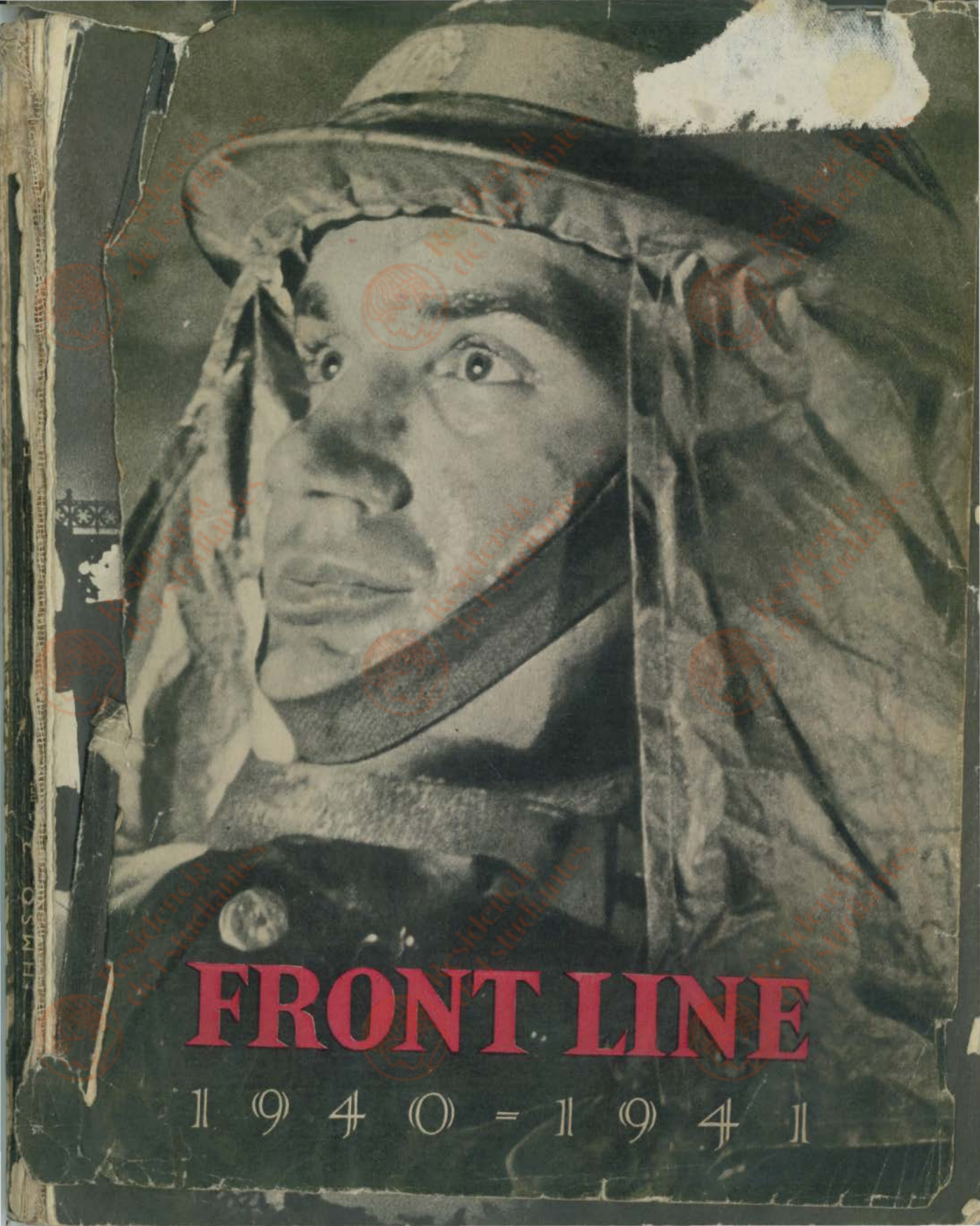

FRONT LINE
1940-1941

Issued for the Ministry of Home Security
by the Ministry of Information

FRONT LINE

1940-41

The Official Story of the
CIVIL DEFENCE
of Britain

1942
London: His Majesty's Stationery Office

Contents

The photographs on the cover and front end-paper and the night views of London fires in Chapters 2 and 3 are from a series taken by Mr. George Greenwell for "The Daily Mirror," by whose courtesy they are reproduced.

To be purchased from His Majesty's Stationery Office at York House, Kingsway, London, W.C.2; 120 George Street, Edinburgh, 2; 39-41 King Street, Manchester, 2; 1 St. Andrew's Crescent, Cardiff; 80 Chichester Street, Belfast; or through any bookseller. Price 2s. 0d. or 21s. 0d. for 12 copies. S.O. Code No. 70-410*

There are many men and women in the Forces who would welcome a chance of reading this book. If you hand it in to the nearest Post Office, it will go to them.

Printed by L. T. A. Robinson Ltd., London, S.W.9

PREFACE

I

"FRONT LINE" is a tale of individual effort and performance, and to omit every personal name was a hard decision. But where tens of thousands are known to have done brave deeds, and ten times more did deeds as brave, but unmarked and unrecorded, choice was impossible. Those whose deeds and stories are recounted in these pages speak now, as then they acted, not for themselves but for Britain.

II

What follows is a narrative of action, not an account of organisation. It tells of the fall of bombs and of what was done about them by the men and women on the ground. It says nothing of administration, national or local, except the little that is necessary to explain the deeds of those in the field of conflict who coped directly with raids and their after-effects.

III

The Ministry of Home Security, in preparing the story, enjoyed the help of many other Government Departments which deal with civil defence. Foremost among these was the Ministry of Health, whose concern with the subject is especially wide. Valuable assistance was also given by the Ministry of Works and Planning, the General Post Office, the Scottish Office, the Northern Ireland Ministry of Public Security, the Ministry of Agriculture and Fisheries, the Ministry of Food, the Ministry of War Transport and the Assistance Board. Grateful acknowledgment is made to each of them, and also to the Electricity Commission, the London Gas Centre, and the Metropolitan Water Board.

1

The Approach to the Battle

THE FIRST BOMB fell upon Hoy in the Orkneys on 17th October, 1939. The first civilian was killed at Bridge of Waith, Orkney, on 16th March, 1940, a half-year after the outbreak. The first bombs on the mainland of Britain for 22 years fell near Canterbury on the night of 9th May. On 24th May, the first industrial town was attacked—Middlesbrough. The first bombs on the London area hit plough-land at Addington in Surrey on 18th June.

This was on the night after the day of the French surrender, and the German Air Force gave quick token of its next intentions by sending night bombers over Britain in some numbers. Strategists call the movements and field preparations leading up to a battle the approach. The 18th June opened the Approach to the Battle of Britain. From that day until 8th August, the Luftwaffe reorganised after its continental exertions, prepared its newly won bases, and gave its heavy bomber squadrons practice in the neglected arts of night navigation. It reconnoitred British coasts as far round as the Bristol Channel, and smelt out by night what was later to be its northerly rat-run across Bristol and up the Welsh border to Merseyside. There were night attacks on various towns, no doubt for practice, and also some rather ineffective raids on aerodromes. The first daylight attacks were on 1st July at Wick and Hull. As the weeks went on reconnaissance of ports and aerodromes increased. These flying visits were often made in force, and Dover had three sharp bombing attacks in the last days of the month: after this there were no more daylight attacks until the Battle of Britain.

Three hundred civilians were killed in this approach phase. The civil defence services, long trained and not yet tried, were finding their feet, making some remarkable reports on the dropping of sinister white powders by enemy planes, and the attraction exerted from the beach, by a derelict magnetic mine exploded there, on potatoes, which were " drawn towards the crater over the brow of a hill 90 yards distant ". Wardens inviting the public to take shelter on the warning were sometimes answered disrespectfully. The British did not yet quite know themselves as citizen warriors, and there was a certain amount of concern —though on no particular evidence—about the possibilities of panic, " especially among women workers in factories." Few would then have thought it possible that some weeks later a bomb falling directly on a warehouse above the largest shelter in London, and driving dust and debris down upon thousands of the poorest and most mixed of the capital's population, would cause no panic at all.

Until after the war no one will be able to say for certain what the enemy's mind was at this time. He gave every outward sign of working up to all-out air assault as a preliminary to invasion. On 19th July Hitler delivered his " last appeal to reason " and his planes dropped it here and there about the countryside. He did not, however, neglect to prepare for the delivery of other arguments that may have seemed to him still more cogent. Meanwhile the British sold copies of his leaflets to one another for the benefit of the Red Cross.

The Battle of Britain began over the sea on 8th August, over land on 10th August. The first bombing attacks made on ports in substantial force were both costly and unproductive. On 12th August the enemy turned his attack to the southern aerodromes, with some later attention to ports

and aircraft factories, and began those sallies towards London that culminated on 7th September.

The story of the month in the air has been told and is known. Ground activities were little more than the shadowy image of events above. Noise filled the whole expanse of sky above the Kentish fields—the vibrating hum of engines and the rattle of machine-guns, sometimes high and faint, but sometimes loud and near, as an unattended Nazi fighter saw civilians on the ground and came down to practise what he had been taught. The land girls took their hands from the plough for long enough to put on their steel helmets, and carried on. The tractor drivers worked in pairs, facing opposite ways across the field, for their engines drowned the noise of planes, and if they were to be machine-gunned they wanted warning. As the bombers hammered at our aerodromes, cows were slaughtered in the nearby meadows, and the craters multiplied hourly. Children at tea in the trim gardens of Sevenoaks and Tunbridge Wells defied their harassed nannies' orders to come to shelter and stared at the combats overhead. Jettisoned bombs, or deliberate attack, wrecked villages and battered towns.

There were tragic happenings in the frontier counties, inviolate since Hastings, and there was magnificent courage on the ground as well as in the air. The Civil Defence Services had work to do among the wrecked streets and farmhouses; and they had the honour of some direct part in the Battle of Britain itself. Firemen of Kent, Sussex and Surrey had heath and forest fires to fight, house fires, ship fires in the Dover and Ramsgate harbours, fires in crashed aeroplanes. But the aerodromes mattered most; the fires upon them numbered scores and hundreds, big and small, and to fight them under bombing became almost a matter of routine. At Manston, late in August, firemen fought fires in hangars and stores for two days and nights on end. Both then and afterwards they had some stern tests under the dive-bombing of that much-battered airfield. Ambulance and rescue workers also shared some of the hazards of the R.A.F. on aerodromes all the way from the coast to the London outskirts.

But the enemy had a thought to spare for other parts of the country, too. When the Luftwaffe, after its first rough handling, took five days off from 18th August to the 23rd, it was not quite idle. On the 19th bombers started an oil fire that burned for many days, and gave hundreds of firemen their first taste of wartime fire-fighting. It was a gruelling and a gallant struggle, and it saved many of the threatened tanks.

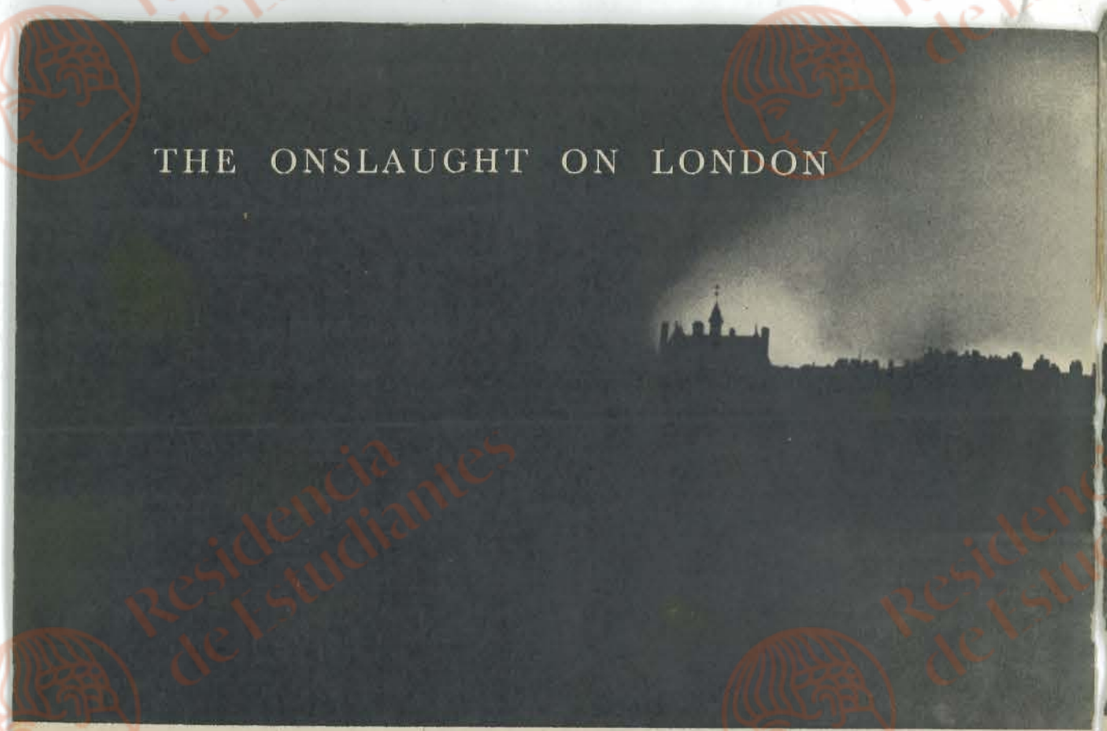
After the renewal of the air battle, the enemy's thrust at London intensified. Croydon aerodrome had been attacked on 15th August and the neighbourhood had suffered. Often there were bombers over the outlying parts of the capital in daylight, but never

in force. At night reconnaissance went on steadily, with occasional bombs. The first general night attack on the London Region was on 24th August; another widespread raid followed on the 30th, and by 5th and 6th September the attacks could have been called heavy. It was clear that the two rising curves of attack by day and by night would soon meet. London's share in the Battle of Britain was about to begin.

The story of civil defence is not itself concerned with the high strategy of enemy air attack. But the bombing of London on 7th September and for the four weeks following can be understood only if it is seen as something different from the subsequent attacks on the capital and the onslaughts on other cities. Until the beginning of October the enemy sought to vanquish London by a knock-out blow, as part of the same total operation that included the attacks on the R.A.F. and its aerodromes. He was plunging for a quick finish. When he finally accepted the R.A.F.'s mastery and ceased to use his big bombers by day, on 5th October, the strategic aim of the attack on London changed. Its weight hardly lessened, but the enemy was able to find some night bombers for the provinces.

If the enemy launched no heavy daylight attack on the capital in the four weeks after 7th September, it was by no means for want of trying. Many times after that day he had bombers driving at the heart of London, but when they got through, which was not often, they evidently had other things to occupy them than the question where best to loose their bombs. Except for two attacks on Buckingham Palace, other odd sorties, and some harassing visits to the East End, the day onslaught so hopefully launched on 7th September had no future. The night was another matter.

THE BATTLE NEARS LONDON. Seen across the Surrey hills on a tranquil August afternoon, black smoke in the direction of London shows that the battle is beginning. It marks a raid on Kenley aerodrome.



2

The Thing Happens

"The attacks of our Luftwaffe are only a prelude. The decisive blow is about to fall."

The German News Bureau to Germany, 30th August, 1940.

