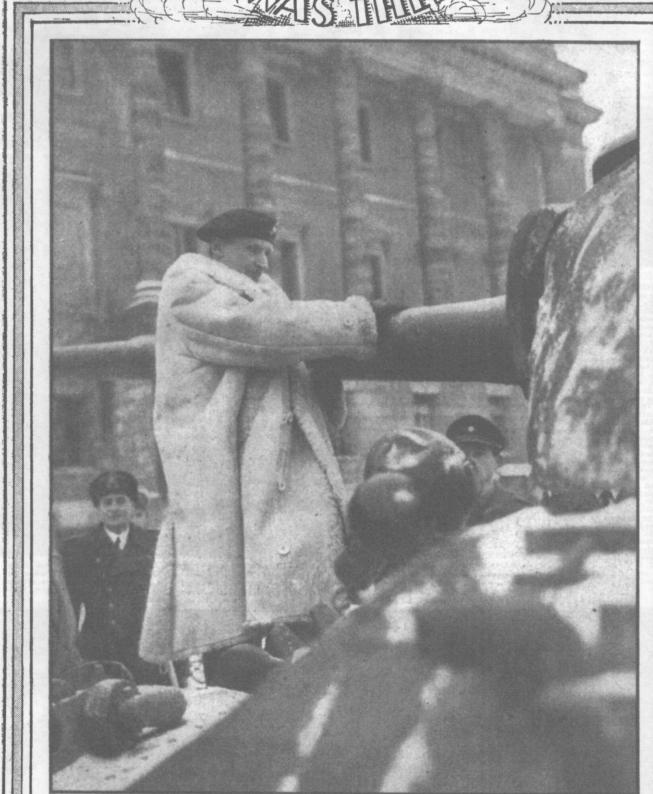
vol 10 The War Illustrated N° 253



AT THE STALIN MILITARY ACADEMY for armoured and mechanized troops Field-Marshal Lord Montgomery inspected a Stalin tank during his visit to Moscow early in January 1947. He and his Soviet hosts exchanged views on the employment of tanks in battle; and the Chief of the Imperial General Staff had a discussion with Marshal of Tank Troops Rybalko, a Russian tank expert in the Second Great War. On his return to England Field-Marshal Montgomery announced that Russian would be taught at our Royal Military Academy, Sandhurst. See also page 709.

Photo, Planet News

Edited by Sir John Hammerton

Glimpsed by Our Roving Camera



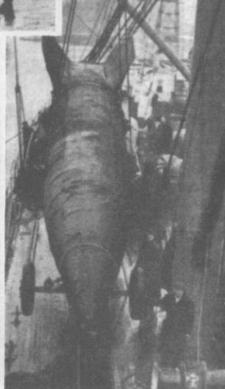


SCIPIONE AFRICANO, an Italian cruiser, may be allotted to one of the Allies under the Peace Treaty signed in Paris, Feb. 10, 1947. Names of the vessels to be surrendered were kept secret, to avoid possible sabotage.

A GEORGE CROSS award was made to Sqdn.-Leader H. Dinwoodie, O.B.E., M.C. (above), on Feb. 4, 1947, for defusing a German bomb which was surrounded with high explosives. His action, on Aug. 20, 1946, saved the German port of Löbeck from devastation. Eleven hundred tons of bombs were being unloaded from two trains into ships for disposal as a when a 120-pound bomb was dropped and exploded, killing six persons and injuring 12. There was grave danger that other bombs would also detonate, and blow up the trains. Dinwoodie proceeded to dismantle one, to ascertain, if possible, the cause of the explosion. He found that the accident was due to defective German workmanship or design, the fusing devise having moved. In the light of this knowledge the Squadron-Leader, assisted by Corporal Garred, who received the George Medal, was able to render harmless the remaining bombs. At the time it was not known whether the action of defusing the bombs would in itself cause a detonation. L.A.C. J. W. Halton, who also gave valuable assistance, was granted the British Empire



UNUSED BARBED WIRE stacked at Taplow, Bucks., is to be exported to Canada, where it will be smelted. In February 1947 there were several such "mountains," estimated to be worth about 600,000 dollars. Every coil was made for defence purposes; now it all goes as salvage.



A V2 WAS TAKEN ON BOARD the liner Karamea at King George V Dock, London, in February 1947, for shipment to Australia, where it will be placed on exhibition in the War Museum at Canberra.



SURVIVORS OF THE JERVIS BAY met at a re-union dinner held at the Marylebone Station Hotel, London, on Feb. I, 1947. A wreath commemorated those who died in the gallant.action fought with the German warship Admiral Scheer in mid-Atlantic on Nov. 5, 1940, while protecting a merchant convoy. PAGE 706



FERGUSON TRACTORS, of revolutionary design, are being manufactured in large numbers at the former wartime shadow factory of Standard Motors, Coventry. These agricultural machines, which are intended mainly for export, will help to overcome the world food shortage.

Photos Planet, A.P., Keystone, G.P.U., Central Physis

How the Australians Took Sattelberg

In February 1943 the 9th Australian Division, which had launched the first attack in the Allied thrust at El Alamein, sailed from Suez for Australia. On board ship they were told to forget the art of desert warfare and learn the craft and guile of the jungle. Other divisions, including the 6th, had already returned and were engaging the enemy on the beaches and in the jungles of the Papuan promontory of New Guinea. By then the holding war in the South Pacific was at an end for the Allies (see article in pages 195-196).

The Japanese had planned to capture Port Moresby, an ideal base for launching and maintaining an assault upon Australia. They planned its capture for September 1942, but by that time it had become the indispensable base through which the great Australian—and later American—counter-offensive gained its life-blood in supplies and reinforcements. In the first eight months of the counter-offensive the Allies recaptured all strategic points as far as the Huon Gulf, and by September 1943 the Japanese defenders had massed their main forces in the Huon Peninsula. Here lay the next objective in the reconquest of New Guinea, and the greater aim—the destruction of the Japanese Army still menacing the security of Australia.

Initial Assault at Scarlet Beach

Lae, in the Huon Gulf, was captured by the 7th Australian Division on September 16 and plans, already prepared, were immediately set in motion for the 9th Australian Division to carry out an amphibious operation against the harbour of Finschhafen on the Huon Peninsula. The landing was made on September 22, six miles north of Finschhafen, at a spot which came to be known as Scarlet Beach, about 90 miles sea distance from Lae. A little way inland from Scarlet Beach a coral track beginning at Heldsbach ran south to Finschhafen, passing through Salankaua coconut plantation to the Kakakog area, a narrow spur between the coast and the steep foothills, believed to be occupied in some strength by the enemy.

A single Brigade group, making the initial assault, was greeted by heavy fire as the frail craft rode into the beach to discharge the crouching troops over whose heads roared the continuous fire of the Naval guns covering the landing. Having cleared the beach area the drive towards Finschhafen, six miles to the south, began. Three days later the Bumi River was crossed, at heavy cost. Stiffening enemy resistance and the vulnerability of the lengthening supply line began to cause anxiety. An enemy stir in the Sattelberg region inland from Scarlet Beach spelt some concentration of strength.

ENEMY patrols began feeling their way towards beach defences and prodding the life-line of the force to the south. Clearly time was to be the deciding factor and reinforcements would be needed. The push on Finschhafen continued in face of almost impossible ground conditions with enemy resistance growing stronger every hour, and it was a force of little more than two-company strength which delivered the final artillery bombardment and later the assault upon the harbour. Finschhafen fell to the bayonet-fighting Australians on October 2.

The success of the operation now depended upon the tactical envelopment of the enemy, and his eventual destruction. Reinforcements—one battalion—which had now landed at Scarlet Beach proved to be timely arrivals, as the Japs had concentrated a considerable force for an attack upon the beach area. The seven-days bitter struggle which followed

By KENNETH HARE-SCOTT

that attack remains outstanding among the highlights of the New Guinea fighting—the Australians battling with their backs to the beach against a desperate enemy who had already cut their link with their comrades to the south, in Finschhafen. The arrival of the balance of the Division tipped the scales and the Jap was driven, although fighting tooth and nail, from his position astride the dispersed Australian force. With the threat to the beach gone and a general withdrawal of enemy forces, the next objective needed no searching.

SATTELBERG, the centre of Japanese resistance in the area, remained the one stronghold to be captured before the tide of advance might roll the Jap to the north and eventually tip him into the sea. In the days of the Lutheran missionaries the Settlement had been a Mission and Convalescent Centre which, apart from its position—perched on a rocky height with a difficult approach—possessed no other claims to be the southern pivot of enemy resistance. With massed aircraft and heavy artillery it would have been easy to reduce. But our Australians were fighting light and the assault on Sattelberg depended upon their skill at beating the enemy the hard way.

The capture of Sattelberg depended upon the occupation of two features: one 2,400 feet high just south-east of the Mission, which we shall call "2400," and another about 1,000 yards east called "2600." The 2/48 Battalion was to attack along the main Jivevaneng-Sattelberg road, forming the centre of the thrust, having the 2/23 Battalion on the left flank moving north from Kumawa, and the 2/24 Battalion on the right flank advancing north-west up the slopes of the "2600" feature. For the first time tanks were to reinforce the assault—a squadron of British Matildas having been landed and a week earlier concealed in the jungle growth beside the road on the axis of the 2/48 Battalion's advance (see illus. page 596, Vol. 7).

They were to be a surprise for the enemy, and in order to muffle the sound of their movements an artillery shoot was planned

in as noisy a manner as possible—full use being made of the echoing depths of the valleys and rocky cliffs. By November 15 it was reasonable to assume that the main enemy concentration was at Sattelberg and to the north, whilst the forces located across the Song River west of the track to Wareo were doubtless supply and lines of communication troops.

The attack was launched on November 17 with an artillery barrage, and a general advance with intense fighting among the dense bamboo thickets where the Jap had skilfully concealed himself in well-prepared foxholes with overhead cover. During the night of the 19th the enemy had become tank-conscious and had laid traps and mines which further hindered progress. A Jap counter-attack was broken that evening, and the enemy's resulting disorganization was exploited to the full. The following day "2400" was taken by the 2/23 Battalion and a junction made by them with 2/48 Battalion on the main road. Much equipment and many weapons were captured and enemy casualties were heavy. Meanwhile, the column moving on "2600" was tied down by superior forces, and at this stage the Australians decided to attack the enemy's supply line on the Wareo-Bonga track—a carefully planned move which proved completely successful.

Standing High on Mountain Ranges

With the artillery and Air Force harassing the enemy's rear areas and other known positions, the advance along the Sattelberg road was continued on November 22. The main drive followed the road, with an outflanking movement in the tangled undergrowth about 300 yards west of the road. The Japanese Air Force had been active daily since November 19 but with little damaging effect. November 23 was devoted to preparatory reconnaissance on the whole approach to Sattelberg, and on the next day the assault was launched.

On the road the enemy was in strength on one of the last ridges below the scarp, but a flanking movement to the east destroyed a strong post and enabled the force to reach the edge of the kunai grass which



AUSTRALIAN INFANTRY entered Sattelberg on Nov. 25, 1943, to find the town had been devastated by aerial and artillery bombardment, though at least one Japanese strongpoint had survived the pounding. As the assault could be made from one direction only the defenders held every advantage. Sattelberg stands on a rocky height in north-eastern New Guinza. PAGE 707

Great Stories of the War Retold

marked the southern end of the plateau. The Mission itself was in a cleared kunai patch standing high on the mountain ranges rising to the inland heights of the peninsula. The cleared plateau gave the enemy choice at will of defensive posts, but it also offered an opportunity for our troops to engage the Jap in open country. The flanking movement east of the road inspired the enemy to mount an expensive counter-attack. It was repulsed, and at last light our troops were within 150 yards of Sattelberg crest.

In order to visualize the situation it is necessary to bear in mind the nature of the country in the vicinity of Sattelberg. The only possible approach to the town lay through the open kunai patch situated directly beneath the top of the cliffs. The enemy had taken full advantage of his superior position, entrenching himself with carefully concealed and well-directed machineguns against which one particular platoon, commanded by Sgt. Thomas Derrick, had fought all day in face of intense machinegun fire and grenades, making little appreciable progress. The position seemed invulnerable, and orders had been given for a withdrawal for the night when Derrick pleaded for and was given another 20 minutes for a last attack. And this is what happened, in the words of the official citation of the action:

"Moving ahead of his forward section he personally destroyed with grenades an enemy post which had been holding up this section. He then ordered his second section around on the right flank. This section came under heavy fire from L.M.G.s and grenades from six enemy posts. Without regard for personal safety he clambered forward well ahead of the leading men of his section, and hurled grenade after grenade, so demoralizing the enemy that they fled, leaving weapons and grenades. By this action alone the Company was able to gain its first foothold on the precipitous ground.

"Not content with the work already done, he returned to the first section and, together with the third section of his platoon, advanced to deal with the three remaining posts in the area. On four separate occasions he dashed forward and threw grenades at a range of six to eight yards, until these positions were finally silenced. In all, Sgt. Derrick had reduced ten enemy posts. From the vital ground he had captured the remainder of the Battalion moved on to capture Sattelberg the following morning.

"Undoubtedly Sgt. Derrick's outstanding gallantry, fine leadership and refusal to admit defeat in the face of a seemingly impossible



situation resulted in the capture of Sattelberg-His outstanding gallantry and thoroughness were an inspiration to his platoon and to the remainder of his Company, and served as a conspicuous example of fearless devotion to duty throughout the whole Battalion."

SATTELBERG fell at 9 a.m. on November 25, 1943. For his gallant action, "conspicuous courage, outstanding leadership and devotion to duty" Derrick was awarded the V.C. (see illus. pages 707 and 760, Vol. 7). His name will forever be associated with the action which I have tried to describe. The battle continued into the heart of Japanese controlled New Guinea, until eventually the Australians destroyed their enemies there and moved on to the recapture of other islands of the Pacific battlefield.

