand-made and highly efficient.

There are 1,590 co-operatives in China and this year the Government of China is appropriating \$5,000,000 for their promotion and loans. The co-operatives produced \$30,000,000 worth of goods last year and will far exceed that in 1943. Instead of attempting the hopeless task of feeding the refugee Chinese, the co-operatives give them money for tools and equipment, and they feed themselves. At the same time they are producing needed war and civilian supplies during the period of China's greatest need.

PROGRESS IN FREE CHINA

THE Chinese Ministry of Information recently published a review of Government achievements in 1942 wherein noteworthy progress is recorded in administration, education, economic reconstruction, and other fields. Internally, the Government gave special attention to increasing administrative efficiency. The programme of planning, execution and examination which was first tried out in 1941 was improved upon last year. Overlapping organizations in the different provinces were mostly reorganized and incorporated. Eighteen provinces and one special municipality had People's Political Councils for advising the Government on administration.

In 1942 judicial administration was centred on the preparation of handling of law cases involving foreign nationals after the abolition of consular jurisdiction. The Ministry of Justice was transferred from the Judicial Yuan to the Executive Yuan for closer co-operation with other Ministries. Universities were asked to help, train judicial personnel in their departments of law, and translators were enlisted to interpret for foreign nationals involved in law suits. The Ministry reports that in Free

China in the past year there were 24 higher courts, 97 branch higher courts, and 400 lower courts.

Outstanding change in China's financial administration during the year was the taking over of provincial finance administration by the National Government and the strengthening of hsien (county) finance. State monopolies of salt, sugar, tobacco and matches proved successful during the year.

Progress was also noted in education and production among other fields. Free China had 232,145 primary schools with 22,343,484 students. In July 1942, in spite of unforeseen handicaps, Government enterprises completed from 60 to 80 per cent of their 1942 production programme, the Ministry reports. Free China farms yielded 48,640,962 piculs (one picul equals 110 lb.) of foodstuffs more than ordinary harvests as a result of the "Increased Production" campaign launched at the beginning of last year, while the nation had 23,747 co-operative societies under the new hsien system with 2,848,642 members.

CHINA GOES "CO-OP"

By ERNEST O. HAUSER

[China's 2,000 co-operatives have brought new hopes and a new spirit to her workers and peasants. Women as well as men have shown enthusiasm for these small industrial plants whose equipment is owned by the workers themselves.]

ONE of the main reasons for China's survival as a nation after six years of her defensive war against Japan, is the fact that peaceful reconstruction has been going on in her backyard while the frontyard was occupied and devastated by the aggressor. People, capital and machinery hurriedly evacuated before the enemy's advance were carefully collected in the rear, to function there and to promote construction and reconstruction so that China might fight on.

In this process of constructive reorganization China's industrial co-operatives have played a prominent part. In fact the "Indusco" line stretching from one end of Free China to the other is great importance to-day.

Along this line the Chinese people with the assistance of a handful of enthusiastic foreigners have built some 2,000 individual co-operatives with a total membership of 25,000 and with something like half a million seasonal workers in their employ.

BRAND NEW IDEA

Co-ops, a time-honoured institution in Europe and a going concern in America, are a novelty in China. After the outbreak of the Japanese war when a few progressive people suggested the establishment of co-operatives in the rear to stimulate production and to counteract Japan's economic warfare, the idea was brand new.

Although industrial co-ops were something new in China, the Chinese had their own co-operatives in the form of the Chinese family. The family numbering hundreds of members is based on the idea that the rich have to support the poor and anyone who has ever entered a Chinese store, where dozens of nephews, cousins, sons, sons-in-law are working or loafing behind the counters, will know what I mean.

The co-operatives, as set up under Chinese law, are made up of unrelated members; in fact two members bearing the same family name are seldom accepted in the same co-op. But the idea of pooling all resources and benefiting collectively from the results of the collective effort is as old as the history of China.

TWO DISTINCT FORMS

There are at present two distinct forms of industrial co-operatives—the workshop and the rural working community.

"Most of us are refugees from Shanghai," a Chinese woman told me when I visited a co-operative machine-shop in Szechwan province. "We worked in the same factory there and we were friends. When the Japs took Shanghai we set out together—all we wanted was to settle down in Free China as far as possible from Japanese gendarmes and Japanese factory management.

"Well, we got what we wanted. There are 20 of us working in this shop. We hold meetings every month and elect our own foreman and accountant and we room together in the dormitory across the way. We don't make much money—but we get enough rice for ourselves and for our babies."

TYPICAL WORKSHOP

The typical workshop is a small size factory where everything is under one roof and where the members either live in a dormitory or individual shacks around the main building. A large percentage of these members are skilled labourers, workers from the once busy treaty ports where practically all of China's industries were concentrated.