LONDON KNEW what was in store. The Air Minister had given warning that the Battle of Britain had thus far left the enemy's heavy-bomber force mainly inactive, waiting on its cross-Channel aerodromes. Göring had said bluntly that the night raids of July and August were mere armed reconnaissances. For years Londoners had been instinctively aware of the shape of things to come. Now they understood that things were coming to them, and they were ready. Ready, that is to say, as far as any city could have been ready for a test that can never be understood until it is experienced; ready for sacrifice and mentally stripped for action against the unimaginable.

On 7th September Göring told the German people; "This is the historic hour when our air force for the first time delivered its stroke right into the enemy's heart."

And on 7th September it came. That gloriously fine Saturday afternoon a senior Fire Officer off duty was having a leisurely tea in the shade on a Dulwich lawn. There were planes about, and some gun noise—when had there not been? But suddenly, soon after five o'clock he saw a great rash of black dots breaking out to the north against the summer sky—hostile planes, in numbers never yet seen over any great city, moving up-river from the East. There were the heavy thumps of distant bomb explosions, and then column after column of black smoke, growing up like trees, merging into a curtain, spreading out into a great rolling cloud. The Fire Officer knew that this was business. He was out of his flannels, into his uniform and in five minutes on his way to Headquarters and to a greater fire-fight than any he had seen or imagined.

There were in all 375 bombers, and fighters, in waves. They dropped their bombs on Woolwich Arsenal, on the immense gas-works at Beckton—London's first civil target—on the docks at Millwall, on the docks at Limehouse, and at Rotherhithe, on the docks by Tower Bridge, on the Surrey Docks, on the West Ham Power Station; they went on across the City and Westminster and bombed a crescent in Kensington.

This was daylight bombing; the Germans could see, and while many of their bombs went wide among the little dockland houses and the tenements, many found more legitimate marks. It was London's only big day attack; and it taught her Civil Defenders, when later they looked back upon it, how much the Royal Air Force did for the capital when it forced the enemy into night-bombing. The docks blazed along all their miles, on both banks of the river, and the wondering watchers looking down-river from the central bridges saw the sun's own light grow pale beside the crimson glare that hung and flickered above the eastern boroughs.

By 6 o'clock the day raiders had gone. There was a two-hour break in the attack. At ten minutes past eight the night raiding force appeared, guided straight to its targets

4.56 P.M., 7th SEPTEMBER, 1940 ; the sirens announced the attack on London.

by huge riverside fires which it set out to stoke with high explosive and incendiary bombs. Until 4.30 next morning the droning procession went on. Some 250 bombers were over the city. When the last departed, there were, as product of the day and night attack, nine conflagrations (huge spreading areas of flame), nineteen fires that would normally have called for thirty pumps or more, forty ten-pump fires, and nearly a thousand lesser blazes, of which no more can be said than that scores of them would have been front-page stories in peace time.

In the dockside boroughs thousands of houses were destroyed or damaged by bomb and fire, though many of them not irreparably. The factories that sprinkle London and the railway lines that run so plentifully near the river had their inevitable share of hits. Three of the main line terminal stations were out of action.

Four hundred and thirty men, women and children lost their lives and 1,600 were seriously wounded. Fire did little of this slaughter : it was wreaked by collapsing walls and ceilings, by the direct impact of bombs, by flying brick and stone, by swift javelins of splintered glass.

Sunday saw no more raiders. The sun rose and shone above gradually diminishing flame, while dazed East-enders rubbed their smoky eyes, picked their way among the stony rubbish in their streets, and worked, many of them, to clear their city and their home.

But that night at half-past seven the procession of bombers began again. For nine-and-a-half hours some 200 bombers dropped their tonnage of destruction, once again on the East End, but this time on the City proper as well.* The night's fire-raising tally was no less than twelve conflagrations in the docks and the City. As before, factories were hit, and a great number of houses damaged. By Monday morning every railway line from London to the south was out of action, but now Londoners began another stage in their education, learning how quickly such injury could be made good, how soon by repair or the improvisation of other methods vital functions could be resumed.

On that Sunday night, 412 civilians were killed and 747 seriously injured.

Monday night was the third of the bombardment, and the attack was widened beyond the previous limits. Two hundred bombers attacked all districts, apparently

* Apart from London Region, an administrative area including a little of the semi-rural fringe around the capital, there are three Londons : Greater London, the whole mass of built-up streets, including outer suburbs (normal population eight millions) ; Metropolitan London, or the Administrative County of London (the inner area, with four million inhabitants in peace time, but a mere fraction of the area of Greater London) and the City proper (capital C), the square mile that encloses the Bank, Lombard Street and Dick Whittington's latest successor. In these pages " city " (small c) is sometimes used loosely of Greater London.

THE LUFTWAFFE SOUGHT A KNOCK-OUT BLOW. The first impact of the attack fell on the docks. The great day raid of 7th September, 1940, which was continued throughout the night and renewed on many nights after, left miles of fires blazing along either bank of the Thames. This is St. Katherine's Dock on the night of 11th September.

FIFTY THOUSAND H.E. BOMBS fell on London between the beginning of September, 1940, and the end of July, 1941.

indiscriminately, from 8 o'clock in the evening till 4.30 in the morning. The pattern of destruction was much as before except that the long tale of injury to famous Metropolitan landmarks began with damage to the Royal Courts of Justice and to Somerset House. On this night 370 were killed, 1,400 injured.

Tuesday night it happened again. But Wednesday was a landmark. The anti-aircraft barrage went into full action, and the people were delighted and exhilarated by its shattering intimation that London could give it back as well as take it. The barrage was more than a comfort; though no planes were brought down, the enemy was plainly affected by no longer having the sky to himself. His attacking force was as large as before, and the death roll was 356, but damage to railway, factories and utilities was a good deal less, and so was the list of big fires.

To pursue the narrative of nightly attack further, and in detail, would produce only monotony. By the end of five or six days, Londoners appreciated the fact that they were in for a long siege. Of their thoughts and doings on the ground some account will be given. For the present we will outline the tale of enemy attack.

The capital was bombed every night in September, by forces averaging roughly 200 planes, fluctuating between 50 and about 300. There were 5,730 people killed and nearly 10,000 badly injured. Railways and railway stations were hit, telephone exchanges temporarily put out of action, roads blocked by craters or the debris of shattered buildings, gas, water and electricity mains were fractured and districts here and there cut off from their supplies for a time. The capital's heterogeneous industries did not escape; and scores of thousands of houses suffered different degrees of injury, from the loss of a few tiles or a window to complete demolition. Hospitals were marked out, it seemed to many by malignant design, for special

attention, and the list of famous buildings struck is too long to reproduce. It was the record month of the air blitzkrieg. The enemy had intended it for the knockout blow.

But by the first week in October German propaganda began to present the air campaign as a war of attrition. In that month the attack was slightly less intense. Yet it was bad enough. Heavy loads of bombs were dropped every night but one; and the bomb-proud may take comfort from the fact that even on that one night (the 6th) a single bomb fell, giving at least formal support to Londoners' claim that they endured continuous bombing for fifty-seven nights (7th September to 2nd November, inclusive).

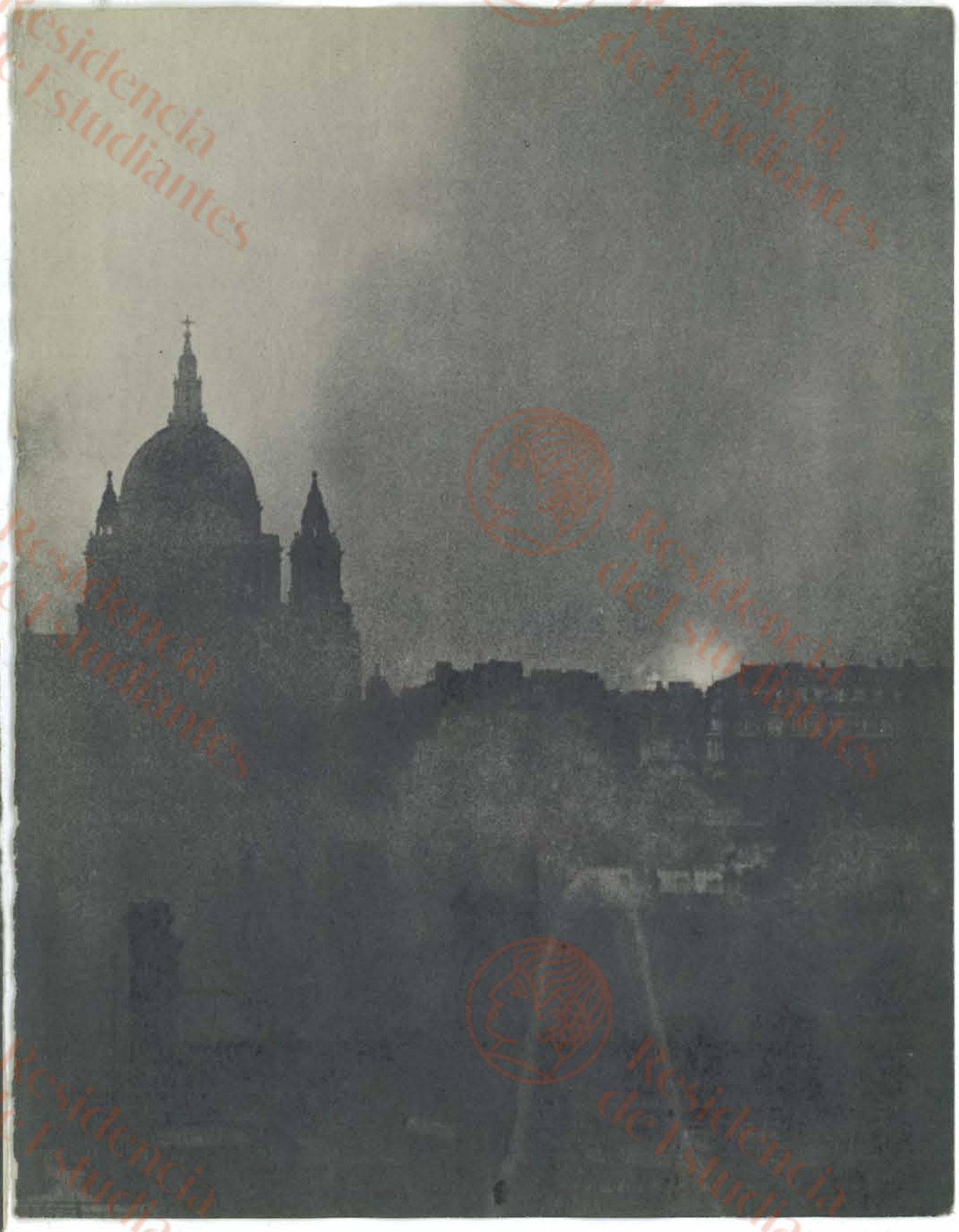
The greatest attack of the month took place on the night of the 15th—full moon. The moon-goddess had a long flirtation with the Nazi bombers, attracting them powerfully in those early months. Later our night-fighter pilots proved the lady frail and won her favour for themselves, to the enemy's great discomfiture. But that is another story. On this night over 400 bombers crossed the capital; and they dropped well over a thousand bombs. They killed 430 civilians and wounded about 900. Five main line termini were put temporarily out of action and four others interfered with. No London worker needed to offer excuses for late arrival on the morning of 16th October. But they got to work somehow—then, and on all the other mornings of the month, though the bombers kept coming in their hundreds every night.

November's long nights at first told the same tale of destruction. There was an attack on every night of the month but three. But on 14th November came the great attack on Coventry—very far from the first, but up till that time much the heaviest, attack on a provincial city. On the following night, the 15th, London had its biggest attack of the month, and looking back with later knowledge we can call this raid the beginning of the end of the German attempt to wear London out by continuous night raiding. There were more raids, nearly every night of the second half of the month, but most of them were fairly light. The Germans' thoughts were elsewhere in the island.

No one can say exactly what number or weight of bombs was dropped on London in those three months. The Germans have published figures, worth as much credence as their other war statistics. In fact they

MILLIONS OF FIRE-BOMBS rained on London in the same period. They did not all fall on roads.

THE STROKE AT THE HEART



THE CITY BURNS. From the dome of St. Paul's, 29th December 1940.

do not know, for their pilots dropped their loads sometimes where they had been told (more or less), sometimes where the counter attack forced them, and sometimes on the healthier side of the barrage which ringed the city—a circumstance unlikely to have figured in their reports. The defenders' own ways of counting were incomplete at first. But some fairly reliable estimates can be made. Something like 10,000 high explosive bombs were dropped on London region in September, of a total tonnage well above 1,000. The main weight fell upon Stepney, Poplar, Bermondsey, Southwark, Lambeth, Deptford, Shoreditch, Bethnal Green, Holborn and the City itself, but the riverside boroughs further west as far as Fulham also had a heavy load. There were at least three boroughs where, in those twenty-four nights of raiding, over a hundred bombs fell for every square mile of the area.

In October nearly 10,000 bombs were dropped, in November about 7,500. The spread was wider than in the first month, and the area of main density was a little further west, centring on Westminster.

In the three months 12,696 civilians in the London Region were killed and about 20,000 seriously injured, by something like 36,000 bombs weighing perhaps 6,600 tons. In the central boroughs (the County of London) the air raids doubled the normal death rate for those who remained in the blitzed area ; but this, of course, must not be allowed to obscure the fact that the chances of mortality were far more than doubled for those younger citizens whose expectation of life in peace time was far above the average.

Thereafter the story of London's attack ceases to be the unique thing it was for those first ten weeks, and begins to resemble the record of the great provincial centres. The strategy of the knock-out blow gave way to that of the bombing of ports and commercial centres, which was to last as long as the enemy's bombers remained in the West. London had, in December, January, February and March, what Londoners called light months. In fact, the capital had only eight more big raids (two of them two-night affairs) in the long half-year that ended with the invasion of Russia.

Two of these eight were in December, on the 8th and the 29th. The first was made by between 300 and 400 bombers. They dropped a well-mixed collection of explosive and incendiary bombs widely over most of the city's area, killing 250 and wounding over 600. The House of Commons suffered its first bad injury, to the cloisters.

At the end of the month came the great fire raid on the City proper, when over 100 planes showered incendiary bombs on the capital's least defensible area for just over three hours, and in that short time started fires which burnt out six great sections. The whole area between St. Paul's and Guildhall was impassable while the flames burned and for hours afterwards. The conflagration around Fore Street was abandoned to burn itself out. Another great blaze covered an area of about half a square mile, from Moorgate to Aldersgate Street and Old Street to Cannon Street. The district remains to-day perhaps the largest area of continuous air raid desolation in all Britain.

The Guildhall was greatly damaged, eight Wren churches suffered seriously, the Law Courts and the Tower of London were hit. St. Paul's stood up almost unscathed, surrounded though it was by fires.

The night's fuller story belongs to another chapter, but here we may record how at 10 o'clock the astonished firemen and civil defence workers found that the enemy had deserted his magnificent target. With the greatest fires of the war raging below him and the entire City of London with its neighbouring boroughs at his mercy, he called the attack off. And so the overborne firemen were left to cope with their broken mains and limp hose-pipes, without more hazard than they might encounter from 100-yard flames, acres of falling walls, and thousands of flying embers.

From that night British citizens were forced to the realisation that civil defence was everybody's business, and that the answer to concentrated fire attack required the watchful eyes and quick hands of roof and street patrols twenty times more numerous than fire brigades could ever be.