Derrick received his Commission on November 25, 1944. Six months later he died in action at Tarakan, the oil island off the north-east coast of Borneo. He was hit by a machine-gun burst on the morning of May 23, 1945, when the Japs counter-

the Japs counterattacked positions from
which the Australians,
led by Derrick, had
driven them in a fearless assault. The enemy
held the positions
strongly, but Derrick's
men attacked the first
crest and made way
for another platoon's
occupation of the knoll.
His platoon cut the
track between the knolls
and established a block,
while another group
attacked the second
feature. Seeing that a
direct assault was essential if success was to
be achieved before night,
Derrick moved his
platoon and took command of the force. He
lined sixteen Owengunners and six men

with Bren guns almost shoulder to shoulder and ordered them to attack targets of opportunity. Inspired, the men charged forward firing from the hip. Derrick ran among the section, indicating targets, organizing and giving encouragement. Carrying a rifle he stood up fully exposed and fired over the heads of his crouching, advancing men. The Jap defenders were killed or driven off.

LANGEMAK

SALANKADA PLANTATION

FINSCHHAFEN

TIMBULUM

PLANTATION

0

H

Z

BAY

The Australians consolidated in preparation for enemy attacks in overwhelming numbers on the third knoll. About 3.30 a.m. the enemy attacked, and a machine-gun burst wounded Derrick in the body and legs as he sat up to organize resistance. Despite his wounds he gave orders repulsing the attack. It was impossible to get the wounded out until daylight, and when he was being carried out Derrick said, "Well, we lost good men getting that hill. Don't pull out now. Tell my wife I went down fighting. It's curtains for me, but I'm happy." Twenty-one bodies were found around the knoll.



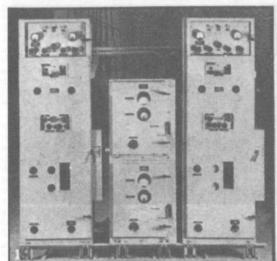
MATILDA TANKS, which surprised the Japanese at Sattelberg, tore tracks through the jungle over which the wounded could be evacuated. The battle for the stronghold began on Nov. 17, 1943, and Japanese resistance was overcome eight days later.

PAGE 708

Monty an Honoured Five-Day Guest in Moscow



How Dover's Radio Jammed German Radar



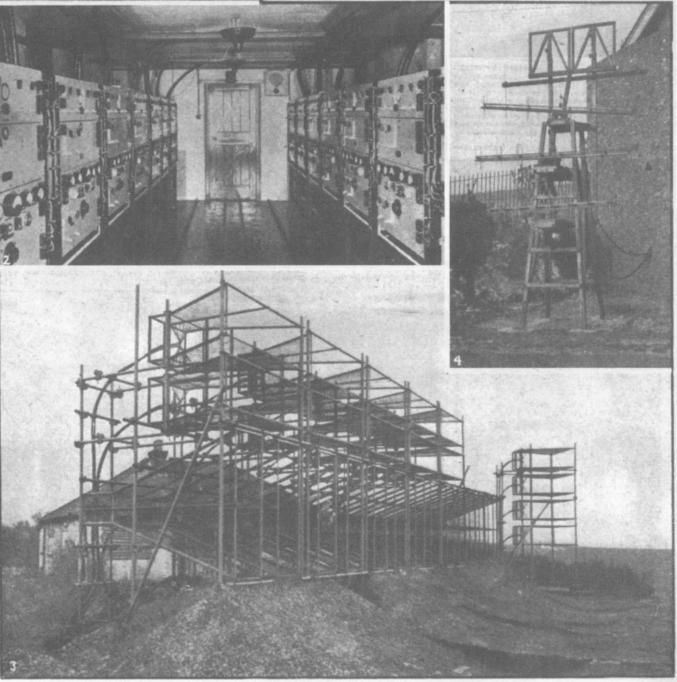
ROM THE NAVAL POINT OF VIEW the success of D-Day depended to a great extent on the efficiency of R.C.M., or Radio Countermeasures, in "blinding" a watchful enemy established on the northern coast of France. The object of R.C.M. was to stop the Germans using effectively their own radar equipment. It was in March 1941 that the Royal Navy began to take active radio countermeasures against German batteries on the French coast that were firing on British coastal convoys as these passed through the Straits of Dover.

One way to give protection was to stop the Germans on the far shore seeing the ships in the dark with radar. Radio experts stationed at posts along the south coast of England listened for enemy radar signals as our ships passed, and jammed them as soon as they were heard. So well did the operators and scientists follow every German move that when the large convoys were passing through the Straits for the invasion of Normandy only about six ships of some 2,000 were hit by enemy gunfire.

To mystify the enemy, German radar in the area where the invasion was to occur was jammed; and in certain other places, where no landings were intended, the enemy was made to detect on his radar screens indications that suggested the approach of an assault force. The transmitting-room of one of the Dover jamming stations (2) had a Wellsian appearance, and the aerials (3) might have been tubular steel scaffolding. The aerials of the monitoring receivers (4), which listened to the enemy's signals. Further countermeasures had to be devised to combat the German radio-controlled bombs; scientists invented equipment (1) that enabled a ship's wireless operator to jam the radio control and no ship so fitted was hit by one of those missiles. This successful warfare waged against the enemy's radar was always a race against time, and the scientist behind the fighting man should have a large share of the credit. More often than not he was told the enemy had perfected some device and the countermeasure was required within a few hours. He managed it, somehow.

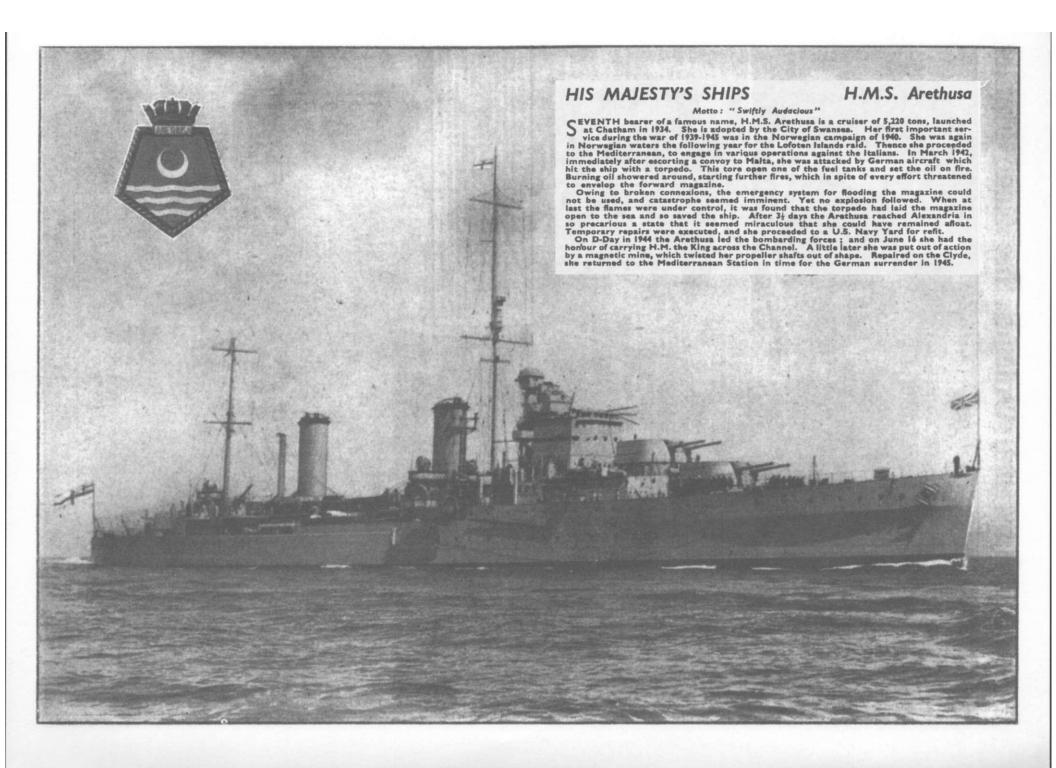
PAGE 710

Admiralty photographs



Preserving Law and Order at the Zone Frontier





Royal Engineers THERE are many different types of R.E. units, which may be classified under

main headings according to the type of work done. Field units form part of every division, whether infantry, armoured or airborne, and are included in Corps and Army troops. In attack they have to advance with the leading troops to clear minefields and other obstacles, and build bridges, roads, and prepare routes generally. In defence they have to construct

concrete pill-boxes, gun emplace ments, lay minefields and de-molish bridges and other installations. In both attack and de-fence they have to arrange water supplies.

Assault Engineer Squadrons are provided with tanks fitted with

special devices for clearing minefields, breaching anti-tank obstacles, and destroying road blocks and pill-boxes. These tanks, known as A.V.R.E. (Assault Vehicle, R.E.), may carry bulldozer blades, dischargers for projecting demolition charges, and bridges which can be launched by the tank without exposing the crew to fire. Other armoured vehicles, known as Arks, are used for crossing anti-tank ditches. These vehicles drive into the ditch and are so designed that other tanks can cross over the top of them.

Lines of Communication units have to carry out all engineering work at bases and on the L. of C. Such work includes the building of depots, workshops, hospitals and other accommodation, construction of roads

By Brigadier C. C. PHIPPS, C.B.E., M.C.

THERE are many early historical records of military engineers, and Edward III formed a Corps of Engineers for the siege of Calais in 1346. In 1716 the first permanent Corps of Royal Engineers was formed, of officers only; the first permanent unit of other ranks, formed at Gibraltar in 1772, was known as Soldier Artificers. In 1856 these ware combined under the present title of Corps of Royal Engineers. The R.A.F. began life as the Air Battalion R.E. Mechanical transport was started by the R.E., who used steam traction engines during the Boer War. The original Tank Corps, formed in France in 1916, was commanded by an Engineer officer, and "Signals" was one branch of the R.E. until formed into a separate Corps in 1920. Submarine mining was the responsibility of the R.E. until 1905. The varied activities of the Corps, brought into prominence in the 1914-18 war, help to explain why the Second Great War."

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and bridges, repair and operation of electric power stations, water and sewage plants, and so on. Transportation units have to construct, repair and operate ports and railways.

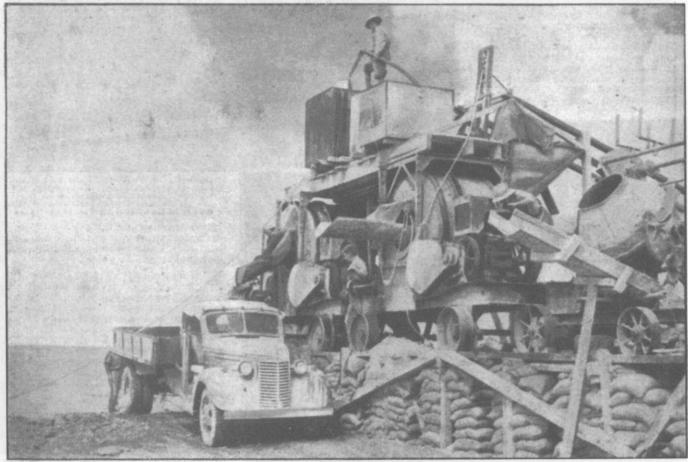
Airfield construction in the field is mainly an R.E. responsibility, assisted by units of the Royal Pioneer Corps. In the later stages of the war the R.A.F. also provided airfield construction units to deal with the very large number of airfields required in France and Holland. R.E. units are also engaged in chemical warfare, bomb disposal, survey

work an! the making of camouflage. Certain duties of a nontechnical nature are also carried

technical nature are also carried out by special branches, such as control of the movement of all personnel and stores by rail or water and the staffing of the Army post offices, though mails are delivered in the field by the Royal Army Service Corps. R.E. units are, trained to fight, and have on many occasions taken their place in the line in an infantry role. The Second Great War, more than any previous Second Great War, more than any previous war, was one of movement; often under most difficult conditions, including millions of mines, demolition of hundreds of bridges, flooding of enormous areas, and most elaborate types of defences constructed over a period of many years regardless of labour and expense. It was the principal task of the Royal Engineers to oversome such obstacles and keep the Army on the move.

SPACE does not permit of detailed description of the many wonderful achievements of the Corps in all parts of the world. Only main activities in each theatre of operations can be mentioned, very briefly. Some idea of the magnitude of the work involved is grasped when it is realized that in Italy over 2,500 Bailey bridges were constructed, while in the advance from Normandy to the Rhine over 1,000 bridges were built on the British front alone, including several of over 2,000 feet across the Rhine and the Meuse, and at least one of 4,000 feet over the Meuse and its flooded approaches. These outstanding flooded approaches. These outstanding triumphs were made possible by the invention of the Bailey bridge, designed at the Engineer Experimental Bridging Establishment.

The main works in Burma were the construction of airfields, roads and bridges. The jungle conditions meant very heavy labour in connexion with the two former, and the wide and fast-flowing rivers and the long



HUGE CEMENT-MIXING PLANT IN THE WESTERN DESERT was erected by R.E. when they were constructing new additions to the British defences in December 1949. Once the campaign in the Desert had developed into a tug-of-war that swayed backwards and forwards across Cyrenaica, the clearing of minefields became the most important task of the Engineers. Mine detectors at that time were crude and unreliable and flail tanks were unknown, so mines had to be located by prodding through the sand with a bayonet.

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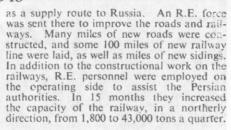
Photo, British Official



JAPANESE BOMBS used as mines on the road to Mount Popa had to be cleared by the Royal Engineers; here a 250-pounder is being dealt with. The mountain, in central Burma, was taken by troops of the British 2nd Division on April 20, 1945.

roads, often little better than tracks, made bridging operations extremely difficult. The Irrawaddy river had to be crossed by ferrying. It was 1,500 yards wide at the site selected for the crossing, and more than 10,000 vehicles were ferried over in about 12 days. A Bailey pontoon bridge with a span of over 1,000 feet was built over the Chindwin river, and later replaced by a more permanent structure.

INDIA was the main base for supplies and for the training of troops for the Far East. The principal R.E. work here consisted in providing accommodation for personnel, stores, workshops, and the construction of airfields. Persia became important in 1942



En Libya and Cyrenaica a considerable amount was done on the coast road, but bridging was not much required. Many airfields were constructed, but the most important R.E. task was clearance of mines. In those earlier days the special tanks with flails and other means of destroying mines, which were later used in north-west Europe, were not available, although it was here that first experiments with these types were made. Mine detectors were in their infancy and few in number; most of this work had to be done by prodding for the mines while crawling on hands and knees! In 1941, Lieut. Bhagat of the Bombay Sappers and Miners,



LAYING NEW TRACKS was part of the work of the R.E. Railway Construction and Operating Companies in North Africa, Italy and North-West Europe. Majority of the men had been railway workers in peacutime.