It is not difficult to find among these refugees someone willing and able to serve as manager and a small workshop can be set up overnight, sometimes with the most primitive means. The C.I.C. is headed by central headquarters in Chungking and it is the job of the central organization to solicit orders as soon as a new unit has been set up.

RURAL CO-OPS.

In contrast to the compact workshop co-operatives the rural co-operatives are decentralised organizations without a common establishment. The rural co-ops, which have sprung up all over the country, are cottage industries whose main purpose is to give the farmers something to do between crops and help them eke out their meagre incomes.

Whenever there are a few farmers' wives and a few looms a co-op can be established. The workers will buy their cotton co-operatively, will hold meetings and decide upon the when and how of marketing, but their profits will not be equal. As the production varies from the time and industry of each worker the co-op will buy the yarn piecemeal and pay each worker according to his or her production.

"Our co-ops now turn out a vast variety of products," a Chinese university graduate told me at headquarters in Chungking. "C.I.C. production ranges from soap and candle-making; printing; wool, cotton and silk textiles; machinery, leather work; alcohol; to small arms and medical supplies for the army. There is hardly an article I could think of that will not eventually be produced by co-operatives."

NO ONE IS BOSS

Already the Chinese army is taking advantage of the co-operatives and orders for hundreds of thousands of army blankets and cotton padded uniforms have been placed with the co-ops. Other army orders call for medical cotton, bandages, stretchers and the like.

A co-operative is a self-governing body; the members themselves run the show, no one is the boss and no one has to take orders. The members do an equal amount of work, have equal stakes in the establishment and draw equal profits. In order to thrive and to do their jobs well co-ops must rely on the activity and enterprise of their members rather than on protective tutelage from above.

China's Minister of Finance, Dr. H. H. Kung, brother-in-law of Generalissimo Chiang Kai-shek, in his capacity as president of the C.I.C., has given an increasing amount of time, money and attention to the development of co-ops. He expects the movements to assume vast proportions, if not during the war, surely in the post-war reconstruction period.

USHERS NEW HOPES

At present the C.I.C. is not marking time. While the total production is still modest—according to reliable estimates it amounts to 25,000,000 Chinese dollars a year—the co-ops have brought a new spirit and new hopes to China's workers and peasants. Wherever a co-operative functions, it functions satisfactorily and the co-operative stores set up to display and market the output of individual co-ops, have come to be the most popular stores in their communities.

In the north-west where the co-operative movement is particularly strong, thanks to the pioneering nature of all work undertaken in that newly developed region, individual co-ops have gone together forming "super co-ops" which run their own trucks, to purchase raw materials collectively and do their own hauling and marketing. In many rural communities the C.I.C. cottage industries have already raised the living standards of the farming people.

POST-WAR PLANS

In post-war China, according to present plans, heavy industries will be owned and operated by the Government, while light industries will be the domain of the Chinese people—individually and collectively.

It is in the field of light industry that the co-ops will make their major contribution to the well-being of the Chinese nation which, as a nation of farmers, needs a new impetus to provide an outlet for untapped energies and to bring in the sorely needed cash. Seen in this historic perspective, the "Indusco" line is one of the most important developments in China, and it holds a bright and shining promise for her future as a democracy.

Recruiting Record in Peshawar

Inspired by the Allied victory in North Africa, the largest batch of men to be recruited in one day presented themselves at the Peshawar Recruiting Office on the Monday following the Tunisia Day celebrations.

The actual figure was 24, which is a 100 per cent increase on the normal figure for Mondays—the best day of the week for recruiting.

LIFE IN CHINA'S WARTIME CAPITAL

By MARTIN MOORE

CHUNGKING is the gayest and the gloomiest place I have ever visited. Gaiety is in the faces and bearing of the people. Gloom is in the grim, grey, shattered city, a ruined slum rising on steep cliffs above the confluence of two muddy rivers.

Europe can show no devastation to compare with what Chungking had seen. Coventry and Rotterdam have had more savage raids, but no city has suffered such continuous punishment as China's wartime capital. It has been destroyed piecemeal, not once but several times.

One of its raid alarms lasted continuously, day and night, for two weeks, during which the "All-Clear" was never sounded.

BUILDINGS REBUILT

Some of its buildings have been destroyed and rebuilt four and five times. Because of the likelihood that there will have to be more reconstruction they have not been re-erected with any idea of permanence.

Such brick buildings as remained repairable have almost all been taken over by military and Government bodies. The better dwelling-houses are of mud and bamboo, roofed with thatch. Tens of thousands of people are living in homes that are a patchwork of salvaged timber and matting.

Every strip of vacant ground is cultivated in the scrupulous Chinese way. These green crops and the mounds of tangerines in the fruiterers' shops and the flags and banners hanging in the streets are the only splashes of colour in grey Chungking.