London's next adventure came on the two nights of 11th and 12th January. On each night a bombing force came over nearly as large as that which had raided the City. A nice proportion of high explosive mingled with the incendiaries was perhaps intended to make things difficult for the new citizen fire-bomb-fighters out on the job in their hundreds of thousands. The recipe was not a success. Many fires were started, but few developed, and none got right out of hand. By six in the morning none was showing a light. Other damage was equally limited.

Then there came two months by no means without activity, but without heavy raiding, and it was not until 8th and 9th March that a big attack occurred. On each of these nights some 150 bombers appeared, leaving the usual wreckage and killing over 200. Ten nights later a very large force, some 300 planes, launched on London what proved to be the much-stricken Capital's most costly attack, so far as human life was concerned, up till that date. By a series of particular misfortunes, 751 civilians were killed on that night and 1,170 injured. The damage, too, was heavy, and the raid as a whole was as great as anything yet endured, ranking with the " previous biggest " of 15th October.

Next came the two great April raids—" the Wednesday " and " the Saturday," as all Londoners who lived through them will always identify them. They were 16th and 19th April. On the earlier night some 450 bombers were estimated to be over London. They dropped a great tonnage of very large bombs mostly over the South and Centre.

FIRE WAS EVERYWHERE. Incendiaries fell in Whitehall, around the nation's memorial to those who held another front line twenty-five years before.

THE FIREBOMBS FELL in Eastcheap on City businesses : 11th January. *Below*, they fell on shopping centres : Holborn Circus, 16th April, 1941.

They killed over a thousand and injured twice as many. Eighteen hospitals and thirteen churches were damaged and over sixty public buildings affected, including (again) the Houses of Parliament and the Law Courts. St. Paul's was directly hit. Several telephone exchanges were damaged, but on the whole the utility services did not suffer as might have been expected.

Three nights later about 350 bombers came again. Interrupted for an hour or so by drizzling rain, they nevertheless achieved another attack, more concentrated in area, just as grievous in its casualty results, but with rather less material damage.

It says much for the Capital's increasingly well-developed repair and restoration services that they took in their stride the combined effect of these two great raids and reduced them, on their material side, to the level of temporary inconveniences.

Just at this time the Royal Air Force had heavily raided Berlin, and these two London raids may have been among the instances when the enemy suspended his planned operations to indulge in angry retaliation.

On 10th May came the Luftwaffe's final fling before its journey to—or towards—Moscow. For five moonlit hours over 300 bombers dropped great numbers of incendiaries and heavy explosives, causing a serious fire situation, setting a new record for casualty figures (1,436 killed and 1,792 injured) and doing great damage to public buildings. The House of Commons Chamber was destroyed. Westminster Abbey was hit, so were the British Museum, the Law Courts, the War Office, the Mint, the Mansion House and the Tower. Five of the Halls of the City Companies were destroyed and many famous churches damaged.

Certainly the Luftwaffe had left London something to remember it by. But it had its own reason not to forget 10th May, for on that night the Royal Air Force (with the help of the A.A. gunners) built a real landmark by destroying at least thirty-three heavy bombers—and very likely more. Even the figure of "certainties" was almost surely a good deal more than 10 per cent. of the enemy force, since it is well known that at that time a number of the Nazi planes were making two trips a night. Great as was the raid damage the Royal Air Force's achievement was perhaps the more significant.

After this London had, by her own standards, but small raids, the last of all on 27th July.

In the eleven months from September, 1940, to the end of July in the next year, it is computed that, not counting incendiaries, between 45,000 and 50,000 bombs were dropped on the London Region, of a total weight of about 7,500 tons.

No one can pretend to offer exact accounts of what the enemy sought to achieve by his onslaught on London in its various phases.

All over London people in the know and people in the street will tell you, of this bomb or that group of craters, "he was aiming at the town hall" or "those were meant for the station." But taking all the facts together, no such theory finds proper support.

The enemy's objectives were, in fact, generalised—especially at first. He aimed at the docks at large, at the administrative and commercial centres, at some big areas containing complicated railway systems. It may be open to question whether as a regular policy he aimed at hospitals and public buildings, but he often hit them.

Moreover, the special interest which he showed at first in the docks, railway networks, power and gas works and administrative centres soon died away. More and more nakedly there emerged his purpose to achieve the greatest possible destruction—

TOTAL ATTACK. As the attempt to hit special objectives failed and died away, the enemy turned to mass bombardment. Churches were inevitably hit: the tower of St. Clements Danes a chimney of fire, May 10th, 1941.

3
The Battle of the Flames

"It is a question of time—a few short weeks, then this conflagration will have reached its natural end."

Bremen broadcast, 10th September, 1940.

WHEN THE BIG RAIDS began, four-fifths of London's auxiliary firemen had never seen a fire. Itching for experience, those who could had gathered in quite unnecessary numbers round any "peace-time" fire that they could reach. There had been a big air raid fire in the City on the night of 24th August, and the Thames-side oil fires were an especially pungent appetiser for those who partook. But on 7th September the auxiliaries, four-fifths of them with no prior experience of actual fire-fighting, faced the greatest incendiary attack ever launched.

In normal times a fire requiring thirty pumps to fight it is a very big fire. Shortly after midnight the first night there were nine fires in London rating over 100 pumps. In the Surrey docks were two, of 300 and 130 pumps; at Woolwich Arsenal, 200 pumps; at Bishopsgate Goods Yard and at five points on the docks, hundred-pump fires. All these were then technically "out of hand," that is to say unsurrounded, uncontrolled and spreading.

In Quebec Yard, Surrey Docks, was the night's biggest fire—immense in its area, moving with disconcerting speed, generating terrific heat. It was thirty or forty times larger than the great Barbican fire of 1938, the biggest in London's recent history. It set alight the wooden blocks in the roadways, a thing without precedent. A blaze covering such an area is not only worse than a smaller one in direct proportion to its area, but is far harder to fight than its mere extent would suggest. The greater the cumulative heat the fiercer the draught of cold air dragged in to feed it, and thus the quicker the movement of the fire and the greater the length of its flames. They were so long and their heat so great as to blister the paint on fireboats that tried to slip past under the lee of the opposite river-bank 300 yards away. Solid embers a foot long were tossed into streets afar off to start fresh fires. Stocks of timber which the firemen had drenched began at once to steam, then to dry, then themselves to burst into flame in the intense heat radiated from nearby blazes.

While the men fought this monster the enemy naturally did not spare so promising a target. Bombs fell incessantly all night. Time and again they would rekindle an area that had just been laboriously conquered. Only with daybreak could real progress begin. The exhausted men could not be relieved after a normal interval because the brigades were fully extended. Many firemen were at work here for forty hours, some officers for longer. In the end, of course, the fire was mastered, and London's novices who helped to fight it had had, with their regular comrades, a concentrated experience without parallel in years of peace-time fire-fighting.

This was but one of the night's events. At Woolwich Arsenal men fought the flames among boxes of live ammunition and crates of nitro-glycerine, under such a special hail of bombs as the enemy could then devote to London's No. 1 military target. But in the docks themselves strange things were going on, as they did on many nights thereafter. There were pepper fires, loading the surrounding air heavily with stinging particles so that when the firemen took a deep

breath it felt like breathing fire itself. There were rum fires, with torrents of blazing liquid pouring from the warehouse doors (nor any drop to drink) and barrels exploding like bombs themselves. There was a paint fire, another cascade of white-hot flame, coating the pumps with varnish that could not be cleaned for weeks. A rubber fire gave forth black clouds of smoke so asphyxiating that it could only be fought from a distance, and was always threatening to choke the attackers.

Sugar, it seems, burns well in liquid form as it floats on the water in dockland basins. Tea makes a blaze that is " sweet, sickly, and very intense." It struck one man as a quaint reversal of the fixed order of things to be pouring cold water on to hot tea-leaves : and the resulting brew was like nothing but the morning-after slops that the W.A.F.S. (Women's Auxiliary Fire Service) girls threw out of the canteen. A grain warehouse on fire brings forth unexpected offspring—banks of black flies that the firemen's jets wash off the walls, rats in hundreds, and as the residue of burnt wheat, " a sticky mess that pulls your boots off."

INTO THE BATTLE. Before September, 1940, four-fifths of London's auxiliary firemen had never fought a fire.

Into this infernal bazaar the firemen had journeyed at once and they kept coming back as long as the enemy did. This narrative from an auxiliary fireman gives something of the atmosphere of the first nights.

" Most of us had the wind up to start with, especially with no barrage. It was all new, but we were all unwilling to show fear, however much we might feel it. You looked around and saw the rest doing their job. You couldn't let them down, you just had to get on with it. You began to make feeble jokes to each other and gradually you got accustomed to it. . . The fires had a stunning effect. Wherever the eye could see, vast sheets of flame and a terrific roar. It was so bright that there was no need for headlights.

" On 7th September we took our pumps to East India Dock, to Rum Wharf. The first line of warehouses was ablaze from end to end. . . I walked down between the two warehouses by myself. Half-way down was a staff car in the middle of the causeway. Standing nonchalantly by it was a young W.A.F.S., outwardly not taking a blind bit of notice of the stuff that was falling pretty thick all round. Seeing her I strolled past as if I was used to walking out in the middle of falling bombs every Saturday afternoon. We gave each other a sickly smile and I passed on. . .

" The fire was so huge that we could do little more than make a feeble attempt to put it out. The whole of that warehouse was a raging inferno, against which were silhouetted groups of pigmy firemen directing

THE FIREMEN WERE AT THE FOREFRONT OF DANGER. Where the flames were, the bombs fell. They fought the greatest incendiary attack ever launched ; they fought it on land and water, by night and day.

IN THE HEART OF THE FURNACE.
Ave Maria Lane, 29th December, 1940.

FIRE IS A LIVE THING, STRETCHING AND SPREADING. Southwark Street, 16th April, 1941.

their futile jets at the wall of flame. . . While we were working on our branch—we had to keep in the same position for hours on end, unable to let go of the branch to take cover when bombs fell—a large cargo ship took fire for'ard. . . We put this fire out in half-an-hour and then returned to our warehouse.

" In spite of the numbness you have time to think a little while you crouch over the branch and I remembered the crowd of women and children whom we had met as we rode in, streaming away from the danger area, carrying bundles over their shoulders. Some would run out into the roadway and call to us to come and attend to their fires. . .

" Occasionally we would glance up and then we would see a strange sight. For a flock of pigeons kept circling round overhead almost all night. They seemed lost, as if they couldn't understand the unnatural dawn. It looked like sunrise all round us. The pigeons seemed white in the glare, birds of peace making a strange contrast with the scene below.

" When the real dawn came about five, the Germans eased off their blitz. The All Clear raised a weary cheer. By 7 o'clock I was hunched half-asleep across the branch holder. At last the relief crews arrived. Knowing that we were returning home gave us that extra ounce of strength without which we could hardly have hoisted the rolled-up lengths on our shoulders."

The first twenty-two days and nights of the London raids were the testing time of the fire brigade. During those nights they, and their Regional and other reinforcements, attended nearly 10,000 fires. After the first two nights they began to get the enemy's measure, and the number of conflagrations grew much less. The nightly total of fires attended exceeded 1,000 on three nights, and the total on other nights fluctuated between 40 and 950. Not all these engagements were fought without local retreats and some confusion.

FIRE DOES ITS WORK. The burning building crashes—No. 23 Queen Victoria Street, 10th May, 1941.

The early nights confronted the brigades with unheard of problems of mobilisation—the task of having the right number of pumps turned out from the right stations and present at the right fires—and of transport along roads pitted with craters and littered with debris. Experience taught its lessons, however, and the fire brigades' officers began to apply more and more successfully the strategy appropriate to the blitz, regarding each fire not as an objective in itself, but an element in the general situation of an area that needed to be appreciated and tackled as a whole. If it had been a question of sending to each fire what it required, first come first served, there would have been no problem. But to adjust limited resources to the relative needs of a whole district, sorting the hopeful prospects from the predestined " burn-outs " and concentrating on the fires that might spread dangerously, at whatever sacrifice of other fighting hopes—this called for judgment indeed, and judgment built upon no precedent, experience or teaching.

In October the enemy's attack was not as heavy, but even so the brigades turned out to about 7,600 fires, nearly 2,000 of them on two nights. This particular double onslaught was comparable in weight to September's worst; yet in the entire month there were no conflagrations and only twelve fires of more than thirty pumps.

In the ensuing weeks the attack was lighter again, with a heavy night on November 15th; there were but one conflagration and seven major fires in that month. This was encouraging evidence of the proficiency

and success of the fire-fighters; and it was strikingly confirmed by the result of one heavy attack. This raised 1,724 fires, by far the largest number the London Fire Brigade and the associated brigades of the outer Region had had to face. High explosive and incendiaries—many of them explosive—fell together for many hours of the raid, yet the firemen kept the number of major fires down to six, and there was no conflagration.

But if we had been learning, so had the enemy; and on 29th December he achieved the great City fire. He had a favourable prospect, for the vulnerability of the City had never been a military secret. He used skill, choosing a time when the City was empty—far emptier of fire-watchers than it should have been. He had luck, too, doing damage to mains which could not have been aimed for, but affected vitally the fire-fighters' prospects. The night's total was some 1,500 fires, intensely concentrated on and around the City, and they included six conflagrations and sixteen other major fires. The greatest were the half a square mile of fire in the Moorgate-Aldersgate Street area, and another, half this size, in the Minories. The damage in the City was very largely civil, though there was injury to a number of telephone exchanges.

The partial loss of the Guildhall was a sad blow, all the harsher in that the old building's fire defences proved quite adequate to defend it from its own bombs. It was the fire in the neighbouring church of St. Lawrence Jewry that did the damage. By 7.30 in the evening, an hour and a quarter after the raid began, the church was in flames, and the wind carried great showers of sparks and embers on to the Guildhall roof. At 8.30 the roof just above the Lord Mayor's screen caught fire. Just as it was almost extinguished the water supply failed and the wind increased. The whole roof was soon ablaze and fell in flames on to the floor where a huge fire burned. It was attacked whenever water was available, reduced to smouldering and finally put out without having done serious damage to the walls.

During these hours the flames seemed to be roaring and raging from one end of the City to the other; the glare was like daylight, and the streets were filled with driving galaxies of sparks. A watcher away across the river in Lambeth saw. . .