Indian Army, was the first engineer officer in the Second Great War to win the V.C., for most conspicuous gallantry in clearing mines (portrait in page 760, Vol. 4).

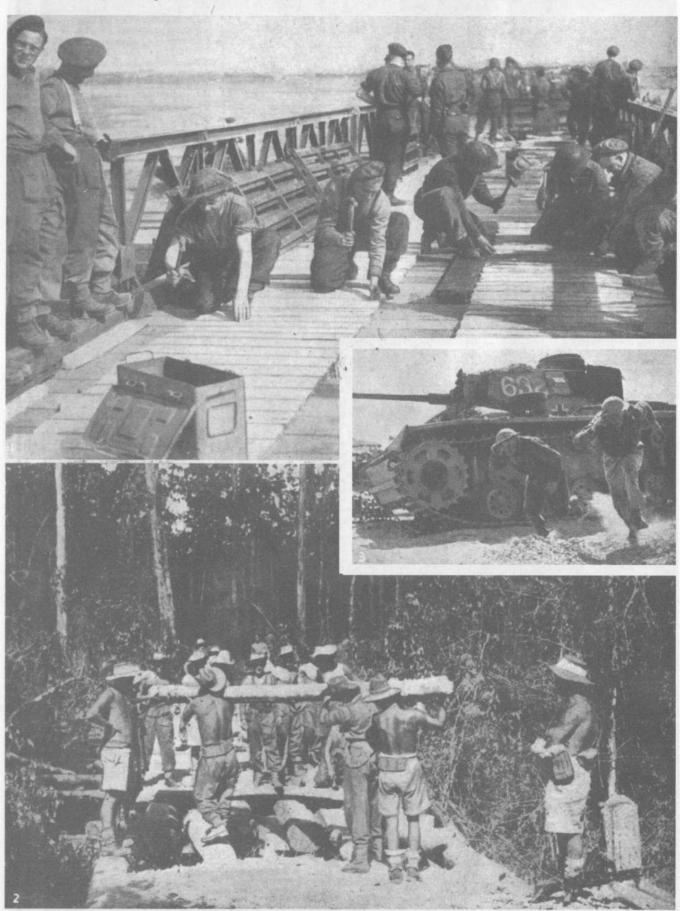
Water supply was a difficult problem. Old Roman aqueducts were repaired and used and a pipe-line constructed from the Nile to near Sidi Barrani. First large-scale use of camouflage as a means of deception was carried out by the camouflage units of the Royal Engineers before the battle of Alamein. Collapsible dummy tanks and other vehicles were constructed and used to represent an armoured division. The enemy was completely deceived as to the location of our real tanks by this method.

R.E. work in Algeria and Tunisia consisted mainly in the construction of airfields and roads and a number of Bailey bridges. Heavy rain throughout the winter of 1942-43 made this work very difficult. Port reconstruction was a most important and vital task immediately after Tripoli, Bizerta and Tunis had been captured. In spite of the most elaborate and effective demolitions by the



BY THE SEIZURE OF TARANTO on Sept. 9, 1943, the Allies obtained this great Italian port as a base depot, and special Dock Companies of R.E.s were soon at work unloading supplies. The Sappers had assault squadrons clearing the path of the attacking infantry, as well as units carrying out important duties behind the front line. PAGE 714 Photos, Brivish Official

# R.E. Everywhere Sped Advance of Our Armies



FIRST BRITISH BRIDGE ACROSS THE RHINE was a Folding Boat Bridge built at Xanten by VIII Corps Troops, R.E., on March 24, 1945. Fifteen hundred feet long, it was built in 13 hours. This was quickly followed by several of the heavier Bailey Pontoon Bridges (1). To speed the advance of the Army in Burma the Sappers rebuilt many bridges, such as the one near Pinwe (2). In Tunisia and elsewhere a dangerous task was the demolition of damaged German tanks; the placing of a demolition charge is followed by a dash for cover (3).

PAGE 715

Photos, British Official



ON THE FROZEN ELBE AT HAMBURG shipping ploughs through the ice which threatens to close the port. Like the rest of north-west Europe, Germany experienced bitter weather in January 1947, a number of people in Hamburg dying from the intense cold and more than 100 being admitted to hospital suffering from frost-bite. The freezing of the inland waterways added to the difficulties of transporting coal from the Ruhr, and the British authorities instituted "warming" centres in buildings, such as cinemas and schools, for the civilian population, the majority being without fires in their homes.



GAPS CLEARED OF MINES were marked at night by shaded lights. This Sapper of the 8th Army, near the Mareth Line in March 1943, carries lamps for this purpose. Photo, British Official

Germans, these ports were all partially reopened within a few days of their capture.

In Sicily and Italy, R.E. work included a vast amount of mine clearance, and a very extensive programme of road making and bridge building. Altogether over 2,500 Bailey bridges were built and many hundreds of timber bridges. The landings at Salerno and Anzio provided useful lessons for the future operations in Normandy, although in neither of the former cases were the obstacles or the defences on the beaches nearly so formidable as in Normandy. Extensive port reconstruc-tion work had to be carried out at Naples and other ports.

In the greatest invasion operation of all time the Royal Engineers played a very pro-minent part in initial landings. The special minent part in initial landings. R.E. assault companies, with their A.V.R.E., cleared lanes through numerous obstacles on the beaches and the exits from them. Their task was to clear the minefields, cut lanes through obstacles of steel and concrete, and deal with hundreds of pill-boxes and concrete gun emplacements. All of which, however, would have been of little value without means of landing the thousands of tons of ammunition, supplies and vehicles required to keep the attack going—and this was made possible by the Mulberry Harbour. Many persons a hand in this wonderful achievement, including civilian workers at home who pro-duced a mass of material in a very short time, and, of course, the Royal Navy and the Merchant Navy, who were responsible for transporting all the parts across the Channel and for the erection of parts of the break-water. But the Royal Engineers were responsible for most of the initial experi-mental work, for the design of most of the parts and actual construction of a number of them, and for the erection of much of it, including all the long piers, pier-heads and a considerable portion of the breakwater.

Once Le Havre, Boulogne, Calais, and Antwerp had been captured, these ports had to be repaired and quays put in working order. The Germans had destroyed everything, except at Antwerp. Sunken ships had to be blown up, quays repaired, new cranes erected, electric power and water supplied, and all this in a matter of days. Although the cross-Channel pipe-line known as Pluto

(see illus. in pages 120, 533, Vol. 9) was not a R.E. project, the Engineers, assisted by Pioneer Corps units, were responsible for the continuation of the line across Europe to Germany. The R.E. were also responsible for ship-to-shore pipe-lines and for most of the larger pumping stations.

Mention has already been made of well over 1,000 Bailey bridges built from Normandy to the Rhine and the Elbe. Hundreds of miles of railway lines and many railway bridges had also to be constructed; altogether nine road bridges, of an average length of 1,400 feet, were built over the Rhine on the British front alone, and a railway bridge 2,360 feet long. Another important task was the construction of airfields, the majority being made by Airfield Construction Groups, consisting of R.E. and Pioneer Corps personnel. Additional airfields were constructed by R.A.F. Airfield Construction Groups.

THE ROYAL ENGINEERS were responsible for the improvement and provision of accommodation for British troops and Americans in the U.K. and Northern Ireland. In addition to housing the personnel, hospitals, supply, ordnance and ammunition depots and workshops had to be constructed, and many training facilities, such as tank and anti-tank ranges, artillery and rifle ranges, provided. Amongst the many engineering works carried out entirely by military labour was the con-struction of two large new ports in Scotland, complete with railway sidings. These were not only constructed, but also operated, entirely by Royal Engineers and Pioneers. One of these ports, at Gareloch, north of Glasgow, had six deep-water berths for ships to 30 feet draught, and a large lighter berth. The other, near Stranraer, had five deep-water berths and also a lighter berth. Work commenced on both ports in the spring of 1941, and Gareloch was operating in the



ROAD CHECKED signs denoted that this high way, near Thury Harcourt, Normandy, had been cleared by R.E. in Aug. 1944. The puzzle here is to find a vacant space on the signpost —already overcrowded with German signs.

Photo. The Times PAGE 717



Colours: Yellow on Red 8TH (INDIAN) DIVISION

FORMED in the Secunderabad area in 1940, by Major-General C. O. Harvey, the Division took part in 1941 in the operations in Iraq and Persia. During 1942 the 18th Brigade was rushed to Libya to help stem Rommel's advance, but was overrun and destroyed by German tanks. Early in 1943 the Division, now commanded by Major-General D. Russell, moved into Syria, being transferred to Egypt in June.

in June.
It landed in Italy in September 1943 and forced the crossings of the Trigno and Sangro rivers. In May Trigno and Sangro rivers. In May 1944 it broke the German line on the Rapido river and advanced steadily northwards, Florence being entered on August 12.

THE Gothic Line was pierced on September 15, and a prolonged battle began for the passes over the Apennines. For two months the Division fought its way slowly across the watershed, finally executing the turning movement that cleared the way for a general advance. In December two brigades were rushed to the Serchio valley, on the U.S. 5th Army front, where they blocked a threatening German advance. During April 1945 the Division made two more bitterly opposed river crossings

April 1945 the Division made two more bitterly opposed river crossings—those of the Senio and Santerno—then took part in the dash to envelop the town of Ferrara.

It headed next for Padua and Venice; but the German collapse was now imminent and the Divisional Reconnaissance Regiment, racing forward, caught up with one of the Division's toughest opponents, the German 1st Parachute Division, and received the surrender of 11,000 men. As a Division this formation never failed to take its objective. It was adjudged to be one of the finest in the Mediterranean theatre. Up to June 1945 four Victoria Crosses had been won by members of the Division, and the number of approved honours and the number of approved honours and awards had by then reached a total of 635, convincing proof of the formation's distinguished record.

summer of 1942 and Stranraer later. This great engineering achievement was of the utmost value in training personnel to repair damaged ports in Europe. (See page 173, Vol. 9).

On the Home Front the great bravery and skill shown by the Bomb Disposal Companies, R.E., will not be forgotten. Work on bombs often had to be carried out in most confined and awkward spaces and false movement might have meant instant death. When there was no further risk of invasion of this country Bomb Disposal Companies were employed in lifting and making safe hundreds of thousands of British mines which had been laid on the beaches as anti-invasion defences; numbers had become very sensitive, and the work entailed was extremely hazardous. Bomb Disposal personnel were also trained as divers, for removing under-water demolition charges at captured ports and assisting with under-water repairs.

## They Now Bear the Title 'Royal'



IN December 1946 a Special Army Order announced that in recognition of their past services His Majesty the King had been graciously pleased to approve that the following Regiments and Corps should in future enjoy the distinction of "Royal." Their distinguished 1939-1945 records are here briefly outlined.

# B

#### The Royal Hampshire Regiment

War the 1st Battalion was stationed at Mersa Matruh, having been moved there from Palestine as a precautionary measure, and mechanized subunits took part in the attack on the Italians at Sidi Barrani in December 1940. Soon after the conclusion of General Wavell's offensive the 1st moved to Malta, there breaking all records for time taken to unload ships. It fought throughout the Sicilian campaign, and also in the landings on the Italian mainland in September 1943, before being sent to England to refit and train for D-Day. The 1st Battalion was among the first troops to storm the Normandy beaches, and after the break-out had the honour to be the first infantry to enter both Belgium and the Netherlands.

The 2nd Battalion served in France and Belgium during the 1939-40 campaign and greatly distinguished itself during the retreat and the evacuation at Dunkirk. Landing with the 1st Army in North Africa in November 1942, it won fame at Tebourba, Tunisia, on Nov. 30, 1942, in what has been described as one of the greatest infantry engagements of the war. It landed at Salerno on Sept. 9, 1943, and fought throughout the Italian campaign, except for a short period spent in Greece.

THE 1/4th, 2/4th and 5th Battalions, forming 128 Infantry Brigade, landed in North Africa in January 1943 and engaged in the operations that brought about the surrender of the Axis forces. The 5th Battalion gained much fame by their outstanding fight at Sidi Nsir. All these units fought at Salerno and remained in Italy until they went to Greece in 1944. The 1/4th and 5th Battalions returned to Italy after a short tour of duty, leaving behind the 2/4th.

The 7th Battalion did not see active service until June 1944, when it went to France with the 43rd (Wessex) Division. It was in the heavy fighting in Normandy and at the crossing of the Seine. Early in 1945 actions were fought on the River Waal, near Nijmegen, and during the advance to the Siegfried Line. Crossing the Rhine in the following March, the 7th Battalion was the vanguard of the 43rd Division and reached the line Hamburg-Bremen before the unconditional surrender of Germany.

Among the many decorations awarded to members of the Regiment were three V.C.s. The recipients of this honour were Major H. W. Le Patourel (portrait page 59, Vol. 7); Major R. Wakeford (portrait page 216, Vol. 8); and Lieut. G. Norton (portrait page 478, Vol. 8). In recognition of its outstanding record the Freedoms of Winchester, Aldershot, Bournemouth and Southampton were conferred upon it. Representative parties of all battalions attended these ceremonies and, on each occasion, were under the command of Lieut.-Col. J. M. Lee, D.S.O., who successively commanded the 7th, 2nd, 1st and 1/4th Battalions.

In conferring the title "Royal" on the Regiment in December 1946, His Majesty the King gave great pleasure and satisfaction to the inhabitants of Hampshire and to those who had taken their part in the grand services rendered by the County Regimens:

#### The Royal Lincolnshire Regiment

THE 1st Battalion was in India at the outbreak of war on Sept. 3, 1939, and engaged in operations on the North-West Frontier until the end of 1941. It moved to Bengal in 1942 and took part in the first offensive in the Arakan in January 1943. It was the only battalion engaged in the attack to reach its objective at Akyab, and covered the retreat of the main body during the withdrawal to India. The Arakan offensive was resumed in January 1944, and in the following March the Regiment relieved the 7th Indian Division, which had been surrounded by the Japanese at Ngakyedauk Pass. In this battle the Commanding Officer, Lieut.-Col. Sinker, was given the immediate award of the D.S.O., and Major Charles Hoey the immediate award of the posthumous V.C. (see portrait page 216, Vol. 8). In 1945 the 1st Battalion was engaged in a series of amphibious operations on the coast of Burma, seizing Ramree Island on Jan. 21 and leading the assault on Rangoon on May 2.