There are 420,000 people living in the central area of the capital. All of them dress in black or blue or brown, and your first impression is that everybody not in uniform is engaged in selling something. Every street is lined with shops so small that there are 20 or 30 of them in a hundred yards. Hawkers, moreover, squat beside their trays on the pathway.

The shops are open-fronted booths in which domestic life proceeds as a background to commerce. At whatever time you pass there is always a meal in the dark recesses of the shop. Shutters are put up so late at night and taken down so early in the morning that the city seems perpetually awake.

Chungking is a difficult city to get about in. The streets were shattered with the houses, and though main thoroughfares have been repaved, many are only tracks of trodden earth which turns to ankle-deep mud after a shower.

The infrequent motor-buses, running on vegetable oil, are yet frequent enough to keep the windless air constantly heavy with the sickly odour of their exhaust. There are no trams and no taxis. The few cars to be seen belong to Government officials or foreign diplomats.

Most people walk. The alternative is some aged rickshaw, its parts tied together with bits of string and wire. Rickshaws are expensive, and a few fares a day enable a coolie to earn as much as a university professor. Many of Chungking's roads are too steep for a rickshaw and the conveyance is a litter, carried by two coolies.

The most remarkable feature of the Chinese capital is its famous system of air raid shelters. The hillsides are honeycombed with tunnels, which can accommodate the entire population.

TUNNEL-SHELTERS

The head of the A.R.P. organization showed me round one of the largest of these dugouts where 6,000 people can sit in perfect safety with 100 feet of solid rock between them. And the Japanese bombs. The cave has three entrances as well as a ventilating shaft, through which electric fans draw fresh air. Every resident in the locality has his appointed place in the tunnel and there is a special section for passers-by or strangers.

A long-range warning system gives people several hours' notice of impending attack, so there is no excuse for anyone not to go to his proper place in his own shelter.

While there are half a dozen of these huge shelters the later policy has been to dig smaller caves accommodating 500 people. Even the smallest has two entrances, because in the early raids on Chungking debris often blocked the doors and people were imprisoned until a way could be dug through. Apart from these public shelters, most offices and Government departments have their own dugouts. Altogether there are about 700 tunnelled into the hillsides.

Like London, Chungking has had a long respite. Thanks to the growing Allied fighter strength in China, a raiding force would now almost certainly be destroyed or turned back before it could reach the capital. The enemy is too much occupied elsewhere to make the attempt.

The mist which descends on the sunbaked city at the end of September is its surest protection. People know that the pall will scarcely lift before May and that until then they are safe from raiders. But though danger is not imminent and may never come again, the A.R.P. organization, with its 20,000 volunteers, is kept in a state of constant readiness. At an hour's notice bakeries can be turned on to produce millions of special "iron ration" cakes in case the city's population should be confined for days on end in the shelters.

When you leave the capital and go out into the country districts you realize how thoroughly China is being mobilized. Everywhere small detachments of soldiers are on the march. In 700 miles' driving I was hardly ever out of sight of soldiery.

ENORMOUS MANPOWER

Military lorries are almost the only mechanical transport to be met with, but they are not enough to satisfy the needs of the armies. Great quantities of supplies have to be moved hundreds of miles by manpower—carried in handcarts, each pulled by half a dozen Labour Corps coolies.

China claims to have an army of 10,000,000 men. Not all of them are under arms, because there are not enough weapons for all. Foreign observers estimate that the immediate effective strength is between 2,000,000 and 3,000,000. But the country's potential manpower if the arms were available, is enormous.

Every man between 18 and 45 is liable for military training. From the reservoir of trained men the actual call-up is by lot. A district is ordered, for example, to send 1,000 men to the army, and the luck of the draw decides who is to go. Even under the urgency of war China's immemorial cult of the family is respected. Every man is entitled to perpetuate his line, so an only son is never called to the colours.

Almost everything seems against happiness in China, a long war, uncertainty about what will happen afterwards, the nearness to the bone of daily life now, high prices, high taxes and the shortage of almost all manufactured goods. Yet China is cheerful. Never anywhere have I seen so many faces in which laughter was the habitual expression.

In the main street of Chungking one day I saw a man riding a bicycle—a rare treasure he was lucky to possess. He ran over a brick and the bicycle frame snapped in two.

In a country where a second-hand bicycle costs the equivalent of £50 to £100 this was more than a misfortune. It was a tragedy. Yet the gathering crowd laughed—and no one laughed more heartily than the victim as he picked himself up out of the mud.

That scene seemed to typify China. Devastation and want and war hang over her like Chungking's unlifting cloud, but underneath she is smiling.

—Condensed from "The Daily Telegraph."