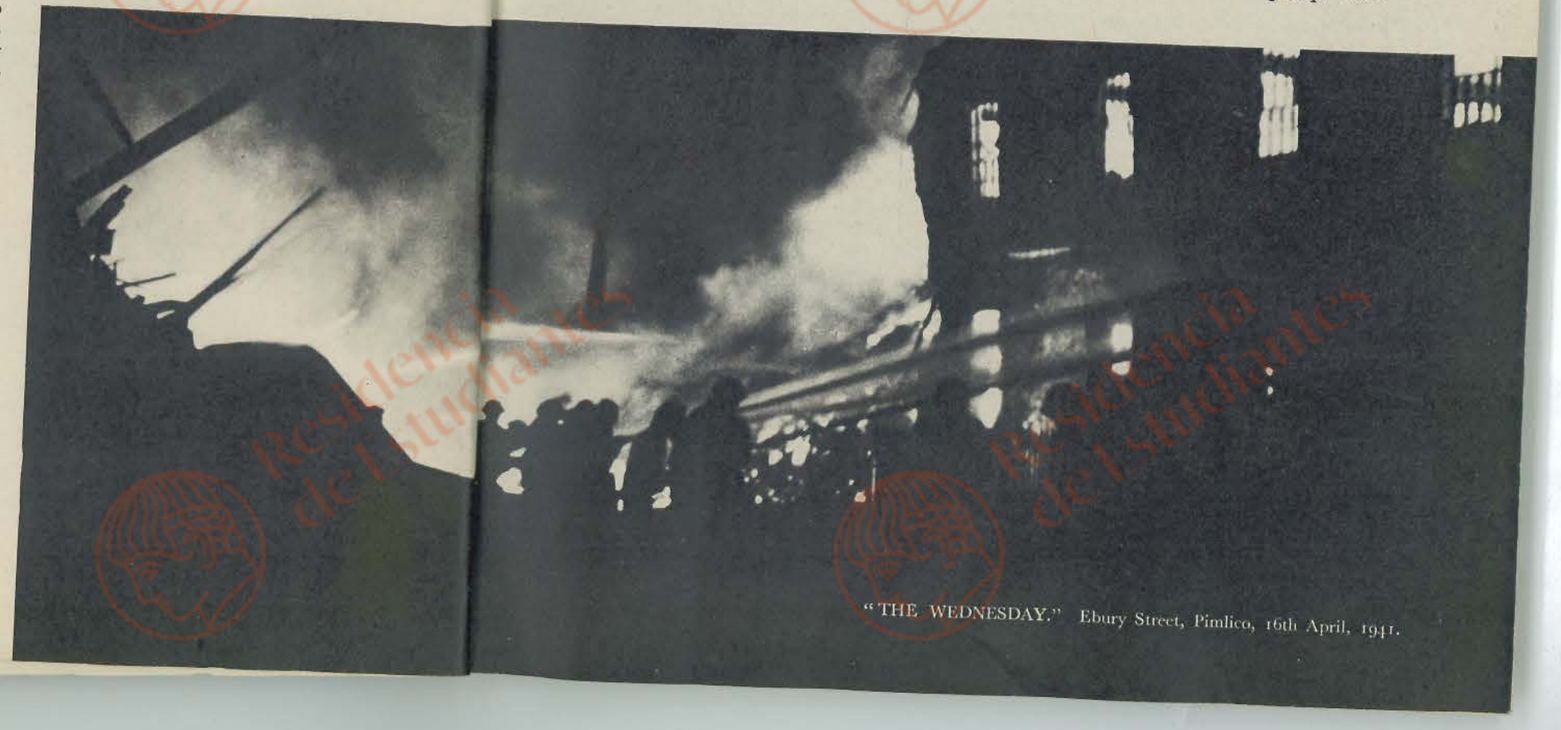
"An unforgettable sight. The whole of London seemed involved, one great circle of overwhelming disaster save in one corner . . . where the night sky was clear. One could not distinguish known buildings through the great clouds of smoke, except when there was a sudden spurt of yellow flames which lit a church tower . . . it seemed impossible that the City, that London, could be saved. There was only that one small bit of calm sky in the distance as a symbol of hope that the circle would not be completed. At last the news came through that water supplies were being restored—that the miracle had happened—St. Paul's was saved and the City, devastated, was still the City."

The brigades and their reinforcements were at full stretch, with many painful and strenuous interludes in search of water. Firemen on top floors got unparalleled views of St. Paul's dark bulk silhouetted against the blaze—and above it that clear patch of sky noted by the Lambeth watcher. There were wonderful escapes of firemen and civilians trapped by encircling flames and managing to find safe passage in the nick of time. But many of the human stories had no happy endings. A young fireman and his team, fresh from a successful struggle to keep the flames away from Dr. Johnson's house, lost their way in the smoke down a narrow street and happened upon a trailer pump crew working hard at a printing press building.

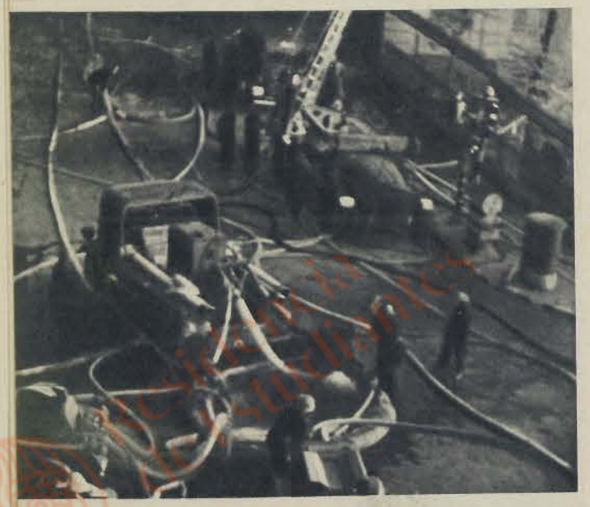
"I thought when I saw them that they were too near. Just at that moment a wall, which looked as if it was bulging dangerously, crashed down on them. As we looked round all we could see was a heap of debris with a hose leading towards it."

There were some heavy fire raids in January, February and March, but the lesson of 29th December had been learned, and the brigades found a fire fighting force on the scene before them. Citizens who had for many months been carefully trained to go to shelter when a raid developed, now came out, faced high explosives, and fought the incendiary bombs to a finish. The result was that despite some very heavy attacks the enemy achieved no mastery over the fire brigades for many weeks.

But 10th May was the climax, with nine conflagrations and a further twenty-one major outbreaks. It was a night that must have graven on many a fire-fighter's heart the words "no water." The breakage of mains was very great and the plans for multiplying the emergency water supplies were as yet far from fully carried out. The sheer weight of the calls on the brigades set the mobilising officers a formidable problem. In many a control room all pumps were



"THE WEDNESDAY." Ebury Street, Pimlico, 16th April, 1941.



THE STRUGGLE FOR WATER. A tangle of hoses at a corner of Thames Street indicates both the scale of the demand on water supplies and the complexity of the firemen's task.

9.40 p.m. BY THE CLOCK, but light as day. The City is its own torch, 29th December, 1940.

THE BATTLE HAS PASSED. Morning reveals the casualties caught by fire and bomb.

BEHIND THE LINES WERE MANY WORKERS. With the blitz still at its height, casualties are attended to in Westminster Hospital. The patient is a woman driver.

ordered out before midnight, reinforcements were in strenuous demand, and the pile of slips representing unattended fires grew on the tables. The women of the control staffs, inured to strain and steadfast through months of bombing, found their nerves stretched by this new test, and their sympathies tried by the messages they had to receive and transmit, ordering grimy men near the last stages of exhaustion out again to some pressing task.

At the Elephant a medium-sized fire grew into a great conflagration because every water main was dry, and a succession of lucky bomb hits defeated for hours every attempt to get water by other means. A group of pumps relaying water from a big emergency basin not far off was hit by a heavy bomb which killed seventeen men and blocked the only entrance to the water supply. A hose line laid with toil and sweat from a point on the river a mile and a half away was crushed and burnt by a collapsing building. Another mile and more of hose was laid from another point, but sparks and embers fell upon and holed it into uselessness before water came through. At last it was replaced. Water was beginning to appear when a bomb fell and broke it. It was repaired, but splinter holes and burns reduced its flow almost to a trickle. The fire, which had reached immense proportions, was finally controlled next day by relaying water through nine miles of hose from the river and a canal.

The tale of damage that night was crowned

by the entire demolition of the House of Commons Chamber, with its Press Gallery, Strangers' Gallery and Ladies' Gallery. Fire was the villain—no one knows exactly how caused. Some say high explosives also fell on or near the Commons, but this is uncertain. The fire buckled the roof trusses of the Chamber and expanded the stonework of the outer walls. The whole roof and part of the upper wall collapsed.

The roof of Westminster Hall suffered, and so, though not severely, did the Abbey itself. The lantern was ringed with a crown of flames, which happily were quickly put out by the emergency water with which the ancient building is well furnished. Just before daylight a fire officer outside the main door heard "a loud roar which tailed off into a long echo. I rushed inside to find a mass of burning debris in front of the High Altar. The whole of the roof above the lantern had collapsed, leaving a blue gap high above from which a few red cinders would occasionally drop."

The weight and persistence of incendiary attack which the enemy achieved in this raid, as he had done in some others both in London and the provinces, presented to the defence two problems which it was not then fully equipped to solve.

One was how to fight fires when main water supplies failed—the problem of emergency water. This could be solved only by an elaborate constructional programme which did not approach completion until much later. The other was how to concentrate defensive forces on the ground at a speed to match the intensity of concentration which the enemy could sometimes secure for his attack from the air. This was the problem of mobilisation and reinforcement. To solve it required radical reorganisation.

In August, 1941, came the constitution of the National Fire Service, which absorbed, reshaped and superseded the separate locally controlled brigades. Its formation is both the concluding episode in the battle of the flames of 1940-1 and also the opening chapter of another and a different story, not yet enacted.

ALL CLEAR.

FIFTY THOUSAND " INCIDENTS " were reported to London Control Centres during the Blitz. Against each, according to its size, the forces of defence and rescue were marshalled ; each was met by planned response.

4

The Fight for Human Life

" London is facing riots, the authorities prove to be helpless, and everywhere there is wildest confusion."

German broadcast to Germany, 3rd October, 1940.

EVERY ONE of the 50,000 high explosive bombs and uncounted masses of incendiaries that fell on London was part of a plan, or, to speak more strictly, of two successive plans. Against both plans, the general nature of which had been foreseen, the civil defence services were designed to provide the counter. In September the enemy sought a knockout blow ; perhaps in October, too. Later, he aimed at attrition and blockade. But the real object was the same ; only the pace and the intensity of the method were different. The enemy sought to destroy the bodily life of the capital : to cut the nerves, pierce the veins, sever the muscles, lacerate the tissues, and by those means to expel the indwelling life or deprive it of all effective strength. In reply, while the active defences did what they could to turn the attack aside or blunt its edge, the civil defence services must staunch the wounds and mend the torn tissues.

Or again, the enemy's onslaught could be likened to the assault of the sea upon a dyke ; the rampart might be weakened either by a few great tidal blows, or by the scooping fall of hundreds of waves. In either case, the defending air force and guns must seek to provide an outer breakwater ; the civil defence services must hasten to every breach and subsidence in the dyke itself, patching, building and thickening up, so that nowhere could the breaches link up into a continuous gap through which the sea might come in to overwhelm all.

While the bombs were actually falling, the defence on the ground against material damage was provided by the Fire Brigades. The A.R.P.* services were there to guard and succour the very heart and citadel of the city's strength—its men, women and children. To the site of every bomb-fall, duly noted and reported by the wardens to headquarters, there must come rescue parties to release the buried, casualty workers to care for the injured, wardens to point the way for both and to comfort and direct the people under the first shock.

Had these services failed, had men and women seen their kin unrescued and untended, and had they themselves been left without guidance or a sense of control, the fight for London could not have gone as it did. It was essential that every one of all those thousands of battles on the ground should be well fought ; the parties must be quickly on the scene, the rescue work done—and obviously done—thoroughly and with skill, the injured quickly cared for and removed, and a never-failing leadership in evidence.

It is impossible to tell the story of this fight as a connected campaign, one episode paving the way for another. Such is not the nature of civil defence. There were 50,000 episodes, alike in their underlying pattern, though different in their size and detail. Something of what they involved may be read in the final section of this narrative, where the work of the civil defenders is described. Here is one contemporary report of a big incident south of the river, inserted not as something spectacular, but as something quite ordinary, because it conveys a little of what the task was, and

* In September, 1941, the original title A.R.P. (Air Raid Precautions) was officially superseded by the phrase Civil Defence, which includes the Fire Service as well as the former A.R.P. services.

OUT IN THE BLITZ, silhouetted against the light of fires, rescue men climb into a building in St. Leonard Street, Shoreditch, to reach people trapped in the upper floors. This is the night of 11th January.

THROUGH THE LONG NIGHT the rescue men are at work, searching, helping to safety. This is 11th January, St. Leonard Street, Shoreditch, also.

the workmanlike spirit in which it was tackled.

"On the night of 15th October at precisely 19.55 hours a heavy H.E. bomb fell, entering the roof on the King Edward Walk side of the college and exploding on the floor above the room used as the restaurant. The bomb shattered the building from one end to the other, only the new extension escaping destruction. The force of the explosion broke up and threw huge sections of masonry, brickwork and reinforced concrete into the air which in turn fell on the adjoining houses on both sides of King Edward Walk, totally demolishing them.

"The wardens on duty at Post No. 3, about 200 yards away, felt a heavy thud at the time the bomb fell, preceded by a terrific swishing noise. They went out to investigate and ran into a huge cloud of dust in Westminster Bridge Road that completely blotted out the general view, and it was some moments before they were able to discern the actual spot, although it was a bright moonlight night. Making their way towards the cloud of dust, huge sections of debris impeding their progress, the wardens came upon a scene of desolation and immediately noting the position of the occurrence sent an express report to the Post which was 'phoned to the Report and Control Centre at precisely 20.00 hours. Whilst the express message was being 'phoned the M.1 (the standard report form) was being made out. The M.1 report was received at the Control Centre at 20.10 hours and before this time the express services of ambulance, stretcher party and sitting case cars were on the spot.

"Meanwhile the wardens were conducting several people from the college to the Post and minor injuries were attended to. At 20.20 hours rescue squads and more stretcher parties arrived on the scene and very soon the whole area was alive with rescue parties and first aiders attending to the casualties. At 20.30 hours the A.D.W. (Assistant District Warden) took over as Incident Officer and organisation was set up to deal with the situation. In order to relieve the work at the post where sixty people were being attended to, the Hall at St. Thomas's Church, opposite the college, was opened up as a temporary first aid post. A mobile hospital unit arrived and doctors administered morphia to trapped casualties who were seriously injured and were being released from the debris. Many people were trapped between the floors and walls of the upstairs rooms which had collapsed into the basement. Many were dead in this wreckage and the bodies were taken out in the morning, the time being utilised to seek those who were still alive.

"The wardens and rescue parties (some twelve in all, including two parties from Southwark who did excellent work at the beginning) carried on with their work throughout the night. During the whole time heavy A.A. fire was going on directly overhead and bombs were falling in considerable numbers in the locality. Whilst there were many runnings and duckings for cover the work went on until dawn, when a better opportunity availed to survey the damage caused and plan out the continuation of the work. Relief systems had to be evolved in order to give wardens and rescue workers some rest.

"This incident, the first major incident that the Post had experienced, gave the wardens many practical lessons, and they were able to learn much from their successes and mistakes. The Control and Report Centre was continually in touch with events by the various supplementary reports and messages that were sent from time to time and we are pleased to say that all our requests were promptly dealt with. In conclusion, out of 195 persons actually in the building at the time of the occurrence, 84 came out alive and unhurt, 54 were sent to hospital and 57 were killed, 10 of whom died in hospital and one of whom is still unidentified."

THE SEARCH GOES ON. Throughout the night and all next day wardens, rescue men and ambulance men burrowed into the wreckage of this house, looking for its occupant an old lady. She was under the stairs.