The 2nd Battalion formed part of the Expeditionary Force sent to France in 1939 and was in action in Belgium and during the retreat in 1940. On returning to England it took its place in the Field Army and began training for the invasion of Europe. It landed with the assault troops of the British 2nd Army on the Normandy beaches on June 6, 1944, and was involved in the heavy fighting at Caen. After advancing through northern France, distinction was won in the Battle of the Escaut Canal in September, this success being followed by victory at Overloon, Holland, on Oct. 12, 1944. The 2nd was in the prolonged fighting to clear the west bank of the Rhine in February and March 1945, and fought its way across north-west Germany to reach the port of Bremen as the war ended.

The 4th Battalion was dispatched to Norway in April 1940, and after the termination of this ill-starred campaign formed a part of the Iceland Occupation Force until September 1942. It landed in Normandy with the rest of the 49th Division in July 1944, and fought in the operations preceding the Battle of Caen. After crossing the Seine it distinguished itself at the capture of Le Havre on Sept. 12, 1944, and further enhanced its reputation in Belgium and southern Netherlands. In 1945 it came under the command of the 1st Canadian Army, and captured Arnhem on April 15, 1945.

The 6th Battalion went to France with the Expeditionary Force at the beginning of the war and was in most of the major engagements up to the evacuation at Dunkirk. In 1942 it was sent to Tunis as part of the 1st Army, and saw hard fighting before the surrender of the Axis forces in May 1943, With other units of the Anglo-American 5th Army the 6th landed at Salerno, where it was almost wiped out. It was re-formed, and subsequently was engaged in important actions of the Italian campaign. In one of these Capt. J. H. C. Brunt was awarded a posthumous V.C. (portrait page 24, Vol. 9)

#### The Royal Leicestershire Regiment

ARIOUS battalions of The Royal Leicestershire Regiment saw active service in Norway, France, North Africa, Crete, Syria, Italy, Greece, Burma, Belgium, the Netherlands and Germany. A Regular battalion left India for Malaya shortly before the Japanese landings in December 1941. Fighting against overwhelming odds, it fell back to Singapore, where it was involved in the surrender of Feb. 15, 1942. Another battalion landed in France early in July 1944 and gave magnificent service in the advance to the Seine. It was present at the surrender of Le Havre on Sept. 12, and subsequently saw much fighting in Belgium and the Netherlands.

A second Regular battalion was stationed in Palestine at the outbreak of war, and was soon in action against the Italians with General Wavell's Army of the Nile, driving back the enemy 200 miles in six weeks. It fought with distinction at Sidi Barrani, Buqbuq, Sollum and Bardia. Sent to Crete as a forlorn hope, it was forced eventually to evacuate the island, and after taking part in the relief of Tobruk the battalion was sent to Syria for the brief campaign against the Vichy French forces, June 1941. In 1942 this unit was transferred to India, and later to Burma, where it joined the Chindit Force under General Wingate, Another battalion took part in Wingate's airborne invasion of Burma in 1944, capturing Taungni Bum and seizing and holding the Kyusanlai Pass.

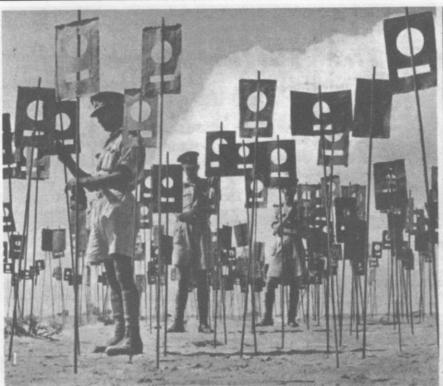
A Territorial battalion, sent to work behind the lines in France in 1940, was drawn into the fighting line and fought its way most gallantly to Dunkirk. After a period of training in England, it joined the 1st Army in its invasion of North Africa. This battalion took the full weight of the first heavy German attacks at Sedjenane, Green Hill, Hunt's Gap and Thala. After the defeat of the enemy in N. Africa, it was amongst the units that assaulted the beach at Salerno and won a reputation during the advance north in Italy, storming Mondaino and breaking through the Gothic Line. Of the Mondaino action the Divisional Commander wrote: "The storming of Mondaino was indeed a Tigers' battle and will rank high among the many feats of arms of the Leicestershire Regiment"



#### Royal Army Educational Corps

It would be difficult to over-estimate the importance of the work carried out by the Royal Army Educational Corps; the Second Great War proved that without the right mental attitude physical courage could not endure. Enforced inactivity that followed Dunkirk and the attendant problem of keeping men's minds interested and alert led to the recall of members of the Corps

(Continued in page 723)









## War Service of the New 'Royals'

Signposting in the Western Desert was carried out by the Corps of Royal Military Police. Cut from petrol tins, these signs in a "shop" (1) were set up along tracks and trails to aid transport drivers. Traffic control was another task of the M.P.; an identity card is examined in Teheran in 1942 (2). In the Middle East (3) an Egyptian sheep dog of the Dog Section—an Ermenti—receives attention. See page 723.

When the Royal Pioneer Corps was when the Royal Pioneer Corps was the Auxiliary Military Pioneer Corps (AMPS); an old soldier with his squeeze-box (4) leads a sing-song in Britain in 1940. In Tunisia in 1943, with native labour to assist. Pioneers at this enormous dump (5) handled 500 tons a day, working in shifts the clock round to do it.

Photos, British Official, Fox



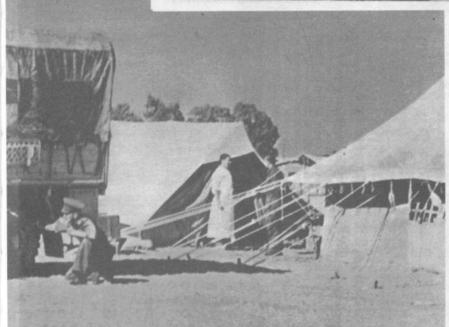














## Uplift and Instruction in Intervals of War

With The Royal Leicestershire Regiment in Italy in 1943: the 2/5th Battalion took its turn in carrying supplies through the mountains (1) to front-line units of the 5th Army. Tommy-gun instruction (2) in 1944 for Leicesters in the Middle East. The Royal Army Educational Corps is as expert in putting over workshop lessons (3) as in lecturing in the field (4) on current events and other topics not necessarily connected with the art and craft of soldiering.

## Time Off from Battle to Visit the Dentist

As well as permanent centres at bases, the Royal Army Dental Corps has mobile field units such as this (5) in the Western Desert.

There were over 600 men of the Corps in the Middle East giving dental treatment of all kinds to British and Allied troops.

Tents and equipment can be swiftly transported and set up. At an advanced dressing station just behind the line in Normandy, during the Liberation of Europe, the Dental Corps were still busy (6).



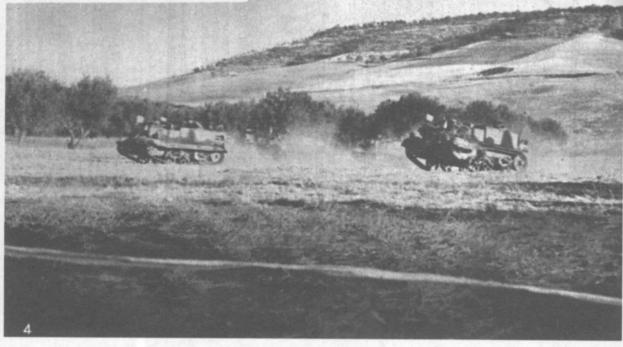


## Lincolns and Hampshires

Officers of the 2nd Battalion The Royal Lincolnshire Regiment engaged in 3rd Division exercises (1) in the St. Pol area in March 1940. More than four years later, members of the 4th Battalion made pets of two goats (2) which they found in the ruins of Willemstad, Holland, liberated on Nov. 7, 1944. Seventh Battalion The Royal Hampshire Regiment occupied a German slit trench (3) south of Caumont, Normandy, in 1944. Bren carriers of the Hampshires (4) in Sicily in 1943.

Photos, British Official





They Now Bear the Title 'Royal'

(Continued from page 718)

from the military duties to which they had been dispersed at the outbreak of war. It became obvious that what the troops needed was an opportunity to discuss the topics of the day. By the autumn of 1941, such discussions, based on informative pamphlets issued by the newly created Army Bureau of Current Affairs, had become a recognized part of unit training.

THE winter scheme of education launched in 1942 represented a more systematic approach and survived, with various additions and alterations, until the end of hostilities in Europe. Three hours of training time were allocated each week to educating the man as a soldier, citizen and individual. Members of the Corps also assisted in physical, mental and moral rehabilitation in military hospitals and prisons and broadened the general education of youths in the Young Soldiers' Battalions. From 1943 onwards basic education courses were arranged, and text books, suitable for illiterate adults, were published to combat illiteracy in the Army. By the end of the war basic education centres existed in every Command, and illiteracy was almost non-existent.

Experience in the field showed that the soldier still required some form of mental stimulus even when operating under the most arduous conditions. Education staff officers were with divisions in Iceland, Egypt and India; and, following the invading forces into North Africa, Sicily and Italy, formed education centres behind the front line. D-Day saw A.E.C. officers and instructors in Normandy with divisions and beach groups, and for the first time in military history their daily commentaries brought reliable information to the rank and file.

With demobilization came greatly increased activity. Local and centralized courses, ranging from engineering to languages and from musical appreciation to carpentry and designed to facilitate the released soldier's transition to civilian life, were arranged according to demand. The correspondence courses were expanded, and libraries of specially selected books were issued to every major unit. The Formation Colleges, fore-shadowed by those already established at Perugia and Haifa, provided specialized residential courses in the sociable atmosphere which is an essential part of education.



Royal Army Dental Corps

uring the Second Great War this Corps attained a maximum strength of 2,300 officers and 3,500 other ranks, including A.T.S., and provided comprehensive facilities for dental treatment to soldiers in every location and particularly in the forward areas of operational theatres. Dental officers, who were all qualified dental surgeons and assisted by skilled technicians, were employed with independent, mobile and static dental units both at home and overseas. They were also attached for duty with the majority of medical units, including Parachute and Airborne Landing Field Ambulances. Inestimable service was also given by specialist dental surgeons in treatment of jaw injuries and facial disfigurements.

By lectures, demonstrations, instructional films and posters the Corps impressed upon the soldier the importance of oral hygiene

and made him fully aware of the value of dental treatment to his physical fitness. This branch of the medical services contributed in no inconsiderable measure to the high standard of health obtaining in the Army. How vast was its task can be gauged from the fact that attendances for treatment alone numbered 20 millions, while teeth conserved totalled 15 millions as against 8 millions extracted. The Corps also supplied, repaired or remodelled 13 million dentures. Much of this invaluable work was done by small mobile units, carrying out their duties in specially equipped vehicles in forward areas often under fire; one mobile surgery might have to deal with as many as from 500 to 600 patients a month, the surgeon being responsible for some 2,000 men.



Royal Pioneer Corps

The badge of the Corps is symbolic of the fact that without this military labour force behind the front lines no victories could have been achieved. Units of the Corps were to be found in every theatre of operations as well as in certain island outposts, such as the Faroes, Iceland and the Azores, where construction of airfields and preparation of defences were essential means of preventing invasion by Axis forces.

The men who went to France for labour duties with the first contingent of the Expeditionary Force in 1939 were Army reservists, and it was from them that the first units of Auxiliary Military Pioneer Corps, as it was then called, were formed. Although Pioneers were at that time only 25 per cent armed many of them did sterling work in the defence of Boulogne and Dunkirk, and on one memorable occasion they wrecked the tracks of German tanks with picks and shovels. The Corps became fully combatant when it was re-formed after Dunkirk. From a force of approximately 25,000 men in July 1940, it had expanded to an army of more than 160,000 U.K. personnel and over 270,000 non-U.K. personnel by May 1945.

Proneers contributed in great measure to the build-up of the Army in preparation for D-Day, by the construction of depots, airfields, roads, railways and defences and the handling of tens of thousands of tons of ammunition and supplies. They helped to build the Mulberry Harbour and Pluto, and provided specially trained smoke units for screening vital areas from air attack. The fire-watching sections saved quantities of valuable stores and much property from destruction, and a special force was formed for the clearance of debris during the intensive bombing of London and other cities.

The Pioneers sometimes fought with infantry units, acquitting themselves well. During the critical battle of the Kasserine Gap in Tunisia they did sterling work in manning the defences. They landed with the first waves of assault troops at Salerno and Anzio during the Italian campaign, and carried out such strenuous tasks as portering supplies to forward troops in mountainous country, often under fire and in appalling weather. Their work at Anzio was specially commended by General Mark Clark, G.O.C. 5th Army, when the discharge of over 5,000 tons of supplies daily for three days constituted a record then unequalled.

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They were also employed as stevedores, dockyard workers, stretcher-bearers and guards for P.O.W. camps. In the Middle East many races and creeds were represented in the Corps. Cypriot and Palestinian Companies took part in the operations in Greece and Crete and suffered heavy casualties. Other units were employed on the construction of defences, harbour works and the water pipe-line through the desert behind the advancing 8th Army.

On D-Day, Pioneers landed "wetshod" on the Normandy beaches with the infantry, and distinguished themselves at Caen, the crossing of the Orne River, at Walcheren and Nijmegen. Pioneers operated as airborne troops for the first time at Arnhem. The great smoke screen that concealed the preparations of the British 2nd and 1st Canadian Armies for the crossing of the Rhine was maintained by units of the Corps. Their proudest moment probably came at the Victory March in Berlin where, while British tanks and troops paraded down the Unter den Linden, the route was lined by Pioneers. Of the men of this Corps it was said by Col. H. Greenwood, V.C., one of their commanders throughout the war: "When trouble came they were too old to run away. They fought with what they had where they were. And usually they were never heard of again."