ENTHUSIASM

America's Air Transport Command men fly everything in the air, from tiny pipers to huge four-engined bombers. They fly food and refugees and generals going to confer quickly with other generals and guns and medicine and engines and clothing. Mostly they fly high.

"Except one pilot I flew with," said a sergeant, "he would always come down low over cemeteries and yell 'Wake up and fight for America!' He never missed a cemetery."

—The Buffalo Evening News Magazine.

AERIAL SPEARHEAD OF INVASION

By WING COMMANDER L. V. FRASER

THE formation of a Tactical Air Force of the Royal Air Force in Great Britain adapts in the northern European zone and as the aerial spearhead for future invasion of the Continent, a method of air fighting that was born in the sands of the Western Desert and developed to complete victory in Tunisia.

Germany thought she had the answer to the problem of co-operation between air forces and armies in the field of battle. Immense fleets of Stuka dive-bombers acted as "aerial artillery", extending the range of big guns and bombing wherever the army commander wanted any part of the battlefield softened up. Against almost defenceless Poland and unprepared France this method worked well. Against the puny Royal Air Force in Greece it was costly, but it still worked. From many points on the Allied side there were loud demands that similar fleets of dive-bombers should be built for work with Allied armies.

NEW CONCEPTION OF THE USE OF AIRCRAFT

But over the sands of the Libyan desert a new idea was formulating, a new conception of the use of aircraft in battle was growing. A few scattered squadrons of the Desert Air Force fighters and bombers were being built into a unified striking power. This new air idea was already working, but not in sufficient strength, when Rommel broke through at Gazala on June 17, 1942. It was just sufficient to tip the scales and enable the Germans to be held at Alamein by July 6. The following October it was a major factor in the great victory at Alamein and the chase that followed across the desert to Tripoli.

When the two Allied prongs began to grip Tunisia from the west and south, the air forces were overlapping. After the Casablanca conference they were co-ordinated. All the air power used in the immediate battlefield was combined into one force and placed under the command of Air Marshal Sir Arthur Coningham, former Desert Air Commander. For the first time this air battle power was called Tactical Air Force, though it was no more than an extension of the idea which had grown up in the Western Desert without that name.

In North Africa the Tactical Air Force was in two sections. In the west it consisted of fighter groups (British and American) and a tactical bomber force which was predominantly American. In the south it was simply the old Western Desert air force with its fighters, fighter bombers and day bombers augmented by the powerful night bomber force of the Middle East.

The whole force was a boxer. Its left fist was the section in Tunisia, its right fist the Desert air force. The former worked in collaboration with the British First Army and the Second United States Army Corps, the latter with the British Eighth Army.

The idea of tactical air forces had completely justified itself. Born in the hard battles of the Western Desert, it was brought to perfection in Tunisia. It was a weapon forged from experience, mightier than any air weapon the world had hitherto seen, mightier far than any air forces which the enemy organized "in support" of their armies. It was the quintessence of the Royal Air Force's experience of air fighting in the field of battle.

HISTORIC DEVELOPMENT

Historians may rate the emergence of this tactical air force idea in this war as highly as that of the tank in the last. Now an idea that was conceived and developed in the African battle has been transferred to the northern European zone. The Royal Air Force in Britain has a Tactical Air Force, to be the spearhead in the air when the Allied armies debouch on the Continent. It will not use the same tactics as its counterpart in Africa, for tactics continually change. But it will have as its basis this great conception of the role of the air in modern battle, that of concentrated power striking from its own element. On such basis there is sound confidence in its future.

BOMBING TO SHORTEN WAR

MANY pictures of air raid damage have been published in Britain, but none like those of Dusseldorf. This is not "raid-ing" either. Even the word "battle" is inadequate. No battle yet fought between armies inflicted such destruction as can now fall upon a great city in a single hour. It is more like the aftermath of some cataclysm of nature.



Colonel General Jurgen von Arnim, supreme Commander of German and Italian forces defeated by the Allies in North Africa, steps from an auto at the tent of Lieutenant-General Kenneth A. N. Anderson, British First Army Commander, after a 100-mile ride from the scene of his capture in the Cap Bon sector. This picture was transmitted by radio from North Africa to the United States.

—U.S.O.W.I.

We may recognize the appalling power of this weapon without abating a jot of our determination to use it to the full against our ruthless enemies. They knew the force of it and wielded it without mercy. But it remained for more ingenious minds on the Allied side to realize that here was something new and startling in warfare, and to use it as such. What we are seeing now is a strategical "softening-up" before the final assault, which may be compared with the tactical "softening-up" which preceded the infantry advances of the last war. It is as if the Allies, to save the lives of their soldiers, are reaching out with a huge mechanical arm to crush and demoralize the enemy. Hence Duisburg and Dusseldorf, Krefeld and Mulheim. Towns are being wiped out as effective organisms at one stroke.