UNTIL IT IS CERTAIN THAT NO ONE REMAINS

There were—let it be repeated—50,000 incidents, some still larger and more terrible than the one described, some few small and even trivial, like the fall of a small bomb on a derelict house—" no services required." At the beginning they provided the first test of an organisation untried not merely in action but in its whole plan and conception. The higher authorities themselves could not but wonder how their effort to provide against the unknown would work out. They could not quite say, like the Duke of Wellington pointing to the private soldier before Waterloo, "' It all depends on that article." It depended on whether the basic plan was sound ; whether the risks had been rightly estimated. Theirs were well-trained forces, but might they not prove to have been equipped against unreal menaces, and left unprepared against what would turn out to be the real ones ?

When the answer came it was wholly reassuring. Many a time in operational reports from local services in the early days of heavy attack there came the remark, " It all went exactly like an exercise." No service fell below the best its sponsors had hoped from it. The wardens exceeded expectations, because so many of the unforeseen aspects of heavy attack fell to them to deal with and they rose to all occasions. The work of every service was of a kind to bring out the best in any man and woman. They were protectors, not destroyers. They were guarding life, their own neighbours' lives at that, and property often in its simplest, most appealing forms—homes and little personal possessions. So they did their work well, and their fellow citizens turned to them in trust and gratitude.

" It all went exactly like an exercise." This was more than a conscious testimony to sound planning. It was a perfect, and quite unconscious, picture of the attitude of mind of the civil defenders themselves. At exercises there had in fact been one or two elements lacking. No one had arranged for the frequent descent of large pointed canisters of high explosive, detonating at temperatures beyond scientific measurement, hurling jagged strips of steel in all directions and causing blasts of air so powerful that even 50 feet away they were thirty times as strong as the pressure of a 60-mile gale. The streets were not punctuated with raging fires. The nights were not filled with the deadly flight of broken stone or glass. The " casualties " were dummies, not human beings so brutally mutilated as sometimes to be almost beyond recognition.

In military warfare the baptism of fire is held to be the greatest test of new troops. The wise commander tempers the wind to them, and puts them if he can in a place where the wild music of war will at first play softly in their unpractised ears. The great majority of the men and women of the London civil defence services were plunged untempered, between tea and supper, into the central fury of the Blitzkrieg. Yet so workmanlike, so matter-of-fact, so selfless was their attitude to the task for which they had been trained that these terrors seemed to them less significant than the fact that they appeared, after all, to know their job.

Here may be quoted some contemporary reports, not from the local authorities who bore the direct responsibility for the work of the services, but from officers whose business was oversight and general direction, and who found fault if there was fault to find :

A Home Security report on the first week :

" Remarkable examples of skill and determination have been reported from all services, and in at least one area they have been officially thanked for their work by a deputation of members of the public."

A Regional Officer :

" All the services worked for five or six hours without relief—in fact, they refused to

ONE BY ONE THE TRAPPED ARE RELEASED. The victim of a daylight raid on central London, October, 1940, is lifted gently from a shattered basement.

ONE BY ONE THEY ARE CARRIED TO SAFETY. The wife of a school caretaker was trapped in a shelter beneath the school. She was rescued after 13 hours of continuous digging, able still to grasp the hand of the man who reached her.

be relieved—and they were joined by members who were off duty. This is not an unusual happening."

A Group Controller :

"The civil defence services throughout the attacked area acquitted themselves with the skill and courage which one expects. Observation everywhere leads one to believe that they are willing to face any amount of active service, even of this severity."

An Operations Officer (Region) :

"In a brief tour of some of the more important boroughs one cannot fail to be impressed by the remarkable keenness and efficiency of the personnel of all services which had exceeded all expectations . . . speed and accuracy . . . far ahead of that displayed in dealing with imaginary incidents during exercises."

A Regional Officer :

"All this may sound like over-enthusiastic eulogy, but you may take it that I have not exaggerated."

It is against this general background that some of the early teething troubles may briefly be regarded, since this is the best way to make clear what it meant for the London services to be the first to face the unknown. Occasionally, in the first weeks, the size of an incident was misjudged, either by the warden on the spot or by Control on the basis of his report. Too many parties would be sent ; and the central resources weakened without need. Worse still, though more rarely, there would be an underestimate and help would be short. But experience taught the art of assessing damage and the required amount of help, so that before long wardens working in the black darkness, among clouds of dust and smoke, stabbing their torch-beams here and there among the debris, moving about and exchanging notes, could sum up the meaning of an incident with a speed and precision that to the unpractised would seem uncanny. And Control, working "blind" from their simple report, came to know just what help to send.

One result of the unexpectedness of all-night bombing was that working in the dark at first presented problems to some of the parties. The rescue workers could hardly make proper progress without some light ; there was a natural reluctance to invite the enemy's attention by using a flare, and the public was quick to protest. Later, ways and means were found to enable the rescue parties to make full speed without waiting for daylight.

Tracing the casualties was a never-ending anxiety. How many were there, and where had they been ? The householders were supposed to let the warden know where they would spend the night. But they forgot, or they changed their habits. If the bomb fell during the evening, there might or might not be friends with them. Under that formidable heap of brick and timber there lay how many human beings unconscious and in pain ? Perhaps fire was creeping forward and minutes were precious ; had they been sitting in the kitchen, at this end of the house, or in the parlour, at the other ? Where should work begin on the debris of the great block of flats ? That injured little boy mustn't be taken away before he tells where his granny and sister were sitting when it happened. Did anybody see the caretaker ? Is it true the old couple have been going to shelter lately and weren't here at all ?

These were grim and testing questions to be answered in the noisy darkness. A wrong decision might waste precious time and labour to no good end, or it might condemn a victim to wait unrescued for long, perhaps too long. This was an inherent difficulty never to be quite overcome. But as time went on the methods for keeping tally of the public got better and better, and the officer in charge of the incident learned more and more about how to fill gaps in knowledge after the event.

Rescue services, too, came to know the almost endless power of resistance of human bodies and minds and the strange freaks of

collision and repulsion that could leave them alive in an avalanche. Beneath the mountainous pressure of tons of brick and stone there might against all reason be somebody, and that somebody alive, guarded by the precarious balance of one brick upon another bearing the weight of the mass above. The boundary between doubt and unhappy certainty must be pushed further and further back. Life was at stake and peace of mind and confidence, too. For the relatives and the neighbours must be assured past all questioning that every stone had been turned, and that no one was there—or no one living. Until that certainty was reached, search must go on in turns, hour after hour, through the night and the next day and into the next night's raid. That was how before very long it came to be done.

It was learned, too, that the system of telephone communication on which the whole system depended might be thrown for a time out of action. However manfully and fast the Post Office engineers strove to restore it—and they spared neither nerve nor muscle in the care of their vital wires—it must be backed up by a system of messengers on foot, cycle, and motor bike that could be relied on if need be to carry every needed message between the Control Centre and its scores or hundreds of incidents.

Lastly, there were the unexploded bombs. They deserve a chapter to themselves. Falling thick and fast, they were a new problem at the beginning. There were the delayed action fuses and the mere duds—only the experts knew which was which. Moreover, there were the fairy tales—the ones that didn't fall at all. Lumps of metal or stone tumbling earthward in the dark would start the suspicion. So might a mere dent in the ground, or a tennis ball, or just a rumour. And it was important to distinguish fact from fiction: important for the people who would otherwise be bundled needlessly out of their homes for a time, for the factory held up, and the railway awaiting a clear line. Important no less for the Army's Bomb Disposal Squads themselves. They had enough on their hands, in those first weeks before their numbers were multiplied and multiplied again, without wasting time on might-have-beens.

The wardens came to the rescue. They learned, and learned quickly, the art of rough diagnosis; they reported accurately and at once what they knew; they cut down the tale of false starts to a small figure. The unexploded bomb—familiarly and briefly the UXB—was the warden's speciality. The jack-of-all-trades of civil defence had here a mystery he alone could master. He made it as familiar as the incendiary, the whistling bomb, or anything else out of Göring's box of fireworks.

THE MEN, WOMEN AND CHILDREN, the very heart and citadel of the city's strength, were the care of the wardens and rescue workers.

5

That the City Might Live

"Traffic in the city appears to be completely interrupted: and from the number of fires in gas and water works, the public services must have ceased to function."

Rome broadcast to Italy, 7th October, 1940.

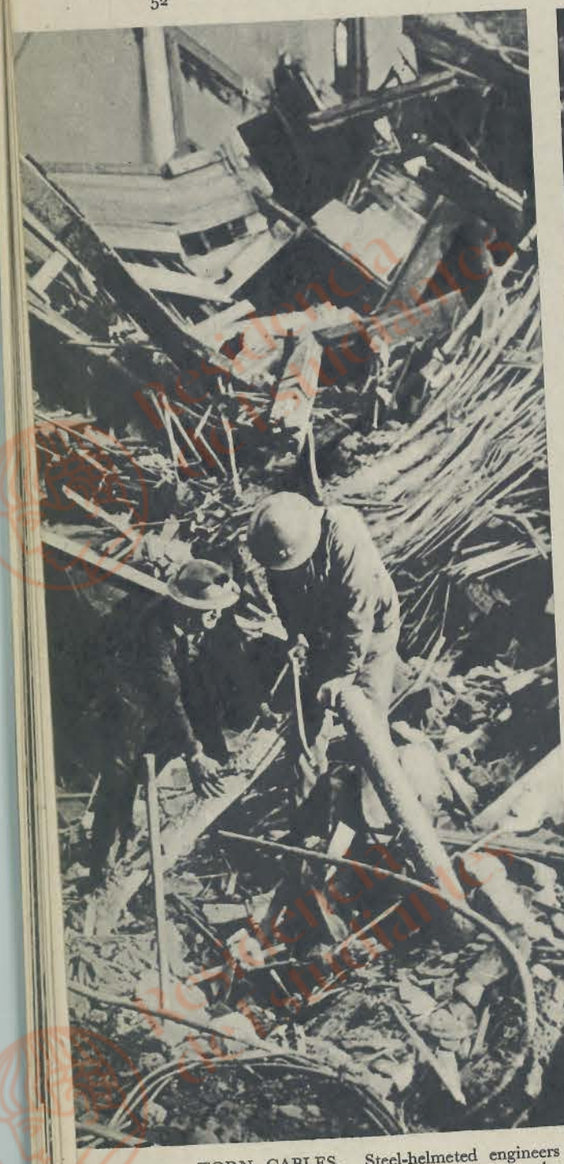
WHEN A BOMB cratered a roadway anywhere in London it was likely not only to make a big hole, but to cut a gas main, an electric cable, a water main, a sewer, and a telephone cable at the same time. On these encrusted arteries, lying side by side a few feet below the road surface, and on the transport services, depended the whole possibility of maintaining the community life of six or seven million people.

The Germans certainly thought so. When they could aim and were seeking a knockout blow, they did their best to strike at waterworks, power stations, railway termini, gas works and sewage plants. When they did not aim, the luck of the game often brought hits on these targets. At one time or another, for longer or shorter periods, every railway terminus, the largest gas works, a sewage outfall, some power stations, and one of the largest water inlets were all out of action. Yet it was surprising how swiftly these troubles were overcome. It is broadly true to say that no serious shortage anywhere was caused by damage to production plant or terminal points. Repair was wonderfully quick, replacement or diversion was possible. Producing plant that was at first thought likely to take months to put right was working again in a week or two.

It was the network of distribution lines that caused more trouble—the street mains and cables, the railway tracks, the roads themselves. Trouble is of course a relative word. London was never within sight of the chaos that must be created in a big city by prolonged artillery attack or continuous day bombing. But many thousands of fractures had to be dealt with during the blitz. There were plans to meet this risk. Thousands of members of the utility services' A.R.P. squads, with valve-men and turncocks, all specially trained in air raid work, stood guard every night waiting for reports from the Control Centres that mains needed repair or cutting off. There were central schemes for the reinforcement of heavily pressed areas from other parts of the Region, just as with the civil defence services.

But there was a time when the mounting total of breaks seemed to be gaining on these standby squads even with their provincial reinforcements; when the craters in the road were not being repaired and filled quickly enough for the needs of traffic, and debris clearance was lagging. This was about the end of September when fresh measures were taken. A Special Commissioner was appointed. Several hundred skilled men were released from the Army to reinforce the mains repair squads; military pioneers (their total at one time reached 14,000) were loaned to do clearance; 25,000 labourers were recruited; big cranes were quickly got from America and put to work. As these measures took effect, the rate of repair work caught up with the rate of damage the enemy was inflicting, drew level and passed it; the arrears were overtaken and the problem solved.

The brave and toilsome feats that lay behind this unsung victory over the Nazis were seen by very few. The citizens were out of sight when some elderly turncock trotted round with his heavy key to stand turning and turning it in the blitz, while the guns flashed and the bombs dropped through-



TORN CABLES. Steel-helmeted engineers dig deep into the rubble to repair the cables which carry the city's light and power.

FLAMING GAS. Severed mains break into sheets of fire. They are targets for the enemy and must be plugged while the bombs fall.

DANGEROUS RUINS. Unsafe walls must be pulled down—the demolition man attaches a steel hawser.

DUST AND DEBRIS. The Pioneers come in; cheering evidence that the mess will soon be cleared.

BLOCKED ROADS. The morning of 12th May: each raid sets the police still another traffic problem.

ENORMOUS CRATERS. At the Bank, where the road collapsed into the subway beneath. A temporary bridge was thrown right across it.

WRECKED STATIONS. *Left*, one of the main-line termini ; the trains still run. *Above*, Underground chaos ; repair men are already at work.

SHATTERED COMMUNICATIONS. A direct hit on a City telephone exchange ; wreckage of the third floor selector racks.

out the three-quarters of an hour that it took to close the big water main. When a gas main was broken and set alight, and the great unquenchable swaying column of fire roared upwards above the roofs of the nearby houses, there were—very properly—no admiring Londoners to applaud that old acquaintance, "the man from the gas company." He worked in the muddy crater, in the scorching poisoned air, to plug the end of the main, or forced his way past blazing debris to reach a valve and cut off the supply. Nor were his problems confined to the streets.

A gas works is one of the extreme danger spots under heavy air attack. It is interlaced with huge pipes carrying explosive mixtures—tar, benzole, and gas itself; and it is dotted with holders of the largest size. Any incendiary may instantly start a great blaze, and the destructive power of a high explosive bomb is multiplied by what it strikes. To repair a flaming splinter-hole in the crown of a gas holder in an air raid, 60 feet up, and with millions of cubic feet of gas below you, is a hazard as great as any in civil defence. It was done many times. Most of the London works were hit, some very often. Every incident meant extreme risk for the men who dealt with it. In London 179 of them were decorated.

Electric power stations, too, had their disconcerting ways of reacting to the direct hits with heavy bombs which they often suffered. To their staffs it had long been a matter of personal pride to keep interruptions of supply to the bare minimum. Under bombing they remained at their posts as a matter of course. If explosions tore the roofs off their buildings, they worked with hand-torches, unless they could see by the light of great fires nearby, which they knew must act as a magnet for bombs. Engine-room staffs carried on, sometimes below ground, in floods from burst water mains. Out in the streets the cable networks suffered the interruptions which were the common lot of utility supplies; and the men who repaired them often did so under bombing, and shared the special risks of flood and fire which those who worked at night in the craters all had to face.