Corps of Royal Military Police

In September 1939 the Corps had a strength of about 3,500, and 720 struggled with the Provost problems of the B.E.F. in 1940. Traffic control had been revolutionized by mechanization, and the confusion caused by streams of refugees and wholesale pilfering of Army stores showed the need of expansion. In 1940 and 1941 three new branches were formed: the C.M.P. (S.I.B.), Special Investigation Branch, the C.I.D. of the Army; the C.M.P. (T.C.), the Traffic Control Companies; and the C.M.P. (V.P.), police for the guarding of Vulnerable Points—mainly huge ammunition and supply dumps that were scattered all over the British Isles. Ports, too, had their special companies.

Hundreds of miles of desert track were marked for the 8th Army; and Sappers and Military Police led the attack through the minefields at Alamein. Beach Provost Companies were formed for the invasion of North Africa in November 1942, and the police landed with the assault troops. This new branch of the C.M.P. developed rapidly and formed part of the British spearhead at Salerno and Anzio. All wings of the Corps were represented in vast numbers in the final campaign that took them from the Normandy beaches to Hamburg and Berlin.

Special Gurkha, Indian, Cingalese and African companies were formed and served with distinction against the Japanese. At the end of the war the Corps was some 35,000 strong, and this figure does not include the Indian and Colonial units. Its casualty list was lamentably long; and it proved itself to be indispensable to all commanders, whether at home or in the field.

A Dog Section was formed during the war. The animals were used for patrolling military supply depots both at home and overseas, thereby releasing many of the police for more urgent duties. The dogs proved remarkably efficient, one making 83 "arrests" during two years' service in Palestine and Egypt.

## SIR ARTHUR (BOMBER) HARRIS HITS OUT

Arthur Harris sets out in Bomber Offensive (Collins, 21s.) to prove how the defeat of Germany was largely achieved by the indispensable part played by the Command which will for ever be associated with his name. He not only maintains that without the help of Bomber Command the invasion of Europe would have been "the bloodiest campaign in history, unless, indeed, it had failed outright—as it would undoubtedly have done," but asserts that there would have been no need for the invasion if men, aircraft and equipment, both British and American, were not "always being diverted from the main offensive by the demands of other Services."

It is only human nature to be cynical when you don't have your own way, and for a man with a personality like "Bomber" Harris, who combined all the qualities of great resourcefulness and ability with sound judgement but strong convictions, his task often seemed irksome. In almost every chapter he comments in treirchant style on the obscurity or obliquity of vision shown on matters that affected the war effort in general and his work in particular. He dismisses leaflet raids as ridiculous and a complete waste of time. He attributes the lack of speed and efficiency in getting things done when there is an emergency to the fact that the matter is argued about "by all sorts of junior officers at the Ministries concerned and then once again by all sorts of irresponsible and very often operationally ignorant officials."

Our incendiary attacks, he says, would have been vastly more efficient and effective "if the armament and production authorities had not bungled everything as they did." He then describes how, after three years of bitter dispute and argument, he despaired of getting a serviceable and useful 5-inch gun-turret through official channels and went and ordered direct from a firm "which can do anything without any fuss and with a comparatively minute staff in the design and drawing office." As a result one whole Group of his Command was equipped in less than a year with a first-class turret of revolutionary design.

But the real importance of the book lies not so much in the value of any carping criticism that the Air Marshal has wanted to get off his chest, but in the undisputed record of the achievements of Bomber Command which he so ably directed for three years. When he took over in February 1942 there were only 69 heavy bombers serviceable with crews. (The education of a member of a bomber crew was the most expensive in the world, he says. It cost some £10,000 for each man.) In 1943 the average number of heavy bombers was 570 and during 1944 this figure was almost doubled, although it fell far short of the 4,000 heavy bombers he had asked for as a front line strength.

#### New and Untried Weapon Proved

Sir Arthur shows himself throughout his book to be a man with a fixity of purpose, backed by an unflinching will of his own. His belief that the bomber was the predominant weapon for the task of destroying the enemy's war potential amounted to almost monomania. It was heavy bombers he wanted, bombers which could carry about three times the load of a medium type, but still requiring only one pilot. Having watched the burning of London he was convinced that a bomber offensive of adequate weight and with the right kind of bomb would, if continued long enough, be something that no country in the world could endure. But he wanted to use his force to fight the war by itself. "The same princ," e of strategy that made England a sea power in the past,"

MARSHAL of the R.A.F. Sir Arthur Harris, G.C.B., C.B.E., A.F.C., looks back from retirement to his active war days and nights in an outspoken book entitled Bomber Offensive, which is here reviewed by Derek Adkins.



he writes, "had only to be applied to the new weapon which had rendered obsolete the old one, the battleship." His first task was to convince those in

His first task was to convince those in power that bombing could really be a decisive weapon. He first had to dispose of any wishful thinking engendered by optimistic forecasts of what might be done, and to make clear the grounds of his complete confidence in a bomber offensive if this was given. a real chance. The 1,000-bomber raid on Cologne in May 1942 provided the answer. At the time it was planned and carried out complete success was far from being assured, but Sir Arthur had such faith in the strategic consequences of similar operations on a large scale that he was prepared to risk everything in a single battle. He reveals that half-trained crews and air-



SIR ARTHUR HARRIS forged Bomber Command into an offensive weapon of devastating power, contributing materially to the collapse of Germany in 1945.

Photo, Fox

craft from Operational Units and Conversion Units were needed to bring the strength up to the requisite figure, but he adds that "we should never have had a real bomber offensive if it had not been for the 1,000-bomber attack on Cologne, an irrefutable demonstration of the power of what was to all intents and purposes a new and untried weapon."

It is evident that the two main contributions to the implementation of his broad plan and programme were, first, the development of non-visual aids to navigation and, second, radio counter-measures to jam the enemy's early warning system, his ground control stations, and communication between his night fighters and the ground. Sir Arthur's description of the very elaborate ways in which deception was practised provides one of the most illuminating revelations of warfare that has yet been published. He lays stress in particular on the dropping of metallized strips of paper, known as "Window," which completely confused the enemy's radar.

"Searchlights waved aimlessly in all directions," he writes, "the gunfire was inaccurate, and in England the stations which intercepted the enemy's wireless traffic were

immediately aware of hopeless confusion in the German ground control stations." The jamming war, he adds, "was eventually to develop to such a point that it became a major factor in deceiving the enemy about our intentions and action by air, sea, and land on D-Day."

When Sir Arthur went to Bomber Command the few scientists who were able to devise new navigational aids were entirely preoccupied with defensive measures, and the author comments that "whereas in 1940 and 1941 it often happened that more aircraft and crews were lost by crashing in England on the return flight than over Germany, in 1942 the wastage had become almost insignificant." He explains how this was largely due to target-finding and targetmarking aids which he caused to be developed under the names of "Gee," "Oboe," "H2S" and "GH" (see page 444, Vol. 9), and to the formation of the famous Pathfinder Force.

A complementary requirement for the success of the offensive, however, was the provision of cameras in all aircraft of his Command, so that a complete and accurate assessment of any operation could be made This was not completed until the autumn of 1942 when, he says, "with the long deferred expansion of strength at last becoming effective, I was ready to start." Meanwhile, he had had other problems to solve.

#### Saved the Flower of Our Youth

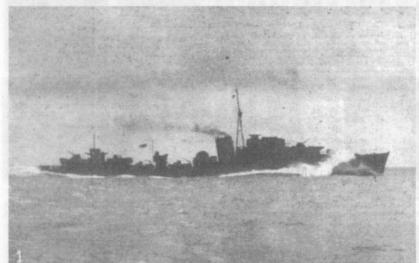
High explosive bombs were found to be too small, and Sir Arthur describes the 250-lb general-purpose bomb as "a ridiculous missile," although the 4-lb incendiary bomb he rates "the best weapon for destroying large industrial areas." The policy decision to destroy Germany's industrial cities, and the factories in them, was calculated to be the best way of destroying Germany's capacity to produce war material, and by saying that "the surest way to win a war is to destroy the enemy's war potential" Sir Arthur reaffirms that he has always belonged to this school of thought. But he makes it clear that he did not invent "area bombing" or insist in carrying it out "in the face of the natural reluctance to kill women and children that was felt by everyone else." To correct the widespread impression that he was not only the author but executor of the bomber offensive, and possibly to vindicate himself, Sir Arthur takes pains to point out that such decisions "are not in any case made by Commanders-in-Chief in the field but by the Ministries, by the Chiefs of Staff Committee and by the War Cabinet."

Throughout the 280 pages of his book and throughout the significant period of his valuable service with Bomber Command, the image of total warfare is reflected in the mirror of his thoughts. It was even more clear as he directed his bomber offensive which, as he puts it, "saved the flower of the youth of this country and of our Allies from being mown down by the military in the field." In his view the wholesale destruction of property was always justified if it was calculated to save casualties and not cause casualties. He recognizes that bombing will inevitably cause civilian casualties, but argues that the bombardment of any city as a whole is still a normal practice.

As a Service chief Sir Arthur Harris was a virile leader with a dynamic flair for getting things done; as an author writing in the tranquillity of Rhodesia he displays a surprisingly acrimonious nature: and as a man who cannot suffer easily the shortcomings of others he cannot complain if his book earns him the indictment, coined many years ago about someone else, of being "intolerant of suggestion and unyielding in negotiation."

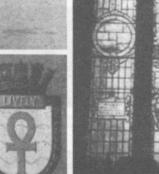
PAGE 724

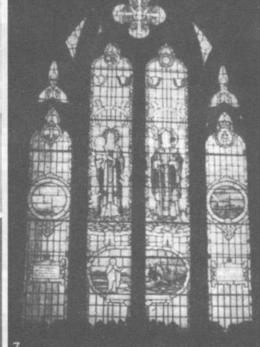
# To the Honour and Glory of H.M.S. Lively



SUNK BY ENEMY AIRCRAFT in the eastern Mediterranean on May 11, 1942, H.M.S. Lively (1, and badge, 2) and company were commemorated by the unveiling, on Feb. 2, 1947, of a stained glass window (3) in St. Margaret's Church, Liverpool. The ceremony (4) was performed by Admiral Sir Harold Burroughs, K.C.B., D.S.O., C.-in-C. the Nore. Lively was a destroyer of 1,920 tons, with main armament of six 4.7-in. guns and speed of 36 knots. Her captain, Lieut.-Commander W. F. C. Hussey, D.S.C., R.N., and 75 of the ship's company were lost, the destroyer sinking within four minutes of being hit. See also page 302, Vol. 5.

PAGE 725 Photos, Admirally, H.M.S.O., Liverpool Daily Post, Topical









L.A.C. R. ARNELL Royal Air Force. Accident. M. East. 2.12.41. Age 31. (Felling-on-Tyne)

Pte. D. BRENCHLEY Royal Armoured Corps. P.O.W. Siam. 29.8.45. Age 27. (Greenwich)



L/S. F. BAILEY
Royal Navy.
Died. 6.8.46.
Age 23. (Macclesfield)

Sgt. A. BAYLISS
Royal Artillery.
Cheshire Regt.
Royal Navy.
Royal Navy.
Action : Cassino. 8.11.43.
Action : Cassino. 6.6.44.
Age 23. (Middlesbrough)
Age 21. (Lowestoft)
Age 23. (Haswell)
Age 18. (Johnstone)









Fus. D. CASEY
Royal Fusiliers.
Action: Cassino. 14.5.44.
Age 19. (Cheshunt)
Age 27. (Braintree)

Pte. A. W. CLARK
Royal Fusiliers.
Royal Sussex Rept.
Royal Sussex Rept.
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Royal Fusiliers.
R L/Cpl. R. T. BURT
Shropshire L.I.
Action: Tunisia. 24.4.43.
Age 22. (Guernsey)









L/St. V. CROCKER
Royal Navy.
Act.: Nr. Tobruk. 26.3.42.
Age 21. (Wincanton)

L/Sto. B. CROSS
H.M.S. Atherstone
Royal Leicestershire Regt.
Action : Margate. 12.9.40.
Age 23. (Banbury)

Pte. T. DAVISON
K.O.S.B.
Beds. & Herts. Regt.
Scots Gaurds.
Action : Italy.
14.10.44. Action : Italy.
14.10.44. Action : Italy.
14.10.44. Action : Italy.
16.10.45. Age 25. (Newcastle/Tyne)

Royal No. DEWIS
Beds. & Herts. Regt.
Scots Gaurds.
Scots Gaurds.
Scots Gaurds.
Scots Gaurds.
Action : Italy.
18.70.44. Action : Italy.
18.10.45. Age 25. (North Shields)









A/B T. DUNCALF
H.M.S. Royal Oak.
Act.: Scapa Flow. 14.10.39
Age 28. (Ormskirk)
Age 23. (Llanrhaiadr)
Age 22. (Llanrhaiadr)

Sgt. T. A. FIRTH
Royal Air Force.
Royal First Park
Royal Air Force.
Royal First Park
Royal Air Force.
Royal First Rifles
Royal First Park
Royal First Pa









A/B R. GOODCHILD
H.M.S. Risis,
H.M.S. Rawalpindi,
Action: At Sea. 20.7.44,
Age 19. (Dagenham)
Age 41. (Daventry)

Sgt. J. D. GREEN
Royal Artillery.
E. Riding Yeomanry
E. Riding Yeomanry
Control of Fitzwilliam)
Age 20. (Fitzwilliam)

Age 35. (Campden, Glos.)

Age 28. (Beverley).