Yet let us recollect that the process is not entirely mechanical. When we read of the loss of 30 or 40 bombers, we should remember that it means the loss also of hundreds of fine men. The task of these men is not to drop their bombs upon some defenceless Rotterdam, Warsaw or Belgrade. They have to fight their way out and back again through miles of massed anti-aircraft fire and against fleets of night fighters. They are the bravest of the brave.

Our enemies are crying out against a retribution that became inevitable when they first used the Luftwaffe as a threatening instrument of power politics, and there are fools in this country who echo these cries. We may sympathize with their soft-heartedness without sharing their soft-headedness. For if we do not finish this thing it will finish us. If we held off now and allowed the Axis Powers to rebuild their declining air strength there could be no future for civilization. As the Archbishop of York has wisely pointed out, the real justification for continuing this bombing of military objectives is that it will shorten the war and may save many hundreds of thousands of lives.

—Daily Mail.

GERMANY FACED WITH CRUCIAL DECISION

GERMANY must very soon take a crucial decision. At present Kesselring, commander of the Luftwaffe in the Mediterranean area, is charged with providing air cover for the whole of the South European coasts from the Pyrenees to the Aegean with 2,000 frontline aircraft.

His losses in North Africa were so heavy that this frontline force has had to be replaced several times over. Aircraft production and supply is so organized in Germany that a fixed frontline strength can be maintained even under heavy losses. One must envisage as it were a queue of new aircraft extending from factory to operational airfield through a chain of supply depots. When an aircraft is brought down in combat, the queue moves up one.

This means that commanders of Luftflotten have credit accounts of aircraft upon which they can draw. All Luftflotten are now stretched to the limit and are drawing on their credits to the limit—and that is particularly the case now on the Russian front. The Allies have compelled Kesselring to become a spendthrift. He has heavily overdrawn his account on several occasions, notably after the fall of Tunisia, and because German organization is good, his demands have been met.

But it cannot go on. Kesselring's position is like that of a young man who is living on an allowance. Special circumstances compel him to go to his bankers and ask for quarters money in advance. He gets it. He then finds himself obliged to go back in a month's time and demand another quarterage. The reaction of the banker (that is to say Goering and his people in Berlin) must very soon be: "Your next instalment is not due for another two months." Where is this leading to?

GERMANS TO ADOPT DEFENSIVE POLICY ?

As time passes chances are increasing that the Germans will adopt a defensive war policy henceforth and start a war of attrition in the hope that the Russians and their allies, will sooner or later grow tired or even quarrel and some compromise peace will result. While a German offensive in the next few weeks cannot be excluded—and the Red Army is in a complete state of readiness to meet it—there are a number of indications suggesting that the German army genuinely proposes to "consolidate" its rear and communications, particularly throughout the occupied territories of the Soviet Union.

One such indication is that the Germans have for the first time engaged in a really large-scale campaign aiming

BANKRUPTCY OF LUFTWAFFE

The answer is that it is leading to bankruptcy of the Luftwaffe. By bankruptcy it is not meant that the German air force will shortly go out of business, but it will not be able to honour fully all its commitments. A decision which must be beginning to press with increasing urgency upon the authorities in Berlin is whether they can afford to go on cutting down replacements for their Luftflotten in the east, north and west, when invasion is threatening from all sides, in order to keep the expensive Kesselring going in Italy.

If they decide to conserve their air resources by withdrawing from Italy and her islands, and if the Allies follow up with invasion, the industries of South Germany and Austria will be exposed to devastating bombardment by the Allies from airfields on the plains of Lombardy, and the Allies will have secured a first-class invasion platform for striking east across the Adriatic or west from Genoa. If, on the other hand, they decide to stay in Italy and risk a weakening Luftwaffe on other fronts, they must then do as they have promised and help defend Italian soil. That would involve a very heavy diversion of troops, equipment and supplies, for Italy would then become a poor relation par excellence, demanding more and more as her patron becomes more deeply committed. And the more German divisions there are in Italy the more essential will it be to maintain adequate air cover, for one of the lessons of the Tunisian collapse was that the German soldier cannot fight without air cover on which he has always hitherto been able to rely.

The decision which Berlin will be driven to make in the near future is well calculated to give the individuals concerned a severe headache, and its consequences will be of vital importance to the future course of the European struggle as a whole.

at wiping out powerful Russian and Ukrainian partisan movements. What they are doing now is not merely in the nature of the old "punitive expeditions" but large-scale military operations involving large numbers of infantry, tanks and aircraft. It is aimed at mopping up numerous areas in Western Russia virtually controlled by guerrillas as well as numerous smaller islands of partisan activity. A "softer" policy towards Ukrainian and other peasants is likely to accompany the "extermination" of partisans.