All these deeds were done behind the backs of the citizens. But one party to the struggle Londoners did see—the Military Pioneers. They came as cheering evidence that all the mess the Nazis made would soon be cleared up. They worked in squads, by daylight, and you could crack a joke with them. Some of the grim and dreadful work they did after a big incident was done behind merciful screens, and you did not see it; but even what you did see was enough to make you feel friendly. Some of the men were aliens, deeply content with this chance to oppose their muscle and will to that of the enemy who had done his best to wreck their lives. Some were coloured, good workers and very powerful, who did prodigies of strength and endurance—a lively lot who made friends everywhere and entertained passers-by on the banjo.

But there was one area where political views were extreme and independent feeling high: what would they think of a military invasion of their precincts? All the more so as the commanding officer of the detachment sent to them was an eccentric nobleman who wore a monocle and carried a long stave like a shepherd's crook instead of a swagger cane. But "although he was so very Piccadilly," he got on extremely well in the difficult area, whose people in fact turned out, as though they had been beleaguered, to cheer the arriving troops and give them cups of tea.

Twelve hundred of these pioneers once dug and cleared in twenty-four hours an alternative channel of water supply when one of the city's biggest inlet courses was put out of action for a long distance by a bomb. After the pioneers came the fire brigades, with a battery of pumps to force the water from the end of the old channel to the beginning of the new. What might

THE MILK COMES . . .

. . . AND THE POST GOES

have been a very serious threat to the water supply turned out nothing worse than could be cured by the appearance of water carts in a few areas for a few days.

It is barely possible to imagine a big city carrying on its peace-time life without the telephone wires; but impossible to imagine its effective defence against air raids without the maintenance of some immediate communication with the outside world and among the defenders within. The linesmen who guarded these vital threads had a complex job. When a cable is broken all its component wires are severed—often some thousands of them. Twice that number of connections must be correctly made and tested, insulated, and kept dry—even in a flooded crater. One cable repair involved the making of over 5,600 separate connections. Such work was done many times under bombing by men sitting cramped for hours in the mud, sometimes in foul air and under the threatened fall of tons of clay.

The railways and the underground showed themselves among the most resilient of all the services. London's hundreds of miles of track, hit again and again, seemed almost invulnerable, with more lives than a cat. In the brief daily records of the railways the words "working as normally as possible" came very often. These words conceal the work of track repair gangs to whom a job that was allowed more than twelve hours was an exceptional thing; of signalmen perched high in their flimsy boxes, with glass around them, carrying on under the bombs; of guards and engine drivers who took their trains through the blitz or past unexploded bombs. Night

STEADY HANDS TIE THE SEVERED THREADS OF CITY LIFE

by night, too, the buses and trams ran sufficient services through the raids, stopping only if bomb damage forced them.

Then comes the most undeniably essential of all essential services, the household food supply. This was one of the services which Londoners paid the high compliment of taking completely for granted. It never occurred to them to raise an eyebrow over the daily appearance at the door (along with those other invincibles, the post and the newspaper) of the loaf of bread and the bottle of milk. Had they known at how many points food distribution is vulnerable they would have wondered a little more.

Bakeries, milk bottling plants and cold stores can be put out of use by power or water-main failures; trains held up, roads blocked, important messages delayed; wholesalers' warehouses and retail shops blitzed. All these things did in fact happen—and so did others, like the bombing of food offices and the machine-gunning of key officials on their rounds. But the wholesalers had worked out mutual assistance schemes; there were plans for mobilising the bakeries—one down, t'others come on; if the milk trains were blocked outside London the contents were pumped into road tanks and delivered only a little late. The food supplies got through.

And so did the news. Fleet Street, near the heart of the danger area, was often badly bombed and set alight. Newspaper offices were hit many times, probably just when the work of "putting the paper to bed" was at its climax. But by nerve and good judgment, by mutual hospitality and quick thinking, every paper printed its main editions every night of the Blitz—printed them and got them out, under the very noses of the Nazi bombers. Sometimes—it was surprising how seldom—they reached the front door a little late. But they got there. It was the reply of a free press to Hitler; an apt piece of symbolism.

6
The Man in the Street

"The legend of British self-control and phlegm is being destroyed. All reports from London concur in stating that the population is seized by fear—hair raising fear. The 7,000,000 Londoners have completely lost their self-control. They run aimlessly about in the streets and are the victims of bombs and bursting shells."

German-controlled Paris radio to France, 18th September, 1940.

THE BLITZ REQUIRED of the ordinary Londoner that he (or she) should make no needless demand on his fellows, whether by panicking, becoming a casualty, or merely making a fuss; that he should carry on with his ordinary work, despite bombs, lost sleep, and trains that did not run; and that he should himself be ready to give help where the need of it came his way. Below this standard very few fell.

No one will know how many private terrors, born in some timid or imaginative mind as the bombs whistled down and the nearby houses crashed, were stifled quietly in the cupboard under the stairs. Statisticians cannot say whether there were many families, or few, in which it took the firm leadership of the group to steady the quivering nerves of one or two as they sat together in the kitchen or the Anderson and heard horror loosed around them. In those first few nights in the East End, when it was still strange as well as horrible to see streets of houses ripped into fragments and the midnight sky so lit that one could easily read by the light of the great flames, when the barrage had not yet begun, there seemed to many of the staggered and sleepless people nothing before them but to sit and wait night by night

until they or their homes, or both, were annihilated. There was never a trace of public panic; but the blitz was not a picnic, and no fine slogan about "taking it" should obscure the realities of human fear and heartache.

Moreover, the immediate impact on mind and body of a bomb explosion near at hand should not be belittled. Some 50,000 bombs fell on the capital. Many times that number of ordinary Londoners thereby suffered such an intense shock, even if they were physically unhurt, as comes to few people in the whole length of a normal peace-time life. Here is a report from a man who was probably nearer to the explosion of a large bomb than anyone else who remained conscious and survived to tell the tale.

"Several things happened simultaneously. My head was jerked back due to a heavy blow on the dome and rim of the back of my steel helmet. I do not remember this, for, as my head went back, I received a severe blow on my forehead and at the root of my nose. The missile bent up the front rim of my steel helmet and knocked it off my head. The explosion made an indescribable noise—something like a colossal growl—and was accompanied by a veritable tornado of air blast. I felt an excruciating pain in my ears and all sounds were replaced by a very loud singing noise (which I was told later was when I lost my hearing and had my eardrums perforated).

"I felt that consciousness was slipping from me, and at that moment I 'heard' a clear, loud voice shouting, 'Don't let yourself go! Face up to it and hold on.' It rallied me and, summoning all my will power and energy, I succeeded in forcing myself down into a crouching position with my knees on the ground, my feet against the kerb behind me and my hands covering my face. I remember having to move them over my ears because of the pain in them—doubtless due to the blast—it seemed to ease the pain. Then I received another hit on the forehead, and felt weaker. The blast seemed to come in successive waves accompanied by vibrations from the ground. I felt as if it were trying to 'spin' me and tear me away from the kerb.

"Then I received a very heavy blow just in front of the right temple—which knocked me down on my left side in the gutter. (Later, in our first aid post, they removed what they described as a 'piece of bomb' from that wound.) Whilst in the gutter I clung on the kerb with both hands and with my feet against it. I was again hit in the right chest (and later found that my double-breasted overcoat, my coat, leather comb case and papers had been cut through and a watch in the top right-hand pocket of my waistcoat had the back dented in and its works broken).

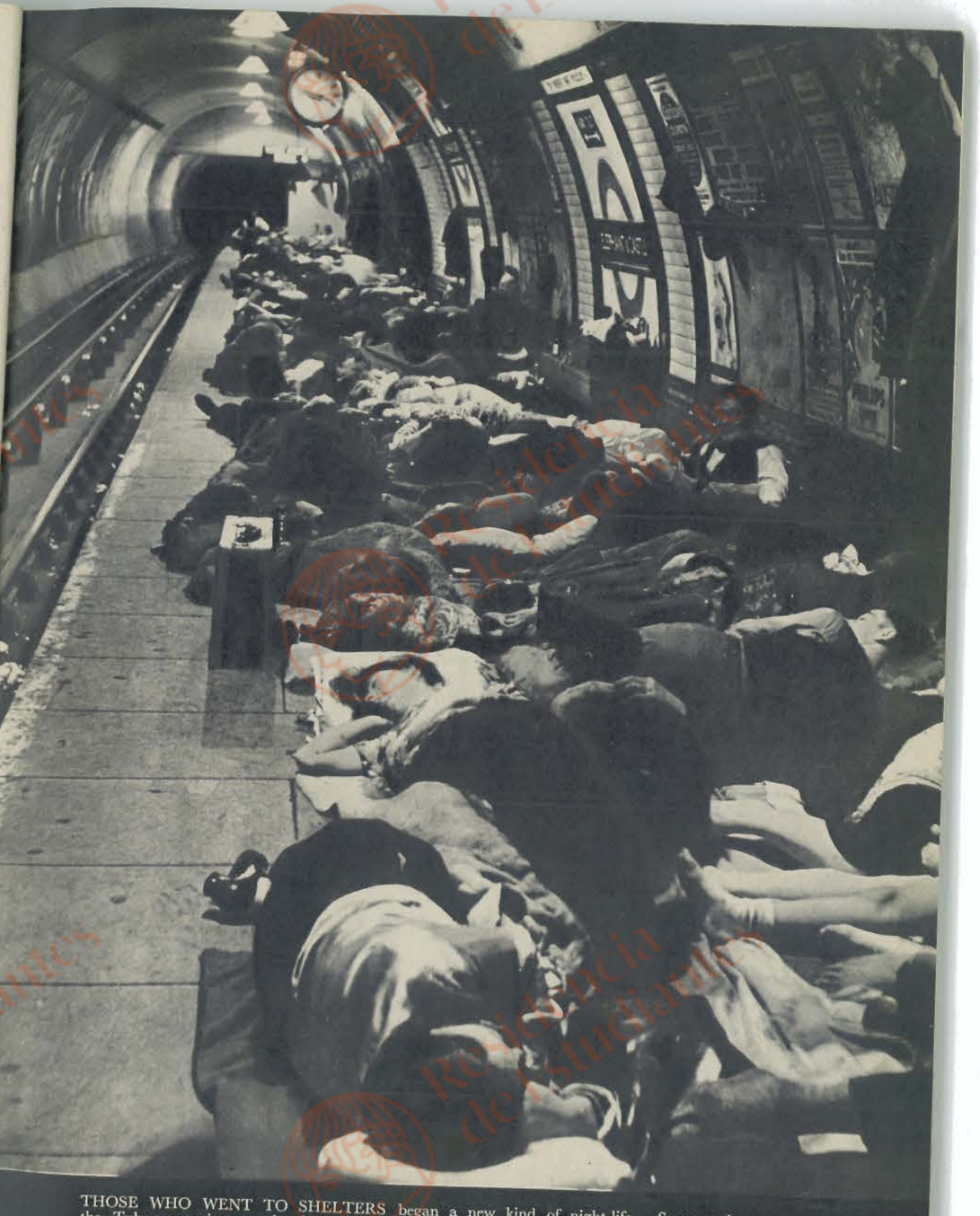
AWAY FROM THE FRONT LINE. The Blitz brought a steady exodus of children from London, controlled and realistic. By the end of 1940 only one child in six was left behind.

TO SAFETY IN THE COUNTRY. The change brought health and a new life to the children, comfort and courage to the parents. Here are some of a party of forty children from London and Gravesend, all under 6, evacuated to Devon.

"Just as I felt that I could not hold out much longer I realised that the blast pressure was decreasing and a shower of dust, dirt and rubble swept across me. Pieces penetrated my face, some skin was blown off, and something pierced my left thumbnail and my knuckles were cut, causing me involuntarily to let go my hold on the kerb. Instantly, although the blast was dying down, I felt myself being slowly blown across the pavement towards the wall of a building. I tried to hold on—but there was nothing to hold on to. Twice I tried to rise, but seemed *held* down—eventually I staggered to my feet.

"The front of the building was lit by a reddy-yellow light—the saloon car was on fire to the left of me and the flames from it were stretching out towards the building and not upwards. Pieces of brick, masonry and glass seemed to appear on the pavement, making—to me—no sound. A few dark, huddled bodies were round about, and right in front of me were two soldiers—one, some feet from a breach in the wall of the building, where a fire seemed to be raging, was propped up against the wall with his arms dangling by him, like a rag doll. The other was nearer, about 12 feet from the burning car. He was sitting up with his knees drawn up and supporting himself by his arms. His trousers had been blown off him. I could see his legs were bare and that he was wearing short grey underpants. There appeared to be one or two dark huddled bodies by the wall of the building. I had not the strength to lift any of them.

"I wondered where the water was coming



THOSE WHO WENT TO SHELTERS began a new kind of night-life. Some took over the Tubes, camping out in this fashion—Elephant and Castle Station, 11th November, 1940.

A MOTHER WATCHES. Stoke Newington, 8th November, 1940. Big shelters became the home of one Londoner in every twenty-five. The rest—those that were not on duty—slept in the smaller local shelters or else remained at home.

THE NEW LIFE BECOMES ORGANISED. Food, medical services, entertainments were provided—an all night canteen in a Tube tunnel, one of London's biggest shelters.

SHELTER LIFE HAD ITS COMPENSATIONS. One was companionship. North London shelterers during an alert.

THE NIGHTLY MIRACLE. Another kind of shelter life was led in something like a million back-garden Andersons. Four people and a dog were trapped in this one when a bomb blew a crater alongside. All came out alive.

from, which I felt dripping down my face, and soon discovered that it was blood from my head wounds."

All this will put in their proper perspective two more quotations. The first is from a telegraphic report by the Metropolitan Commissioner of Police on 12th September, when the blitz was five days old.

"My latest reports are that there is no sign of panic anywhere in the East End. . . . In —— and —— the inhabitants are shaken by continued lack of sleep but no sign of panic and no wish to evacuate. No defeatist talk."

The second is from one of the weekly "appreciations" built up in the Home Security Operations Room by officers working on reports and messages coming in from the scene of action. It is dated 25th September, 1940, the very day when (as measured by the numbers taking shelter in the tubes) pressure on civilian resistance was at its peak.

"The German attack upon London has had no fundamental ill effect either upon the capital or on the nation. Its first impact caused bewilderment and there was some ill-temper both on account of its apparent success and because some remedial measures did not operate with time-table accuracy. This loss of temper . . . has almost completely vanished and a general equanimity prevails. . . There is little appearance of nervous or physical overstrain and the fear and shock, only attendant upon actual explosion, very quickly passes over in most cases. Nothing has affected the unconquerable optimism of the Cockney nor has anything restricted his ready if graveyard humour. . . Without over-emphasis people take the obvious precautions to ensure sufficient sleep. Having done so they regard the event philosophically. During the day they continue their ordinary business.

". . . It is still necessary to canvass some classes of the people to leave London."

The report might have added how greatly

IN THE MORNING, WORK AS USUAL. After a big raid, the way to the office is knee-deep in rubble. Londoners unemotionally pick their way through it.

Londoners in the most-bombed areas were steadied and heartened in the early days of upheaval by the frequent coming among them of the King and Queen, whose own London home had been made the target of deliberate daylight attack.

It is no secret now that, misled by the knowledge of what had happened in some instances abroad, the authorities had prepared for a great panic exodus straggling out from the eastern boroughs along the roads into Essex and Kent. These were the boroughs that took the heaviest weight of attack, and the facts of what happened bore no relation to the forecast. There was a steady evacuation, but it was controlled and realistic, and did not use up shoe leather. It seemed to result not from panic but from a cool assessment of the position that arose when whole streets and blocks of houses were put temporarily or permanently out of use.