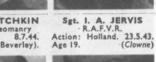


















A/B J. METTRICK
H.M.S. Prince of Wales,
Act.: Off Malaya. 10.12.41.
Age 25. (Huddersfield)

Pte. T. PRUDEN Oxf. & Bucks (Airborne). Act.: Germany. 24.3.45. Age 24. (Coseley)

Pte. J. W. LARKIN
Gloucestershire Regt.
Action: Burma. 23.11.44.
Age 22. (Salford)
Gnr. E. G. LANG
Royal Artillery.
Action: Burma. 25.2.45.
Age 21. (Part Talbot)

Fus. E. LEWIS
Royal Welch Fusiliers.
Action: Holland. 7.12.44.
Age 18. (Penycae)



Sgt. J. LEWIS Royal Air Force. Action: France, 24.6.44. Age 22. (Lampeter)

Pte. G. E. LAY
Royal Hampshire Regt.
D/W.: N. Africa. 7.8.43.
Age 23. (Woodbridge)
Pus. J. O. MELLOR
Royal Fusiliers.
D/W.: Italy. 11.9.44.
Age 24. (Audenshaw)



Gnr. J. MANSELL
Royal Artillery.
Action: Malta. 19:4.42.
Age 34. (Dagenham)

Mne. R. MARSHALL
H.M.S. Arethusa.
Action: At Sca. 18.11.42.
Age 30. (Romford)





L/Cpl. D. MILLER
R.A.S.C.
Action: At sea. 26.4.41.
Age 33. (Hawarth)

Sgt. E. N. PERKINS
Royal Air Force.
Royal Air Force.
Action: France. 4.2.43.
Age 19. (Landon)

Sgt. E. N. PERKINS
Royal Air Force.
Royal Air Force.
D/W.: Jav.. 21.2.42.
Acr.: N.W. Europe. 10.7.44
Age 21. (Landon)
Age 21. (Birmingham)



Pte. R. RICHARDSON
Herefordshire Regt.,
Act.: Germany. 10.4,45,
Age 24. (Horsham) Pte. P. J. ROGERS D/W. Age 23.



J. ROGERS
S.L.I.
7.8.44.
(Whitchurch)
(Whitchurch)
(Whitchurch)
(Sgt. W. J. ROWE
Royal Air Force.
(Crewe)
Royal Air Force.
Royal Air Force.
Royal Air Force.
(Crewe)
Royal Air Force.
Royal Air F





L/Stwd. V. STAFRACE
H.M.S. Barham.
Action : Medit. 1941.
Age 37. (Valetta, Malta)

L/Cpl. H. TAYLOR
East Yorks Regt.
Action : France. 29.5.40.
(Ashington)



Pte. A. MORGAN
The Royal Scots.
Accident: Italy. 23.8.45.
Age 34. (Cardiff)

L/Sgt. R. RYAN, M.M.
Queen's Royal Regt.
Action: Italy. 9.9.44.
Age 25. (London)

L/Bdr. A. V. SEABY
Royal Artillery.
P.O.W.: Far East. 12.9.44,
Age 29. (Twickenham)

L/Cpl. E. SHEARER
Seaforth Highlanders.
D/W. 25.5.43.
Age 21. (Portmahomack)

A/B F. R. SIMPSON
H.M.S. Bullen.
Action: At Sea. 6.12.44.
Age 21. (Whaley Bridge)



A/B S. TAYLOR
H.M.S. Royal Oak.
Act.: Scapa Flow. 13.10.39
Age 18. (Ashington)
Age 21. (Falmouth)







F/Sgt. E. J. SHARP
Royal Air Force.
Act.: Hungary. 20.10.44.
Age 21. (Droylesden)
Age 26. (London)



L/Sgt. J. WALKER
Black Watch.
Act.: N. Africa. 26.4.43.
Age 25. (Wakefield)



Sgt. J. WAREHAM Manchester Regt. Action: Italy. 28.7.44. Age 31. (Manchester)



L.A.C. R. WATTS
Royal Air Force.
P.O.W. Far East. 29.7.45.
Age 29.

(Offley)

Sgt. R. E. WATTS
Royal Air Force.
Royal Air Force.
Act: Germany. 2.1.44.
Age 26.

(Marrow)

Sgt. D. H. WARNER
Royal Air Force.
Royal Air Force.
Action: Ramleh. 17.8.42.
Age 29.

(Kirkby Lonadale)
Age 19.

(Southall)

Age 19.

(Southall)

Age 19.

(Southall)

Age 19.

(Southall)















Fus. T. JODDRELL
Royal Welch Fusiliers.
Action: Belgium. 17.9.44.
Age 19. (Stockport)
Age 23. (Feltham)

Fus. L. JOHNSON
Royal Scots Fusiliers.

Cpl. S. KEEN
Wittshire Regt.
Wittshire Regt.
Cpl. S. KEEN
Wittshire Regt.
Royal Artillery.
Royal Artillery.
Action: Ltaly.
Age 24. (Manchester)

Cpl. H. KAYE
Bads. & Herts. Regt.
Royal Artillery.
Royal Artillery.
Age 27. (Streatham)
Age 27. (Streatham)

Cpl. S. KEEN
Wittshire Regt.
Royal Artillery.
Action: Ltaly.
Age 23. (Huddersfield)
Age 23. (Stratford/Avon)

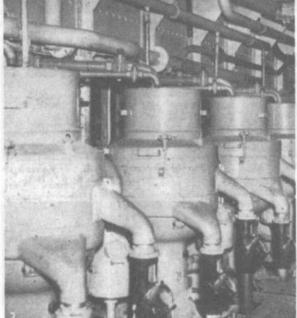


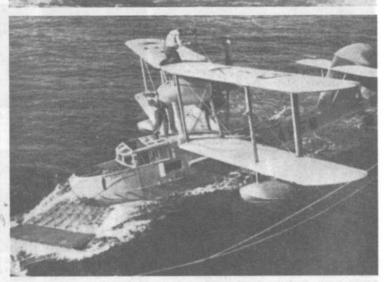
# Walrus Aircraft Engage in Chasing the Whale

ABOARD THE BALAENA, 25,000-ton whaling-factory ship (1), when she salled from Southampton in October 1946, were three Walrus amphibian aircraft to act as whale spotters. They can be catapult-launched and picked up (3) after a flight. Far out of sight of the parent ship the spotters flash back reports which enable the small, whale-catching craft to be directed to their quarry. The interior of the Balaena resembles a factory, one section being crammed with machinery for separating the whale oil (2). Masses of material covered the decks (4) on sailing, including timber for platforms on which the whales are cut up. It is hoped that the present season, ending in April 1947, will yield 1,000,000 barrels of oil from the ships of the whole fleet. A record catch will go a long way towards easing the fat-ration situation. By the spring, too, whale steaks should be entering many British homes. See also illus. page 212.

Photos, Central Press, Planet News











## 'Up the Micks!' at Djebel Bou Aoukaz

At four o'clock in the afternoon of Tuesday, April 27, 1943, the 1st Battalion The Irish Guards attacked the Djebel Bou Aoukaz, the last hill left to the Germans west of Tunis. Their task was to take its most important feature, Hill 212, and hold it while the guns; tanks and infantry of the 8th and 1st Armies launched the final attack on Tunis. How the Micks acquitted themselves is told by Major D. J. L. Fitzgerald, then with the Regiment.

rising steeply from the flat plain, with a knob on either end, Point 212 on the west, Point 214 on the east. In full view of the Germans the Companies waded slowly through the waist-high green corn and the tall red poppies, unchecked by the rain of shells. Less than half of them reached the olive grove at the foot of the ridge.

We lay down beneath the trees to wait till nightfall before scaling the hill. It was not long before the German big guns and those abominable machines the six-barrel mortars came into action. They pounded the olive-grove systematically from end to end, working up and down the lines of stumpy trees. The ground had just been ploughed by some industrious French colonist, but unfortunately for us the furrows ran the wrong way, so that while we could press our heads and legs down below ground level our middles were protruded. But, of course, no cover was of any use against the heavy shells; the Regimental Sergeant-Major, for instance, and the tree he was sheltering under both disappeared in one explosion.

One hundred and twenty men out of the four Rifle Companies and Battalion H.Q.

reached Hill 212 that night. The rest lay down in the corn or in the grove calling to the stretcher-bearers, or silent and marked only by a rifle butt silhouetted in the glow of burning Arab huts. The top of the ridge was bare rock, with only a few pockets of earth. We worked all night, digging, hacking and shifting boulders, to get slit-trenches built before dawn. Down below in the plain the carriers ran a shuttle-service from the Battalion's old position, bringing ammunition, rations and cans of water up to the foot of the ridge and taking the casualties back to the Aid Post. The Germans, too, were busy.

We could hear the clank and clatter of their "half-tracks" ferrying up fresh troops, and we suspected that they were passing groups round behind us. That was exactly what they were doing. Every now and then there was a confused brush in the dark, the flare of a Verey light and a burst of wild firing. We expected a counter-attack at dawn. When none came, fatigue-parties went down the hillside to pick up the dumped stores. They managed to collect some twenty boxes of '303, three or four sacks of bread and bully, a large bag of cigar-

ettes and some cans of water and tea before the Germans put a stop to these expeditions. We then took stock of our position.

We were stuck out on a barren hill, separated from the nearest British troops by over a mile of open plain. We had enough small arms ammunition to be going on with, and as long as our one wireless—an 18 setworked we could call for artillery support. None of the mortars had reached the hill, and now it did not seem that they ever would until another attack opened a clear way up the hill. Till then, though a few small parties might—and in fact did—slip through to join us, the duty of holding this vital hill fell on 120 men, armed with Brens, rifles and bayonets and two grenades per man.

At midday the Germans set to work to soften-up Hill 212. Salvos from the sixbarrel mortars screamed through the air like Green Line buses and crashed in quick succession along the ridge. About two o'clock, 88-millimetre guns and tanks in the olivegrove opened up on the crest. This fire was heavy, most unpleasant and very accurate. With their telescopic sights and at such close range the Germans could snipe an individual man with solid armour-piercing shot. The main force was withdrawn to the top of the reverse slope, leaving look-outs in the best trenches. Both then and throughout the following day casualties were terribly heavy amongst these look-out men, but there was never any lack of volunteers for the task.

At three o'clock the German fire intensified. The look-outs shouted "Here they



ON HILL 212 IN TUNISIA is a white cross dedicated to men of the 1st Battalion The Irish Guards who fought and died there. The photograph was taken from Point 214 at the conclusion of the memorial service held in July 1943; and Point 212 can be seen behind the cross retook Point 214, and it was there that the Guardsmen made their magnificent charge, which is described by the author of the store one of the 1st Battalion's 72 survivors in the Battle for the "Bou".

----I Was There!-



#### NO. 149 SQUADRON

Dispanded in August 1919, the Squadron was re-formed at Mildenhall, Suffolk, in April 1937, when it was equipped with Heyford aircraft. In February 1939 it received Wellingtons and made its first sortic on September 4, 1939—a daylight attack on the German fleet near Heligoland. -This was followed by months of reconnaissance flights.

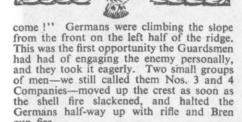
near Heligoland. -This was followed by months of reconnaissance flights, leaflet dropping and attacks on targets in enemy-occupied territory.

In August 1940 the Squadron made its first operational flight to Berlin, and by January 1941 it had engaged such targets as Turin, Milan, Genoa and Venice, in addition to the vital German centres of Bremen, Kiel, Wilhelmshaven and Munich. Converted to a Stirling squadron, it raided Lübeck in daylight on July 16, 1942. It was also one of the busiest minelaying squadrons of Bomber Command, and in Dec. 1943 it introduced a new technique of high-level mining.

DAYLIGHT bombing became a regu-

DAYLIGHT bombing became a regular operation during the last twelve months of the war; targets included flying-bomb sites, Channel ports, oil and petrol installations, dykes and concentrations of enemy troops and armour. The Squadron's last bombing mission was carried out against Bremen on April 22, 1945. In the final days of the war supplies of food were dropped for the starving population of the Netherlands.

Perhaps the Squadron's best work was on special missions, some of which, such as the dropping of agents and supplies to the Maquis, were not divulged until some time after the end of the war. All these sorties required expert navigation; also it was highly dangerous work, the unescorted bombers running the gauntlet of the enemy's fighters and ground defences, and the routes to the dropping zones being long and intricate. ping zones being long and intricate



When the Germans were already wavering, two Brens and-a section of No. 1 Company came over the right flank and joined in. This increase in the volume of fire had a splendid effect. The Germans turned and ran back down the hill. We were astonished at this sight, but soon recovered and went forward and shot down the fugitives. Two German officers who tried to rally their troops were picked off by riflemen, and our own guns, called down by the 18 set, completed the rout. Naturally, we were all elated by this success.

The Germans had run away from us, and from then on no-one for one moment doubted our ability to thrash and to go on thrashing the Germans.

After this attack, the mortar and shell fire began again and went on steadily till the Friday night. I cannot remember any time when we were not being shelled or mortared, when we were not being shelled of inortated, and later machine-gunned and sniped as well. But the worst of all was the thirst. We had only some half-dozen jerricans of water and two petrol tins of cold tea. The water was strictly rationed, and by the end we were all croaking harshly. The tea we bent for the wounded kept for the wounded.

It rained for half an hour on Thursday night and we caught a little muddy but very clome water in groundsheets. The only night and we caught a little muddy but very welcome water in groundsheets. The only other source of supply was the Germans; after dark, men used to crawl forward and unhook the water-bottles from the dead bodies down the slope. One man got down to a wreeked carrier at the foot of the hill and brought back three tins of canned peaches. He brought them to me for the ridge at maximum elevation and minimum range, with alternative switches to left and right. We could judge the effect from the screams which followed each burst.

No. 4 Company and part of No. 1 slipped forward and destroyed the leading Germans who had been cut off from their friends by the mortar fire. The Germans then retired for the night, and in the darkness we could hear them collecting their dead and wounded in the plain below. Their roll was loudly called by what seemed to be a very bad type of sergeant-major; we were glad to note that he was deficient in a good half of his names.

The Germans did not attack again till nine o'clock the following morning. This was a mass attack, all along the ridge from 212 to 214, including both points. On the right, by Point 212, Lance-Cpl. Kenneally, V.C., broke up that half of the attack by going forward to meet it, firing a Bren gun from the hip. On the left the Germans drove an armoured car up the eastern slope of the hill. Lieut. Keigwin stopped it by firing four armour-piercing bullets into the engine. The crew baled out, but tried to salvage



GERMANS CAPTURED BY IRISH GUARDS on Hill 212, in the Medjez sector, in April 1943, march back to the rear. They could not face the accurate small-arms fire and bayonets of the Guardsmen, and in a series of attacks and counter-attacks a handful of indomitable Irishmen captured and held this key position.