All this is a sign of weakness, just as was the extraordinary phenomenon of belated Nazi humanitarianism when, before a recent raid on Gorki, they dropped leaflets urging the population to take women and children away.

INDIAN BLINDED SOLDIERS TO BE TRAINED

THIS month a St. Dunstan's Hostel for Blinded Indian Soldiers, Sailors and Airmen, is to be opened at Dehra Dun.

Hitherto, our blinded men have returned to their villages, there to sit about in idle darkness for the rest of their lives. The blinded Indian soldier of the past took it for granted that he could do nothing. So did his fellow-villagers.

Fifty years ago the first school for the blind was opened in India. Now there are some 33 schools, mostly for children. They teach reading, writing, music, basket-making, weaving, knitting and chair-caning.

Founded by a blind man, Sir Arthur Pearson, owner of a number of London newspapers, St. Dunstan's does not confine itself to training men; but, if they do well, it helps to look after their families, contributes towards the cost of houses, supplies them with amenities like gramophones, records, musical instruments and indoor-games. To its able student, it gives the equipment and the raw material necessary to work at home in his village. It keeps in touch with him.

The Society is run entirely on contributions given by the public. It is not a government concern.

The Medical Directorate will transfer to the Military Hospitals in Dehra Dun all blinded soldiers' cases. While they are in hospital, St. Dunstan's will interest itself in them, and they will later be transferred to it from the hospital. Soldiers' families will be allowed to stay with them. They will be given an allowance of Rs. 8 a month in addition to pension or army pay.

The course of training aims at three things—

- (1) To train the man to have confidence in getting about and doing things for himself.
- (2) To have games and social interests to fill his spare time, and
- (3) To have a useful job he can do at home.

The number of blinded soldiers is still small, 30 at present. How many there will be ultimately depends on the fighting to come. But blindness is no longer the permanent handicap it used to be. Blinded early in this war, men have been back in 18 months at such occupations as massage, assembly work in aircraft factories, inspection of aircraft in the course of construction, operating telephone exchanges, lecturing to trainees in army and navy and weaving camouflage nets. One is a film actor. He makes propaganda films. In short his life will not be a burden. He can now live usefully.

But let a blinded soldier speak for himself and of his friend.

"My job was journalism, editing an army newspaper. Thanks to St. Dunstan's, these 28 years, since I fell foul of a shell in Gallipoli, have been full of action, work and pleasure, farming, a Member of Parliament reconstructing blind welfare work, organizing public appeals working for the war effort in Britain and the U.S.A." Lieutenant-Colonel Sir Ian Fraser, the Chairman of St. Dunstan's, was blinded in France at the age of 18. He is an M.P.; a Governor of the B.B.C., and a director of two large industrial and trading companies.

WAR DIARY

BRITAIN AND THE COMMONWEALTH

10TH JULY.—Lord Wavell addressed Indian trainees of the Bevin Boys' Group in London, and said that in the new post which he was shortly going to occupy, he would do something to repay the debt he owed to India.

Mr. Bevin, Minister of Labour, announced that there was under consideration expansion of the training scheme so that more men might come from India and their stay be prolonged from six to nine months.

11TH JULY.—Mr. Henry L. Stimson dined with Mr. Churchill at 10, Downing Street. His visit to England is interpreted as intended to arrange definite time-table for launching new campaigns at the close of the Battle of Sicily. Greece is high up in the list for liberation.

12TH JULY.—An air-raid on the east coast of England took place and high explosives and incendiaries were dropped.

14TH JULY.—Mr. Churchill refused to agree to a suggestion in the House of Commons for amending the Atlantic Charter.

* * * * *

UNITED STATES AND THE ATLANTIC

11TH JULY.—Mr. Henry Stimson, United States Secretary of War, has arrived in London.

14TH JULY.—President Roosevelt has issued a message to France on the "Bastille Day," the anniversary of the French Revolution.

* * * * *

ITALY AND THE MEDITERRANEAN

7TH JULY.—Bomber squadrons of the Allies, supported by swarms of fighter bombers carried out unremitting night raids on the Axis airfields in Sicily and Sardinia, and the air assault on the Italian islands must be considered to have reached the peak of intensity. Opposition was insignificant.

8TH JULY.—According to a German news agency, German estimate of the Allied Forces in the Mediterranean include several units of the Anglo-American fleet, including two battleships of the King George class, American cruisers, and several aircraft carriers. There are also concentrations of several hundred thousands of transport shipping in Port Said. The Allies in the Mediterranean area from North Africa to Syria have some 44 infantry divisions, and fifteen to twenty tank formations. They include Anglo-American parachute battalions and two airborne divisions and two Polish divisions brought *via* Persia to Syria and Palestine. These formations also include Greek, Czech, Serb and Syrian immigrants. Excluding the large forces available for garrison purposes, the forces available for an offensive against Southern Europe are only a fraction of the entire Allied Forces in the Mediterranean.