The " trickle " of children out of London, under public auspices, reached 1,500 a day. Great numbers, of course, had gone at the beginning of the war, but some had returned, while many had never left London. By 24th September half the children were in the reception areas ; by 31st October, 70 per cent. ; by the end of the year only one in six was still in London.

Mothers, too, went out, with Government assistance—their numbers rising to 30,000 in one week. More still went out by themselves. Mother and children, with father taking a day or two off to get them settled,

lumped their belongings to Paddington or Euston, took tickets to some station in the Home Counties, and there found billets. East London's annual September trip to the Kentish hopfields took on a new timeliness and value. This year it provided not only a fortnight's holiday but refuge, and a grandstand view of the Battle of Britain.

So far was all this from panic that it took three months for the population of the twenty-eight central boroughs to drop by about 25 per cent. from a little over 3,000,000 (the figure before heavy bombing began) to 2,280,000 at the end of November. In a group of the most heavily bombed eastern boroughs the pre-war population of 800,000 had fallen to 582,000 before the blitz began ; for four months it had dropped steadily to 444,000 ; by 31st December a fall of 23 per cent. These figures do not spell panic, and a further substantial fall in 1941, after continuous heavy raiding had ceased, completes the evidence that those who went did so in cold blood, for practical reasons as valid for their hard-pressed city as for their private selves. Moreover it was not those with work to do who went ; a labour shortage did come to London, but later, and it was the demands of the capital's own war machine, not the impulsion of bombs, that caused it.

What of those who stayed ? Did they all spend their nights in picturesque squalor, underground and in droves, as the impressionists of the time may have suggested to readers and listeners at home and abroad ? There was no doubt about the squalor at first, when the all-night raids put to dormitory use big shelters which had been equipped for nothing beyond an hour or two's daytime occupancy, and when people silently broke the official barriers that would have kept them out of tube stations never intended for such use. For weeks in the big shelters there were no beds, not enough sanitation, no proper food, no hygiene, and no organisation to save women and children from queueing in the streets for hours to get a place.

All these things were put right in time. The tubes and the other big shelters were equipped with bunks and a ticket system, with canteens, medical aid posts, and sanitary provision. Indeed they came to have cinema shows, concert parties, lectures, and other communal luxuries all just as faithfully publicised as the earlier miseries had been.

But what did all this mean to the average Londoner ? In November, inner London (the county) contained some 3,200,000 people. Not more than 300,000 of these were in public shelter of any kind, half of that number at most in those larger shelters on which the limelight shone so exclusively. Nor is this all ; in domestic shelter (Andersons, small brick shelters and private reinforced basements) there were no more than

FEET MUST BE SHOD. This street was a nightmare a few hours before, but the life of a city is soon renewed.

1,150,000 people. Thus of every hundred Londoners living in the central urban areas, nine were in public shelter (of whom possibly four were in " big " shelters), 27 in private shelter, and 64 in their own beds—possibly moved to the ground floor—or else on duty. Particular big shelters, and for a few nights the tubes, were overcrowded, but there was public shelter for twice the number who made use of it. In outer London, with a population of some 4,600,000, there were in November 4 per cent. in public shelter, 26 per cent. in domestic shelter, and 70 per cent. at home or on duty.

Probably the numbers in shelter had been higher at the end of September, before systematic censuses were taken. But, at the very peak, not more than fifteen metropolitan Londoners in a hundred can have been in a public shelter, six or seven of these in " big " shelters, including the tubes.

To the two-thirds who slept at home, the air raids brought their own problems. Day after day in the early weeks the trains ran very late, or not at all. Emergency buses filled gaps between severed stations, but they too ran slowly. The Central London buses had day by day to find new variations on their usual routes: the yellow sign " Diversion " hung on its barrier across so many of the traffic arteries, East, West, North and South. The bus wheels might, like the feet of pedestrians, crunch over broken glass and splash through newly-flung mud, but they could not ford craters or climb heaps of rubble like a tank, and had to pick their way round small back streets, where they looked as misplaced as an ocean-going ship in a Thames back-water.

All this meant early rising for the clerks, the shop-girls, warehousemen, waitresses, and the rest—early rising after short, broken nights. But one had to look far to find any uninjured Londoner who could not say that he or she had got to work, even if sometimes a little late, every day of the blitz. Damage to their own homes did not stop them; often bereavement did not. Indeed the unchanged routine of the place of work helped them to face these things. Much that had been familiar all their lives was being torn away in the blast of high explosive, and Londoners did not weep to see it go. But, being human, they needed the feel of something fixed and persistent. In their normal daily work they found it and gripped it hard.

In the last great war there had been outbursts of hate against the distant enemy, and shops with German names had been wrecked. This time the citizens did not stop for such things. After the first shock of realisation they found no more need for direct recrimination than does the soldier. Like him, they got on with the job and waited their chance. Neither in this nor in any other way was there a sign of instability; no panic running for shelter, no white faces in the streets (though plenty of taut, grim ones), no nerve disease. In all London, the month of October saw but twenty-three neurotics admitted to hospital. The mind-doctors had rather fewer patients than usual. Some of them said that this was because " escapism " of any kind was out of favour. Those who wanted escape had got it, literally. Those who stayed meant to see it through.

There were hardly any blitz superstitions, though a few idiosyncracies. Sometimes fatalism expressed itself in the myth that " if your name was on the bomb it would get you "—otherwise, why worry? There grew up a saying that bombs never hit the same place twice. (They sometimes did.) Some people feared that any mention of particular areas would attract the Germans' attention to them. Occasionally rumour exaggerated the early tales of damage and casualties, but not for long. The feeling that the plane above was directly overhead—was, in fact, circling about and looking for you personally—did become quite general, and so did the civilian's special delusion that he knew just why Jerry had dropped that one in that place.

THE FAMILY MUST EAT. After the raids on the East End, there was no panic exodus; people preferred to cling to what was left and help neighbours who had suffered worse. The woman on the left and the girl on the right lived in the ruined house across the road. Dinner was cooked over a fire made gipsy-fashion in the basement.

"TEA, AND TELLING ABOUT IT"

There were two universal solaces for those suffering from strain of any degree, whether it was a sleepless night in bed at home or being bombed out and losing one's possessions or one's kinsfolk. These two were Tea, and Telling about it. At the Rest Centre, at the mobile canteen on the blitzed street-corner, in the kitchen at home, the cup of tea was the current coin of sympathy and comfort. Here was a national institution which rose to greater heights even than in peace, not only in London but everywhere the bombs fell. And then the added comfort of talking. Everyone did it. Those who had no more to say than the proverbial "Couldn't have been more than fifty yards away"—the mere onlookers—were labelled Bomb Bores and frowned or joked into comparative silence. But the real sufferers were allowed, by wise helpers at Rest Centres and Information Bureaux to

"Cleanse the stuff'd bosom of that perilous stuff
That weighs upon the heart."

One thing that showed up strongly was the powerful attachment of many Londoners to their own locality. Not perhaps in the sprawling outer suburbs, but in the East End and some other areas, the spirit of neighbourhood proved that it had survived even the disintegrating effect of metropolitan life on the largest scale.

There was a working man who returned from the house of relatives half a mile away in Fulham to live alone in his own badly damaged house under the shadow of a great power-station "because," he said, "I'm a Chelsea man." Further East a woman of forty-five, her nearest relatives killed and her home smashed, was being urged to go to the country. She almost yielded, but then, with an angry lift of her shoulder, said, "No. W'y should I let 'Itler drive me out o' Poplar?" Not "London," not "my friends," but Poplar. In Bermondsey they waged their own war against Hitler, sure of the superiority of their borough, its spirit, and its civil defence services to those of any neighbour on either bank of the river—if indeed those distant strangers "across the water" on the north bank could properly be called neighbours. The Hams, East and West, treasured the words of a Regional Commissioner with insight and sympathy enough to tell them that the stand they made in the early days saved London.

Lastly, this must be said. British people, and Londoners not least, are traditionally ready to criticise their leaders and to fasten upon authority the blame for trouble. Before the raids some armchair psychologists had foreseen an angry people visiting punishment for death and destruction on the nearby civil defenders who had not prevented them. In fact there grew up as the raids went on a substantial if unspoken confidence in the civil defence services.

People knew that the warden would put his head round the shelter door every hour or so as the bombs fell, to ask "Everything all right?" The rescue men could be counted on to do the job until the job was done. If the shelter was hit or almost ringed by fires, a warden would be there to lead the occupants through the glaring streets to another. The first aid men and the ambulance girls would not fail, in the extremity when their service was needed. Without stopping to think about it, people were aware as the bombs fell of a firm grip on the problem that they and their leaders had to face. This was true nearly everywhere, and the exceptions proved the rule that good spirit and good civil defence services went together.

EVERYTHING ALL RIGHT?

7
The Londoner's Home

"Now here it must be very definitely stated that the objectives in London at which our Air Force aim are all of either military nature or of those industrial categories pertaining to England's war effort."

Hamburg broadcast, 8th September, 1940.

IN THEIR WELL-PLANNED attack on Europe, the Germans made use of a new strategy, new tactics, and a large number of new weapons. Their enemies for the most part had to contend with little preparation against a series of innovations. The strategy of air attack on civilian life in large cities was not itself unforeseen, nor entirely new, but the tactics to be employed were a matter about which the defenders had to make reasoned guesses and anticipations.

Some things were not anticipated; some guesses were wrong. No one estimated high enough the amount of material damage that modern high explosive would do in proportion to the casualties it caused. No one was optimistic enough to expect that the Royal Air Force would force the enemy to confine himself almost entirely to night bombing, where, in default of deliberate aim at military objectives, he could not fail to drop a big proportion of his bombs on houses. A third and consequent shortcoming was that no one foresaw the enemy making a virtue of necessity and adopting technical methods deliberately designed to achieve the greatest possible destruction of houses and disorganisation of domestic life. The result of these three factors in combination was the unexpected size of the problem of the homeless.

THOUSANDS WERE SUDDENLY MADE HOMELESS

Destruction of houses was, of course, expected, but on a scale that would allow the homeless to be absorbed fairly readily. Some would go at once to neighbours, friends and relatives. For others, billets or new homes would be found; and while they waited they would camp, for a few hours or a day at most, in Rest Centres.

The event dwarfed and stultified these plans. Concentrated bombing destroyed or put out of use entire streets and neighbourhoods. The Germans were using a proportion of large bombs whose blast extended far and wide, tossing roof-slates about as the wind tosses dead leaves, doing superficial but for a time effective damage to hundreds of houses at once. Exact figures for the early weeks are lacking, but after four months about half-a-million houses in London had been damaged in some degree, and in September the temporary loss of homes may well have been at a rate of from 40,000 to 50,000 weekly. In nine months up to the end of May, 1,150,000 houses in the London Region were damaged.

And this was far from the whole story. Unexploded bombs, until the Bomb Disposal Squads were expanded to cope with them, were an accumulating menace. Each one falling in a residential area meant that for a time the nearby houses had to be cleared and their inhabitants added to the growing roster of the homeless.

The assumption that many people would look after themselves was fulfilled. They went to friends, near at hand or in other parts of London, or they left the city for the country. But the rest were far too many for the billeting schemes of that date. They crowded and choked the Rest Centres and could not be moved out to billets, so that instead of camping at the Centres for a day at most they stayed for days and even weeks on end. Before the end of September the Rest Centre population of the Region had reached 25,000, and while many of these

AFTER A LIFETIME

were going out, there was a hard core that did not and could not go.

The result was to overcrowd and overtax the Centres, and to leave unmet for a time the need of the homeless not only for a home but, more immediately, for comfortable sleep, good food, cleanliness and understanding human contact. Moreover, they wanted to know about their damaged furniture, lost ration book, or injury allowance; whether they could go back to their house or when they would get another; how to replace their tools or clothes; where to get a little money to tide them over. They had at first to pursue this knowledge from one authority's office to another, walking miles up and down their borough with their children at their heels. If they went to look at their damaged house they might find their precious belongings unhurt by the bombs, but unrescued from dust and dirt or from the rain dripping through the broken roof.

When Londoners were bombed out they reacted defiantly; their spirit was toughened. But if this mood was tried by days of rootless uncertainty, discomfort, a regime of tea-and-sandwiches, and a disheartening quest for help, there was apt to be another reaction of despondency and resentment.

In short, it looked as though the enemy had, as on other fields of battle, found an unsuspected weak point and might achieve a break-through. But the defences rallied

quickly. On 28th September a special Regional Commissioner for the homeless was appointed, and the basic question of accommodation tackled three ways at once. The Rest Centres were given better equipment all round, and staffs with social training. The streets were combed for billets and the corps of billeting officers strengthened. The repair of lightly damaged houses was pressed on. The enemy's attack did not slacken, but inroad was made into the heavy arrears of unexploded bombs, and this was itself a great relief. By 8th October the Rest Centre population was down to 10,000. The great raid in the middle of the month sent it up high again, but it soon fell to a manageable level which itself masked a brisk flow not only in, but out, to new homes or billets. The chiefs of staff of the defending force felt that the victory was won. On Christmas Eve the Rest Centres housed just over 10 per cent. of their September peak. After the end of the year that sector of the front, though attacked again, and powerfully, was never seriously threatened.

IF YOU COULD, YOU CARRIED ON. If the gas still worked, you cooked the dinner; it seemed the right thing to do.

LITTLE BUT THEIR LIVES. This family got out of its house only just in time and dashed through the blitz to shelter.

During the nine months of attack, 375,000 were billeted as homeless, and 120,000 given permanent new homes in London. Great numbers, too, had gone back to life in their own homes within walls and roofs made sound again by the great repair drive. Quick repair came to be known as the most powerful of all remedies for low spirits. Only second, perhaps, was the prompt salvage of furniture —everything from budgerigars and insurance policies to the bedroom suite that stood for comfort and the familiar past, and perhaps for so many months' sacrifice at three-and-six a week.

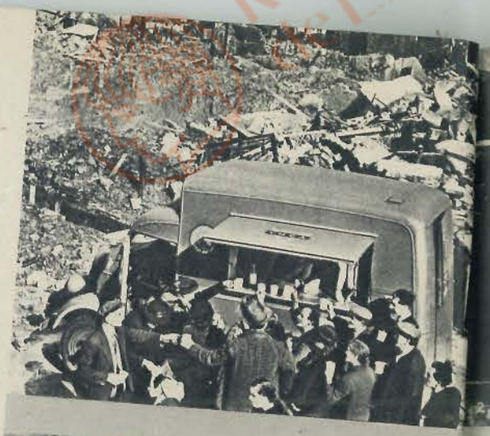
As the months went on all the varied agencies of help and information came to be grouped together in each borough under one or perhaps two roofs. The machinery for paying out those essential few pounds to meet urgent needs for clothes and fares was simplified and lubricated with the oil of a sympathetic comprehension not

always attributed to the financial offices of State. Good supplies of clothing from America as well as home were in the depots of the Women's Voluntary Services, who in many boroughs also staffed some of the Rest Centres and sometimes the Administrative Centre.

When the last great raid of 10th May fell at its heaviest, in one big East End borough where the problem had originally been most severe 5,000 homeless or other sufferers had their need of help and information met —each as she came, within a few hours.