Photo, British Official

wounded, and for the next three days I doled out the juice spoonful by spoonful to dying men. It was the only physical comfort we had to offer them.

At six o'clock that evening the Germans began to work round the left of the ridge, into a gully below Point 214. At seven they attacked again, this time trying to scale the ridge from the east. No. 2 Company ran along the reverse slope and caught the enemy in the flank, but even so a large number of Germans reached the top of Point 214. Life on the ridge would have been intolerable. if not impossible, if the Germans had held this point. They could not hold it. A bayonet and tommy-gun charge swept them off it back down the hill. However, the Germans continued to press their attack on that part of the ridge and had dug themselves

It was by now getting dark, and the situation looked serious. At this very moment a sergeant and three men came running along the reverse slope, carrying the parts of a three-inch mortar. They had just rescued it from the bottom of the hill—how I do not know. They now assembled it in record time and shot 20 bombs over the **PAGE 730** 

their machine-gun. A section of Guardsmen caught them with it half-way out of the car, and fired a volley which completely disposed of the crew.

After a few hours respite, fresh German troops made another attack. By this time everybody was getting used to them. As usual, the Germans were driven off, but this time we launched a small counter-attack across a gully beyond 214, captured two machine-guns on a neighbouring hill, and turned one of them on to the retiring enemy. We had not enough men to hold this hill as well as our own or the counter-attack force. well as our own, so the counter-attack force came back, draped with belts of ammunition, and bringing one machine-gun with them.

The rest of the afternoon we spent shooting their own ammunition at German infantry who were following up the tank attack on the plain below us. As a result of this attack German tanks got round to the rear of the ridge and opened fire along the reverse slope, We were now under fire from all sides. before dawn (Friday the 30th) Battalion Rear H.Q. managed to get some ammunition and food up to the base of the ridge. tunately, the Germans started activities at the same time, and only a very small portion of the stuff could be got up, for everybody

They came on in greater numbers and with greater persistence than ever before. There was with them a higher percentage of officers was with them a higher percentage of officers than I have ever seen with any troops—half were in front leading (these were easily picked off), and half were behind (these were harder to hit). They swept over Hill 214 and along the top of the ridge—and the Guardsmen were ready for them. Each man fired a couple of steady aimed shots and then jumped out of his trench and rushed at the nearest German. This spontaneous charge shattered German. This spontaneous charge shattered the enemy and the whole line of Guardsmen swept forward, cheering and shouting "Up the Micks!" It was the most remarkable thing I have ever seen.

bayoneting the less fleet-footed. It was with

stepped the Guardsmen from going downright into the cornfields. This last and complete failure of their biggest attack must have broken the Germen's spirits for they never launched another one, though throughout the day they continued to work their way up in small groups only to be shot down.

THAT afternoon the plain behind was cleared of enemy and we were joined by a company of Grenadiers. Hill 212 was safe. Just before dawn the following morning we were relieved by a new battalion. Of the 120 men who had reached the top of the hill on Tuesday night and the few parties who had joined us during the following days, 72 came down on Saturday morning. The thing I have ever seen.

They chased the Germans half-way down the ridge, shooting into the thick mass and proudly on the ridge they died to hold. It was an honour to have served with such men.

who tried to get it was killed by snipers. great difficulty that the two surviving officers ranges to Sandy as they appeared on the radar screen. There was a gun-sight evolved later made their last attack.

This last and complete for single-seat fighters, but in our aircraft screen. There was a gun-sight evolved later for single-seat fighters, but in our aircraft it was unnecessary as the radar set was equally

accurate. Some form of range-taking was essential since, by night, the exhaust flame of the buzz-bomb looked just as near at widely different ranges. I helped where possible with the judging of the enemy's line of flight, which, however, was no easy matter.

I was watching a rather spectacular



raid which Bomber
Command was putting on just inside the
coastline when, looking back, I' saw a
light. "That looks
like one, Sandy!" I
exclaimed. "Just
down to port." Sandy turned slightly to port
to look more closely. "I think you're
right," he said, and swung the Mosquito out
from shore a little. We turned starboard
again and had another look back for it. Then
happened what we had seen many times. happened what we had seen many times. Before anyone could get on its tail the V1 toppled over and the light went out in the waters of the Channel.

We turned northward and prepared to make our way back to Gris Nez. But that dud was the herald of many live ones. Soon dud was the herald of many live ones. Soon they were crossing the coast at several points, and the sky seemed full of the red, green and white navigation lights on the pursuing fighters. We spotted another that looked within our range. Out we charged again, throttles well open. When we judged that we were on the line of flight and over our target, we looked for it. It was not below us on my side and Sandy couldn't see it on us on my side and Sandy couldn't see it on his, and we wondered if it had gone into the "drink." I craned my head backwards and

arink. I craned my nead backwards and saw it still coming along. We waited for it to overtake us. But it came no closer.

"Must be one of those slower ones," said Sandy. For doodle-bugs came in two main speed categories. One lot, the more numerous, tore through the sky at about 400 mp. h. speed categories. One lot, the more numerous, tore through the sky at about 400 m.p.h. The others, either through defect or intentionally, reached only about 250 m.p.h. We turned back, throttling down, and keeping the target carefully in sight. Sandy eased the Mosquito in behind it and down to its level, some 2,000 feet above the sea. The ranges came down and down on my radar set. I read them out, 1,000 feet, 900, 800, 700, 600 . . . As I said "six" I looked up from my set, knowing that Sandy would fire at that range. He aimed at the flaring light right in front of us. As the aircraft shook to the thump of the cannons I saw the little flickerthump of the cannons I saw the little flickering white lights from around the flying bomb's jet, which told of strikes on our target. Then a great shower of red sparks mingled with the white glow of the jet.

Sandy pulled out, and we waited for the VI to fall into the sea, its fuel tank, as we thought, holed by our cannon shells. But nothing happened, so we went in again. Once more the flicker of the strikes, again the red shower from the exhaust light. Again Sandy pulled the Mosquito aside: too many base battered and torn by the terrific blast of a buzz-bomb's explosion at close range. Others had never come back but had perished from unknown causes. Altogether, the squadron had lost more aircraft and crews on this type of operation than in a similar period on the apparently more dangerous job of night intruding. So Sandy turned aside once more. But again nothing happened and again we

## Night-Fighter Versus Flying Bombs

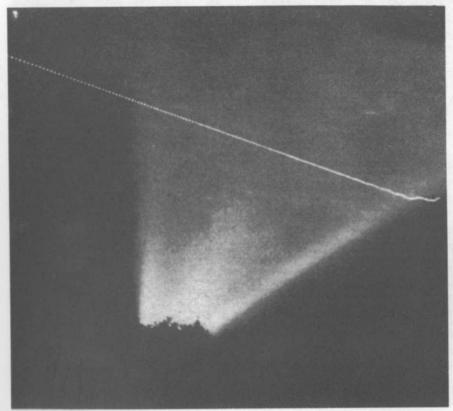
As a Lieutenant (A), R.N.V.R., on loan to the R.A.F. for operational night-fighter duties, L. F. Thompson was given various tasks that could scarcely be considered Naval. Among them was the shooting down of Hitler's V weapons. His experiences with VIs—variously known as flying bombs, buzz-bombs and doodle-bugs—in July 1944 are recorded here.

ROM 7,000 feet up the French coast shone clearly below us in the light of the full moon. Our patrol line took us south from Cap Gris Nez to Saint Valery and then back again at 6,000 feet. We did the northward trip at a different height so as to lessen the chance of collision with one of our fellow-patrollers on the opposite course.

We had to stooge up and down just off the French coastline and wait for the flaring white light that meant another load of death and destruction was on its way to London. In mid-Channel, we knew, were other night-fighters on the same job as ourselves; while others, we suspected, were actually inside France, also on the job. Across the Channel to the north in England thousands of gunners

and searchlight crews stood ready for the same purpose of shooting down the VIs.

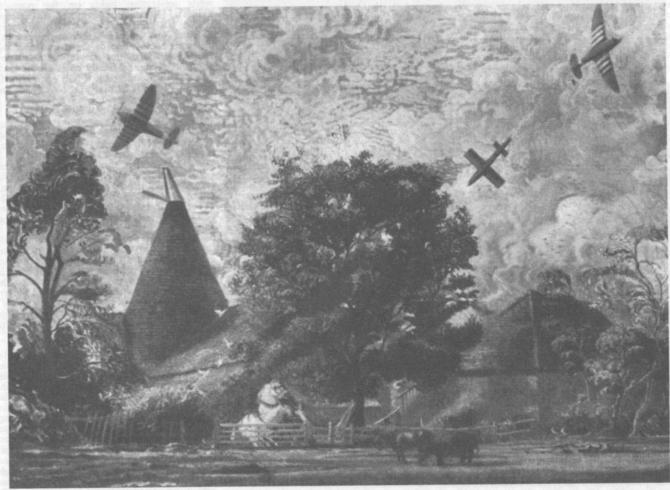
Sandy, my pilot, didn't go much on this business. Nor did I. We had been taken off intruding to help in this anti-V1 campaign, in which the tactics were as follows. On sighting the VI the pilot placed his aircraft above the line of flight, as near as he could judge, and switched his navigation lights on to warn other aircraft that he was in the chase. Thus positioned, the pilot would wait until the VI passed in front of and below him. Then he opened the throttles and put the nose of the Mosquito down, using the extra speed gained in the dive to hold the small target in range for long enough to shoot it down. My job, as observer, was to read out the



PATH OF A FLYING BOMB over England, as seen by a camera, appears as a white line drawn across the night sky. The speeding doodle-bug is held in the beam of a powerful searchlight to attract the attention of the pilots of patrolling night-flighters who might be unable to see the weapon's exhaust flame, so easily observable from the ground. PAGE-731 \_Pkolo, Associated Press

# This Way Our Tempests Destroyed Flying Bombs





ONLY THE FASTEST AIRCRAFT could shoot down flying bombs, and Tempests were among the most successful. Diving on a VI (top), the pilot would fire a burst and then turn away (bottom) to escape the terrific blast when the missile exploded. Mosquitoes also intercepted VIs over the Channel, and bursts of A.A. fire were often used to indicate the course of the target to a pilot. (See story beginning in page 731.) The reproductions above are from paintings by Roy Nockolds (top) and W. T. Monnington. now in the Imperial War Museum, London. PAGE 732 Crown Copyright

went in. This time to closer range, 400 feet. Sandy put his sights on the target, pressed the firing button and we saw the strikes. Then, suddenly, the V1 seemed to stand still in midair, so violently did it slow down. We passed it close on our starboard side, my side of the Mosquito, as Sandy and I sat side by side in the nose of the aircraft. For one ghastly moment we were dead level with it. There, almost at our wing-tip, was the buzz-bomb, and I could see every detail of it as clear as

day, for it was glowing a fiery red. I thought, "It's going to explode right in my face!" With a gulp I found my voice.
"Hard port, Sandy!" I yelled. "Turn hard port!" He did so, and as I looked back I saw our hard-hit target topple over in a stall and plunge into the Channel. "Well," I said to my pilot, "you've shot one down at last. But if you're going to give me another scare like that, you'd better find yourself another observer!"

hurst, a very delightful spot. And the job? It was to drive around men in charge of various parts of the building and construction of Mulberry! Hence all the secrecy. Convey-ance had been almost impossible to find for these men who had to go from place to place where Mulberry's parts were being built: the caissons at Marchwood, the pontoons at Bosham and elsewhere.

## I Lent a Hand with Mighty Mulberry

In the M.T.C., driving for the Ministry of Supply, Miss Gwen Croft was one of the unknown number of men and women who helped to make possible the great prefabricated harbour that was towed over to Normandy for the Invasion. See also pages 430-434 and 710, Vol. 8.

morning for Southampton, on a very hush-hush job. We spent the evening getting

things ready, and next morning, before leav-ing London, we were warned that on no account were we to divulge to anyone the

nature of our task. Well, that was easy; we had yet to discover it for ourselves! We arrived at Southampton about lunchtime, and were told to re-port at King George V Dock, where we were warmly welcomed by the man in charge.

We entered what

was supposed to be an office. Dirt and papers were everywhere. We discovered later that finding it impossible to work satisfactorily in a tiny hut, these people had decided that the railway

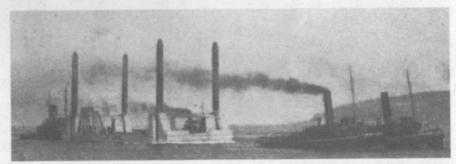
the evening of April 21, 1944, my offices were more suitable, and they had moved in a day or so before our arrival, and there was were told to prepare to leave the next no time for cleaning up. But then there was no time for cleaning up. But then there was hardly time for them to cat. We concluded that something must be done, and whilst Miss Ward took her car into the town for brooms, buckets, soap and disinfectant, I swept up as much dirt as I could find and lit a fire in a room containing a cooking-range. Between us we cleaned up, much to the amusement of the staff. But that wasn't what we had been sent to Southampton for.

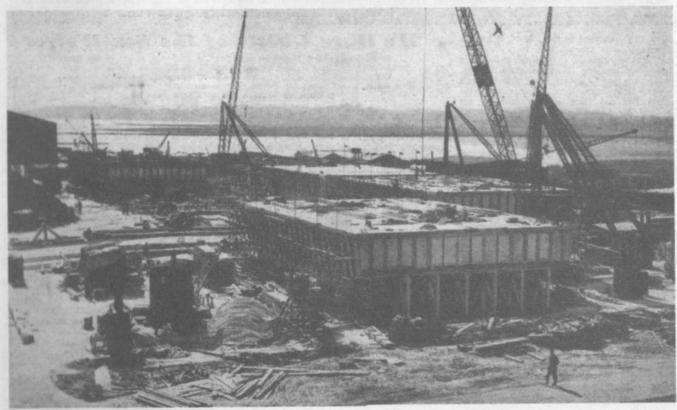
Later, over a cup of tea, they told us that we had been fixed up in a hotel at Brocken-

THE pierheads built at Conway (Caernarvonshire) were towed to Southampton, where the spuds (anchors) were fitted. These were 60 feet high. It was indeed a fascinating sight to see the little tugs towing huge pierheads to see the little tugs towing huge pierheads down the river, then pushing this way, pulling that, and finally guiding them gently alongside the quay. As soon as they were alongside the workmen were on deck with their equipment. Not a second was wasted. Speed and yet more speed was the cry, and from daylight until dark the work went on.