9TH JULY.—Two waves of Liberators attacked Catania in Sicily, dropping a quarter of a million pounds of high explosives.

10TH JULY.—The Pope has been promised by Mr. Roosevelt that the status of the Vatican would be respected during the invasion of Europe by the Allies.

Powerful Allied Forces under the command by General Eisenhower, began landing operations in Sicily this morning on the rock-studded Western tip of Sicily with the support of the British and American Naval Forces and Allied aircraft are hammering road communications. Italian Naval Forces are in action and there has been a violent air battle south of Sicily. The place of landing is only 260 miles from Rome. Axis troops in Sicily number 900,000. The battle of Africa is over; the battle of Europe has begun.

11TH JULY.—Allied advance troops are driving inland into Sicily. There are more than 2,000 vessels involved in the Sicilian landing operations.

12TH JULY.—The Allies are now in possession of all major Italian ports and airfields in south-east corner of Sicily—*Syracuse, Avola, Pachino, Pozallo, Scoglitti, Gela, Licata, Ispica, Rosolini and Nola. Cape Passero* at the south-east corner of Sicily, is now firmly in Allied hands. General Montgomery is now in command of the British forces in Sicily. Military objectives towards Catania is now a sea of flames as a result of Allied air pounding.

Bitter battle is raging for *Ragusa*, near the south-east corner of Sicily. This town is defended by 30,000 Germans under the command of Marshal Kesselring. On the whole, enemy resistance is less than expected. Liberators of the Ninth United States Air Force have started attacking aerodromes in Southern Italy.

13TH JULY.—Three more places, Augusta, a naval base, Florida, eight miles inland from Syracuse and Ragusa have been taken by the Allies in Sicily. Enemy resistance in Sicily is stiffening and Allied troops come across more Germans and more 75 m.m. guns. American and Canadian forces have linked up at Ragusa and the whole invading force is knitting itself together. Allies have captured an Italian General. The forces attacking Sicily is the Fifteenth Army Group and is under Command of General Alexander. It includes the British Eighth Army under General Montgomery and the Seventh United States Army under General Patton. Sicilians welcome the Allies.

A united anti-Fascist Front has been formed in Italy.

14TH JULY.—The defences of Catania in Sicily are being stormed. The American troops are advancing towards Agrigento.

* * * * *

GERMANY AND OCCUPIED EUROPE

8TH JULY.—Heavy raid by the Royal Air Force took place over Cologne. More than 1,000 tons of bombs were dropped.

9TH JULY.—Cologne, Capital of Rhineland, the most bombed city in the world, had its 118th raid by the Royal Air Force, and the United States Army Eighth Air Force. German aircraft bases in enemyheld France were also pounded.

10TH JULY.—General Kazimierz Sosakowski has been appointed Commander-in-Chief of the Polish Armed Forces of Free Poland (functioning in London) and acting Premier Stanislaw Mikolajczyk has been asked to form a new Cabinet.

The Axis are reported to have 70 regular divisions in the Balkans exclusive of air and naval staffs. This force is made up of approximately 14 German divisions, 33 Italian, 21 Bulgarian and some Croats and Hungarians. It is estimated that there are two Italian and two German infantry divisions in Crete, excluding air and naval personnel which may represent another two divisions. Rhodes has three Italian divisions and some Germans.

* * * * *

RUSSIA

8TH JULY.—Fourth day of the offensive. Russians for the first time throw in their own medium weight tanks to stem the Nazi onslaught with heavy German Tigers in the north and south of the Kursk bulge. The Germans have struck at the two ends of the bulge in an attempt to storm the town. Orel is the northern end of this front. The German offensive has made "some advance" in the Byelgorod area on the southern road to Kursk. The German plan was to start the offensive with the Central Army Group attacking in Byelgorod-Orel-Kursk area, break through both to north and south of Kursk, and attack Kursk itself to open the gateway across the black earth country towards Voronezh which is the key point for a switch northward round the neck of Moscow. Soviet Command has not yet revealed who is commanding the Russian army. German forces, according to Moscow radio, taking part in the offensive consist of fifteen panzer divisions, one motorized division, and fourteen infantry divisions. Numerous *Luftwaffe* formations from other sectors of the Russian front and also from Western Europe have been thrown into the offensive.

9TH JULY.—Fighting is developing on a still larger scale along the Orel-Kursk front. A specially intensive struggle is being waged for a town south of Orel. Soviets have captured air initiative over the Byelgorod front. They are using the *Stormovik* bombers with their big calibre guns.

10TH JULY.—Fierce battle rages for a vital town south of Kursk in the Byelgorod sector where Germans are increasing their pressure after driving a wedge into Soviet lines. This is the main danger point at the moment. Another fierce battle has developed in the Orel sector. Across Kursk plains Germans are throwing in 1,000 tanks and several infantry divisions. In the first five days Soviet lost heavily, but German losses have been much heavier with 2,306 tanks knocked out and 904 planes destroyed. A new type of tank possessing undreamt of manoeuvrability is being used by the Germans.



TWIN AIR ATTACKS BLAST JAPANESE INSTALLATIONS IN BURMA.—Two United States Army Air Force bombing missions, arriving from different directions simultaneously, successfully carry out attacks only a mile apart to score direct hits on twin bridges (upper right) and the Japanese railroad yard (lower left) at Myitkyina, Burma. The surprise two-way raid, carried out from different bases, completely baffled the enemy fighter defence, which was split up and rendered ineffective by the manoeuvre.

10TH JULY.—In the Byelgorod sector the biggest battles since the start of the German offensive were fought out today. In the first six days of the offensive the German losses in tanks totalled 2,601 and in planes 1,037.

12TH JULY.—Furious tank battle is raging during the last 24 hours on the Orel-Kursk front. Germans are losing one tank every three minutes.

13TH JULY.—Soviet troops have recaptured part of the ground lost in the earlier days of the offensive in the Byelgorod sector. Soviet K. V. tanks are reported to be superior to German Tigers.

INDIA, BURMA AND CEYLON

8TH JULY.—Government of India's decisions on the recommendations of the Food Conference which has been in session in New Delhi since July 5 were announced to-day. Rationing in urban areas is to be taken up in a progressively increasing measure and almost immediately and free trade is not to be considered except as an objective for the return of normal conditions. Announcement was made by Sir Azizul Haque, Food Member, in the course of his address to the Conference.

11TH JULY.—This day was observed in all churches as a day of remembrance for the Royal Navy, the Royal Indian Navy and the Merchant Navy.

12TH JULY.—Heavy bombers of the Tenth United States Air Force dropped more than 12 tons of bombs on enemy railroad installations at Ywataung, Burma. On the same day our fighters armed with medium and fragmentation bombs attacked the Japanese base at Nanyaseik in Northern Burma.

THE FAR EAST

7TH JULY.—Chinese War Minister and Chief of General Staff, General Ho Ying-Chin, speaking at an international gathering at Chungking, said that Japanese casualties in China since the start of the war up to June 1943 totalled 1,930,639. The Japanese Navy since the outbreak of the War lost 124 war ships out of 230 first-line naval craft.

According to Mr. L. W. Brockington, Empire Adviser to the Information Ministry, China has lost, during the six years of War, five to six million Chinese soldiers and seven to ten million civilians by famine and flood, while fifty million were homeless refugees.

There was an air raid on Port Darwin, being the 58th.

8TH JULY.—American forces made two new landings on vital points in the Solomon islands and of New Georgia and are converging on the key airfield at Munda which is now threatened from four sides. Rendova and Vangunu islands are firmly in American hands, and Viru Harbour on the south-west coast of New Georgia has been captured.

The naval battle in the Kula Gulf broke off, but may be renewed any time in the Central Solomons whose waters the American ships are now sweeping in open challenge to the Japanese fleet.

9TH JULY.—American forward patrols are reported to have reached the outskirts of Munda air port. Munda is now blockaded by land and sea and will fall to the Allies in the very near future.

More than a hundred Allied bombers pounded the Japanese positions on New Georgia island and American destroyers bombarded Japanese base at Munda in New Georgia. Japanese positions in Salamaua in New Guinea were also strafed by medium bombers supported by ground troops.

12TH JULY.—Blockaded by land and sea Japanese garrison at Munda is faced with the alternative of death or surrender. Once Munda falls, the Allies will have a line stretching in an arc for 700 miles from New Guinea to New Georgia, with the Japanese air, land and sea base at Rabaul only 300 to 400 miles north of that line.

Kiska in the north-east Pacific was bombed and bombarded by American Air and Naval Forces.

FREE FRANCE

8TH JULY.—French Committee of National Liberation met in plenary session in Algiers under the presidency of General de Gaulle.

9TH JULY.—At a press conference General Giraud announced that complete agreement has been reached with President Roosevelt for the equipment of a French invasion force numbering 300,000. To a question whether U.S.A. was prepared to recognize the Committee of National Liberation, President Roosevelt said that there was only about 5 per cent of France outside the Metropolitan area.

13TH JULY.—In Martinique Admiral Robert has given up his post of High Commissioner and M. Alpino of the French Military Mission in America has succeeded him. Mr. Alpino has given an assurance that the resources of Martinique will be mobilised against the Axis and that all French warships and merchantmen will be made available to the Allies.