When we were not driving we did our best to eliminate the hasty sandwich lunch washed down with a cup of almost cold tea. We managed to get hold of stools and tables, and arranged them in what we now called our

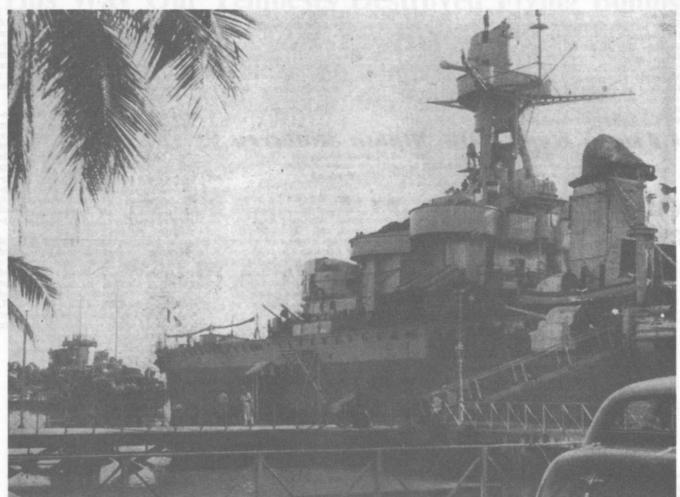
arranged them in what we now called our kitchen, bought crockery and cutlery and proceeded to serve a decent meal to the staff, 18 in all. It was surprising how many other people happened to find their way to the office kitchen when the teapot was on the go!





WHEN MULBERRY HARBOUR WENT TO FRANCE it was the first time in history that an invading force had taken its own prefabricated harbour with it. The spud pontoons, one of which is seen on tow at the Gareloch (upper), were 60 feet high. Several of the huge concrete causeons, weighing more than 6,000 tons cach, are shown under construction at Marchwood, near Southampton (lower). The Germans knew nothing of this great project, though their reconnaissance aircraft flew over the southern port where much of it was assembled.

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VICHY FRENCH CRUISER GLOIRE took on board survivors of the torpedoed liner Laconia after she had been summoned to a rendexvous in the Atlantic by the commander of a German submarine (story below). The Gloire, seen with H.M.S. Waveney at Salgon Docks, French Indo-China, in October 1945, was built in 1935. Her displacement is 7,600 tons, main armament nine 6-inch guns, speed 31 knots. The cruiser Joined the Allied navies on the adherence of French West Africa to the Allies in November 1942.

One day I crossed to the Isle of Wight, in connexion with rehearsal of troop-carrying craft, and was amazed at the sight of so many ships, little and big, that smothered the sea. We almost had to squeeze our way through them. Sometimes Jerry would come over during the day, but he always kept his distance, at a great height—spotting, so the men said. There were heavy raids at night, but not once did they hit the docks.

Every man now was working at top pressure, for D-Day was in the air. There were plenty of guesses at the date, and nobody seemed keen on being in Southampton on the particular day—especially on the docks! We knew by this 'time what Mulberry was for and how it would look when completed. We were shown over one of the completed pier-heads. Its stairways and passages were very narrow, and the crew had great difficulty even in getting into their bunks. Down below there were steel supports everywhere, and at each corner was encased mechanism that worked the spuds up, and down; when the pier-head was in position the spuds were lowered, anchoring it.

We were very glad to get up on deck again, though the siren was going and everyone was thinking the same thing—Jerry was sure to make a mass attack soon and this might be it. But it wasn't; only one enemy plane approaching, and the All Clear soon sounded. A few days later I went back to London for 48 hours and when I returned to Southampton the sea was still covered with ships, and the pierheads were still in the King George V Dock. But early the next morning everything was gone—and my part of the job was finished.

## We Were Guests of the Sea-Wolves

In this story which began in page 702 Claude Jones, purser in the liner Laconia, told how his ship was torpedoed in the Atlantic. While the over-crowded lifeboat in which he found himself was making progress towards Africa it encountered a U-boat, whose commander invited the survivors to come on board a few at a time for a meal.

This was a surprise indeed, and many of us were still suspicious. A U-boat commander in the role of Good Samaritan and his ship providing a hostel for British survivors! What he said, or his kindly tone, so impressed two of our Italians that they changed their mind about lying doggo. They came from under the thwarts and allowed themselves to be "rescued"; but the others stayed out of sight. The pair that surrendered for the sake of getting a meal were taken aboard the U-boat, and to do them justice they did not squeal on their comrades.

The women and children were lifted out of the lifeboat and given something to eat and drink by the Germans. Other small parties went aboard in turn, and were fed from large bowls of soup placed on the steel deck for ard of the conning-tower. The soup and bread were a godsend, but what I enjoyed even more was the chance to stretch my cramped limbs. On this occasion the seawolves had not run true to form! They had assumed sheep's clothing. Nevertheless, I suspected an ulterior motive by reason of what occurred while I and some of my shipmates were being fed.

One of the Germans came through the conning-tower hatch and handed a small cine-camera to the young commander, who

leaned over the bridge and shot a reel of film to record the scene on the foredeck. There was little doubt in my mind that this pictorial record was intended for the dual purpose of proving that a successful attack had been made against a British transport and for propaganda by demonstrating the humanity of German U-boat crews towards their victims.

Refreshed by the food and comparative freedom we returned to our boat, the submarine standing by. Then the German commander addressed us again. "It is bad," he said, "that women and children should suffer for the sins of a criminal Government. They have permission to come on board the Unterseeboot again. I will give them more food, and they may dry the clothes. You can trust me," he added, when no one stirred. "I give my word of honour they shall be well cared for."

After some discussion the invitation was accepted. The women and children were transferred again to the U-boat, and that gave blessed relief to the rest of us. It was good to be able to stretch the legs and move about without fear of capsizing. We raised sail, and the submarine cruised slowly near us. During the short tropic twilight the young commander reappeared on his bridge and made another announcement that caused

us some anxiety. "I am going to dive," he said. "Your women and children will stay with me to rest tonight. Tomorrow morning I will give them back. You must sail slowly and keep the course you are on now.

THE C.P.O. demanded, "What are you going to do after that?" To this the German answered that he intended to radio a signal and try to arrange for a ship to make a rendezvous and take all of us aboard. With that we had to be content. And the Italians who were still in the water and had remained unseen were more than content when the U-boat submerged and we hauled them into our boat. Those fellows had got on our our boat. Those fellows had got on our nerves. We had been inclined to hand them over to the Jerries, but they had pleaded desperately to be allowed to stay where they were. Now they were curling up in the boat, catching up with much-needed sleep.

Nothing at all was seen of the U-boat during the hours of darkness. When daybreak came we scanned the sea for a sight of her periscope, wondering if the German would keep his promise and return. The sun lifted above the horizon and gilded the waves. Then, suddenly, one of our seamen, whose pre-war service had been in a whaling ship, drew attention to a burst of foam: "There she blows!" The submarine had

kept her tryst.

Whatever ruthlessness the German commander and crew were capable of in active warfare was now hidden beneath a veneer of good will. It is only fair to record that we and the survivors in two other lifeboats received generous consideration that was as gratifying as it was exceptional. Once more we were allowed to board the submarine, in batches, and fed with stew in the lee of a 4-7 gun while the seawater sluiced over our feet. Our women and children were returned dry and rested to the lifeboat, and the fact that they were soon drenched again with spray was nobody's fault. Finally, we were given some rations, water, cigarettes and matches, and the German commander ordered us to proceed on an easterly course and wished us luck before sheering off.

Our lifeboat made progress on an easterly course, switchbacking over the long Atlantic rollers. Packed like sardines, we spent a restless, uncomfortable night but enjoyed a fair breakfast, thanks to the extra rations. Haze made visibility poor, and we had no expectations of sighting a sail when, quite startlingly, at eleven o'clock in the morning, a grotesque shadow loomed into view. A ship! Rescue at last! That was the instant reaction. The vessel came nearer, and with fading hopes we saw it was another submarine.

#### Tide of Luck Again in Our Favour

"It's a 'guinea'!" a seaman ejaculated, using the Merchant Navy slang meaning an Italian. He was correct. The approaching craft unfurled an ensign from the short staff abaft the conning-tower bridge, and suspense was almost unbearable as the enemy hove-to and signalled for us to moor alongside. Here were sea-wolves of a different tribe. We could hardly expect this encounter to pass off as the previous one had, especially with Italians among us who might give a garbled account of what had occurred to many of their compatriots when the Laconia had been torpedoed. But again our prisoners went to cover under the thwarts, even less inclined for rescue by their own countrymen than by the Germans.

The Italian submarine commander spoke English, and his first question did nothing to relieve our anxiety. "Have you seen any Italian prisoners?" he demanded. The Naval C.P.O. acted as our spokesman. "No," he replied. He feared, like the rest of us, that if these submariners suspected loss of life among Italian prisoners the consequences might be serious for us.

The commander looked down upon our crowded boat and asked the name of the ship that had been sunk. He repeated the question, but no one told him. He shrugged his shoulders, and put another query about the nationality of the attacker. "We were the nationality of the attacker. "We were torpedoed by a German," the C.P.O. told him. We could not be sure of this, but it proved a good answer, because the Italian captain responded with an exclamation of disgust before interesting. disgust before interpreting to a younger officer standing by his side. One doubt kept officer standing by his side. One doubt kept me on tenterhooks during this second encounter. Would the Italians in our boat remain hidden and silent? They never stirred a finger or said a word—and all was well. The tide of luck again ran in our favour! Kegs of water, flasks of Chianti, boxes of biscuits and cigarettes were produced from the submarine's hatches and handed into our lifeboat. The spectre of

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hunger and thirst was banished once more, and the real dread now was lest the weather should worsen.

When the Italian submarine left us to continue its interrupted patrol, we exchanged farewells with a friendliness curiously incon-sistent as between enemies; the years of political misunderstandings and military political misunderstandings and military combat were bridged in an hour or so by compassion on one side and gratitude on the other. Discomfort and anxiety attended the further voyaging of our boat until the sixth day, which held another surprise for us. From a seemingly empty ocean our old "friend" reappeared—the U-boat with her young bearded commander. He knew nothing of our meeting with the Italian craft, and no one enlightened him. His first con-cern was for the women and children, whom

he took aboard again, thereby giving the rest of us a chance to move about.

"Now I will give you a tow," he said. "You will be made prisoners of war. Ja, it is for your own sakes, because the weather may change and you might founder. I have made a signal by radio for a French warship to meet me. Always we Germans are humane." There was nothing we could do about it, and we made fast a rope and were towed for a couple of hours while the women and children sat on the U-boat's after-deck.

Presently, to our joy, we saw four or five of the Laconia's lifeboats. That German sea-wolf had been ranging like a sheep-dog to round them up, and amid emotional scenes numbers of relatives and friends were required for the first time since the same results. reunited for the first time since the transport was torpedoed. Then the U-boat took the boats in tow and proceeded on a different course all night and part of the following day. At last the lifeboats were cast off, and the German commander made his final speech through a mercuphone through a megaphone.

#### Gloire Keeps a Glad Rendezvous

"Here you must wait," he announced. "Soon you will be rescued, I think, but I warn you that there will be bad trouble if you try to sail away!" When the women and children had been returned to our lifeboat, the submarine moved off and dived-and that was the last we saw of her. The boats kept together and drifted on the tide, but we were not left long in suspense. Smoke smudged the horizon and a ship hove in sight -the Vichy warship Gloire keeping the ren-dezvous in response to the U-boat's signals.

The transfer of everyone from the lifeboats took some time because many were unable to mount the rope-ladders and had to be to mount the rope-ladders and had to be hoisted in slings. Again there were glad reunions, for the Gloire had picked up many other survivors elsewhere at sea. Our life-boats were sunk by gunfire, and the warship steamed direct for Dakar; and I for one was mighty glad she arrived without "catching a packet" from Allied air-patrols. In contrast to the open boats, our voyage was a holiday. Yet the accommodation for the men was vite, the food poor and insufficient. men was vile, the food poor and insufficient, and we had to sleep on the steel decks without bedding, and no pillows other than our own damp life-jackets. Treatment by the French guards varied according to individual allegiance to the Vichy regime or sym-pathy with the Allied cause—but no open display of sympathy was made.

From Dakar some of us were taken to Casablanca, then to a grim prison camp under the ramparts of the Atlas Mountains. They gave us cubes of tough meat that the Vichy French guards called boeuf, veau or mouton, but which were easily recognized for what they were—goat. And we had a 'high' tea consisting of black bread and hard-boiled eggs. The only privileges we re-ceived at this wretched camp were accorded secretly by De Gaullists among the guards. What with dysentery and skin troubles our lot was indeed unenviable, and then prolonged gunfire from the direction of the coast one morning set us all seething with excitement.

A FTER much suspense, we came to learn the truth of a stupendous event. The Allies had landed in North Africa! Jeeps came roaring down the rough road outside our compound. "The Yanks! The Yanks are here!" We yelled ourselves hoarse. It was November 11, 1942, a red-letter day in our lives. We were taken to Casablanca, feasted lives. aboard transports and cargo-carriers, and all arrangements made for our repatriation. I returned to England via Norfolk, Virginia, and New York; and another red-letter day for me came a bit later at Liverpool when I was provided with a brand-new uniform and appointed purser in the ocean-going steamchip Wanderer.

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# British-Loviet Frontier Post in Germany



ON THE AUTOBAHN NEAR HELMSTEDT is the British-Soviet frontier control point in Germany. Helmstedt is a small town 21 miles east of Brunswick and about 117 from Berlin, and the post is one of the busiest on the Russian line. Night and day a British sentry is on guard beside the red-and-white pole which can be lowered across the road as a barrier. The soldier on duty (above) is Pte. F. Kendrick, of Walsall, serving with the 2nd Battalion The South Staffordshire Regiment. See also page 711.

Exclusive to The War Illustrated

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