The story is only half told without an account of the Kitchen Front. In September at first there were only the tea and sandwiches of the Rest Centres to meet the needs, not only of the homeless but of the gas-less and wifeless alike. Volunteer mobile canteens very soon drove into the breach—one of the best instances of that civilian self-help which so often blazed the trail for public action in the chaotic early days. Food Officers too did some unorthodox things with retail and wholesale food stocks and utensils, and thousands of good improvised meals were served out of quickly dug cooking trenches. At the end of September the decision was made to embark on a wide programme of communal feeding. More than one local authority had not waited for official sanction, but when it came the pace quickened. By the third day afterwards, a communal meal was being served to every homeless person ; gas and electricity were not always there, but schools and institutions had ranges, field and mobile kitchens could be improvised, catering firms pressed into service.

The Londoners' Meals Service was set up ; its centres multiplied, serving a good two-course dinner for about a shilling. Every Rest Centre was equipped to provide proper meals or was within reach of a feeding centre. The new British Restaurants played their part when emergency needs arose. Mobile units and Queen's Messenger Convoys appeared with a special eye to the needs of



THE DEFENCE IS REINFORCED AND EXTENDED.

The bombed out were cared for—given food, clothes and money, new homes and new hope. At first the weight of attack overwhelmed these post-raid measures. But before long they grew stronger : (1) hot food and drinks brought to the very site of destruction by the first of a hundred mobile canteens given by Americans ; (2) an improvised kitchen amongst bomb-wrecked houses ; (3) questions answered in a Hackney Rest Centre ; (4), (5) and (6) meals prepared and served ; (7) and (8) blankets and clothes distributed ; (9) the homeless found beds in an East End school.

the outer part of the Region. Mobile canteens were pooled and their work centrally co-ordinated. All big shelters had canteens.

Some months passed before all these developments reached their fullness. By the end of the attacks they could have coped with emergencies far greater than any that had arisen. But in about a month from the beginning of heavy attack, certainly by mid-October, the main problem had been solved.

For three weeks from 7th September, the enemy's attack on the social front had matters rather its own way. The counter attack, launched on the 28th with all arms, showed in about a fortnight that the line could be restored. For some weeks afterwards ground was being gained and positions consolidated. This victory, like others won in the air and on the ground against the Luftwaffe, was not appreciated in its full significance by the world until well afterwards. As for those who won it, they were busy with other thoughts and other things.

8

A Borough in the Blitz

"One thing is certain, namely that London's power of resistance, both as far as material resources and human nerves are concerned, has been gauged to perfection. However immense London is, however enormous her resources, the day will come—it must come—when it can no longer be held."

Rome broadcast to Italy, 12th September, 1940.

THAMESBOROUGH represents no place but itself. Some notes are here made upon its air raid history because, without focusing briefly on an area smaller than all London, the narrative of the bombed Capital would be unbalanced. And also, though Thamesborough is not typical, there is something about it that suggests the quality of a portion of Britain very much larger than itself.

It lies to the east, on the river. There was a dock at the place in the fourteenth century and a shipyard in the sixteenth. The first of the present Port of London docks was opened there by Pitt at the beginning of last century, and ever since then it has been a channel of trade with most of the world. The bustling growth of the nineteenth century made slums, some of which are still there, but there are fine spacious streets and squares, too. In the eighteen sixties the docks and shipyards throve; prosperous business men did not disdain to live near their work, and they left good architecture behind them. This airy historical background helps to explain the Thamesborough of to-day.

The awakened social conscience of the late nineteenth century found a major objective in the "East End." Thamesborough was by then a fruitful ground for social work. Vigorous movements and some remarkable men went to work in its precincts, bringing both help and leadership. They liked the place and became part of it. This middle-class infiltration forged links with wider kinds of life outside and left its mark on the people and their way of thinking. In this century, home-grown working class leadership in good quantity and of rare calibre has been a notable factor in Thamesborough's life. The borough has played a part in the vanguard of some hot social struggles within the past generation, not always unsuccessfully.

Whatever may be the general advantages or disadvantages of a strong political atmosphere in local life, leadership in Thamesborough turned it to good account in establishing civil defence. From the start, the achievement of protection against the reactionary menace from the Continent was held to be on all fours with the struggle for social progress at home. The Borough

GUERNICA, WARSAW, ROTTERDAM, LONDON.

Council could build civil defence on the firm if unusual foundation of a highly developed political organisation in the wards of the borough. It could draw upon a reservoir of local leadership, already discovered and trained.

Wardens volunteered in plenty—solid dockers and labouring men, not too ready with a pen, but able to turn a hand to anything else. They would put in time out of shift hours, meeting together in the little shelters they built above their posts, discussing civil defence problems as they were used to discussing the building of a new library or a local baths. Each division of the borough had a wardens' committee—elected—which in turn sent its delegates to the Central Wardens' Committee, whose representations would carry considerable weight with the Civil Defence Committee of the Council itself.

In a well-governed borough which is socially homogeneous (Thamesborough today is all working-class) close ties are apt to grow up between the Council and its citizens. This leads to a form of social discipline as valuable in war as in peace. There was one important illustration of this fact. The people were taught the value of dispersal, of sheltering in small groups at home, and when the test came they did not forget. There were a very few large shelters in the borough, but the great majority of people sat tight in their Andersons or small brick shelters, and only a tiny percentage made their way to the tube stations and the large underground shelters that lay to the west.

By the time the first bombs fell on the docks, Thamesborough's pre-war population of 130,000 had been reduced by evacuation to 104,000. The men were dockers, labourers and workers in the mills, shipyards, engineering plants, and small mixed industries of the locality. The tremendous bombings and fires of September destroyed or damaged many houses. In some of the dockside neighbourhoods half the people had to take themselves elsewhere in the first few weeks. The men stayed near at hand to work; the women and children went away.

The social dislocations of the first days hit dockland hard; people had to fend for themselves in the matter of food and often of shelter. The dockside settlements, like others of their kind, did marvels of improvisation. One settlement chief might have been seen taking her joints of meat around the streets to women whose kitchens were still in working order, and who prepared the food and returned it to the settlement for communal eating. Another settlement cooked 70 dinners a day in its garden, in camp equipment fuelled with salvaged timber, using water brought by garden hose from a park nearby. In the streets, or in backyards, fires of derelict timber were made for communal cooking.

The shops were bombed in large numbers—those "little shops round the corner" that mean so much to workers' households with neither the purse nor the storage space for buying ahead. At first communications were so bad that it was hard for the women to go farther afield for their purchasing and shopping became a daily adventure. Most of the churches near the river were unusable and institutional religion became an uncertain and intermittent thing for many months. But life did go on. Certainly the factories did.

Nearly all the little houses in the borough (two floors and a semi-basement, two rooms to a floor, an outhouse-scullery in the back yard; two or three families to a house) were damaged in some degree. Thamesborough had 25,800 houses in all, and there came a time when it could boast of an arithmetical miracle—45,000 of its houses having had first-aid repairs and 42,000 secondary repairs. In other words, an average of four repairs per home.

There were other losses and tragedies—those "big incidents" that ill-fortune brought at intervals to every bombed borough, when

a score or two of people were killed at a blow—but these were not as numerous nor as costly of life as in areas where the policy of dispersal into small shelters had been less faithfully followed. More typical of Thamesborough's incidents was one in a residential estate at—let us say—Colwyn Street. A very large bomb brought down hundreds of small houses, and the next morning the neighbourhood was a muddy wilderness of heaped rubble. Here and there the observer, climbing over untidy piles of brick, would come across a small aperture—the entrance to an Anderson shelter, nearly buried under debris, where half-a-dozen people had spent the night. Looking more closely about him he would see quite a number of these little mud-covered igloos humping their backs out of the desolation. When the people crawled out in the morning they were covered in dust and mud, and hard to pick out from their surroundings. But there was one touch of colour—the crimson varnished nails of the girls, rubbed clean against their skirts as the first instalment of a return to normal life. The Andersons had done their work. Nearly eight hundred people were made homeless in Colwyn Street—only three people were killed.

By the end of 1940 the population had fallen, along with that of the rest of inner London; and it went on falling for six months more. But the garrison's spirits left nothing to be desired. An increasing number of men and women—over 5,000 by the Spring—paraded the streets at night in small parties, competing with one another in the number of incendiary bomb fins they could deliver to the Town Hall as signs of the number put out. Another outlet for the sporting instincts of the borough was the laying of bets on the extent of damage. After the last big attack odds of ten to one were freely laid against the chance of finding any house in Thamesborough with all its windows intact.

There were a number of children who did not leave London; and very expert shelterers and blitz citizens they became. They made practice of using as their special play-pitch the sites of their demolished homes, where they could on summer evenings in 1941 be seen soldiering with sticks and mounting guard in some symbolic play understood only by themselves. Sometimes there were fierce disputes between these old inhabitants and returning evacuees about the use of a particular pitch. The passer-by might be asked to give judgment. The old inhabitants put their case. "We stayed 'ere all through. We *won* this. Didn't it ought to be ours?"

BUT LIFE GOES ON

EAL OF THE PROVINCES

MANCHESTER, 22nd December, 1940. One side of Piccadilly Gardens stands like the ruins of Ypres.

9

The Front Widens

THE ENEMY MUST have given up hope of an outright victory in the Battle of Britain by the early days of October. He withdrew his long range bombers from the daylight air on 5th October. Until then, the bombs he dropped on cities and the countryside may be best understood as part of an immediate attempt to make ready for invasion, by hitting at aerodromes, aircraft factories and southern ports, and by giving cities as far afield as Liverpool a preliminary taste of terror. (He had used the same tactics in the notorious lunch-time attack on threatened Paris, two weeks before France surrendered.) When October came, with neither the R.A.F. nor London knocked out and invasion no longer a lively prospect, the Germans sent such bombers as they could spare from the capital on the long term mission of striking at industry. There were 27 lesser raids in the month, nearly all by night, seven each on Coventry and on Birmingham. In these two cities 445 people were killed during the month ; the attacks were not negligible.

During the next month, November, the Battle of London properly so-called drew to its close, the character of raiding changed, and attacks on the provincial cities moved from the margin to the centre of the picture. London had failed to yield quick results ; and the German Air Force, well exercised over the Thames, was becoming proficient enough in the once despised art of night bombing to undertake attacks on smaller and more elusive targets than the sprawling capital. There was to be no knock-out blow —that was clear. But the enemy may have thought it still possible to achieve the same ultimate result, given time, by striking intermittently at industrial centres and ports.

The new policy was inaugurated by the big raid on Coventry on the night of 14th November. On the limited area of the small Midland city some 400 aircraft dropped a much greater weight of bombs than any part of London of the same size had had to endure in a single night ; 600 incidents were counted. As it happened, London was raided on the following night ; it was a heavy attack by any standard, yet in the central area, with a population about sixteen times greater than Coventry's there were less than three times the number of incidents. This fact illustrates the special quality of the raids on provincial cities, which it will be well to examine.

No provincial target had to endure anything like the long-drawn-out continuity of the first three months' nightly attacks on London. None of them suffered a comparable sum total of damage. Parliament has been told that in the London Civil Defence

Region twice as many houses were made uninhabitable by air attack up to the middle of 1941 as in the whole of the rest of the country. This makes London's ratio of destruction, in proportion to population, eight times as great as that of the balance of the country. The death rate from air attack throughout the period of raids was several times greater in a collection of the hardest hit London boroughs than in heavily raided provincial cities of similar population. About half the country's total of deaths and serious injuries occurred in London.

But neither these facts, nor the peculiar military importance and world significance of the London attacks, could soften the special ordeal which the raids brought to inhabitants of the smaller cities elsewhere. Such a concentration of missiles as the Germans achieved in Coventry meant, for instance, that most of the inhabitants heard, or felt, the fall of every bomb. There was no question of the attack moving from one part of the target to another, some distance away, as the night wore on. Every moment the onslaught bore down upon the centre of the city and its nearer environs; by the same token, every moment it bore down upon the nerves and eardrums of the people. Despite never-failing schemes of reinforcement there is something fearfully exposed, naked and unbefriended about a city of limited size under heavy attack—something which Londoners were not called on to experience.

The visible after-effects matched this comparison. London was deeply scarred and widely desolated. In the City and part of the East End, great blocks and neighbourhoods were brought down or burnt out, and few parts of the central area were left unmarked. But the heart of the West End, London's playground, the famous shopping centres, are at worst recognisable and at best unharmed. Piccadilly, Regent Street, Oxford Street, Clubland, Theatreland—still there. In many of the other great cities it is a different story. After some of the heavy raids it was possible to stand at certain points in or near their centre, and hardly know where one was. Not only did the raw wounds gape and the smoke curl weirdly among endless arcades of twisted steel, but the very contours of the city had been battered out of recognition. People had to take their bearings carefully, and peer about to be sure of their direction.

In Coventry itself the great Cathedral spire, towering still above its fallen walls, gave the key and starting point to the maze of ruins around. But in one after another of the target cities, the whole centre was wiped out, either in one night or by the accumulation of bombs and fire spread over several raids. True, in Southampton, though whirlwinds flung away the shops of the long High Street, the Bargate still stood, defying bombs as it had defied the centuries. But in Portsmouth, the bright shopping centre of Southsea was gone. In Liverpool the great homes of the shipping companies were hollow shells. In Manchester one side of Piccadilly stood like the ruins of Ypres. Hull is scarred from side to side and end to end. In Swansea, Bristol, Plymouth, a large part of the centre of the town is now a levelled expanse of soil pitted with broken brick and scored here and there with the remains of walls. Though these cities may have had one or two raids, half a dozen or a dozen, against London's tale of scores of attacks, there are few indeed where minds and memories, like the physical fabric of the streets, are not deeply marked by the white heat of intense experience.

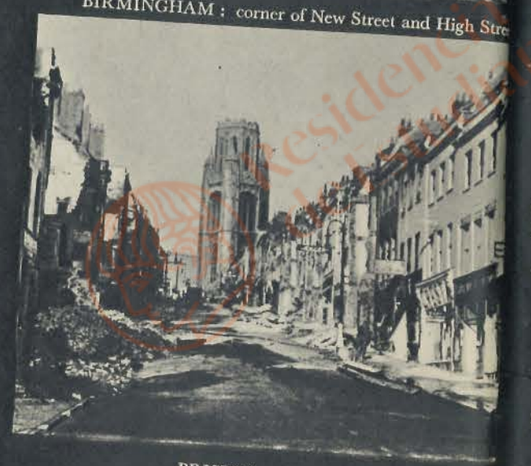
. . . . . .

After the first raid on Coventry, there came in the latter part of November, more heavy raids, two on Birmingham, one on Bristol, one on Liverpool, one on Southampton. None compared in relative weight with the Coventry attack, but each was a grievous blow. In Birmingham the city's death-roll, with earlier figures from the seven

DAWN BREAKS to find the city transfigured after a night of hell. Swansea had three heavy raids on successive nights in the middle of February, and the civilian centre of the city was levelled to the ground by bomb and fire.

COVENTRY : the city centre.

BIRMINGHAM : corner of New Street and High Stre



BRISTOL : Park Street.

SHEFFIELD : High Street.

MANCHESTER : corner of Portland Street.

THE ATTACK ON THE ARMS TOWNS

Dates of main raids		Estimated enemy planes engaged	Total civilians killed in all raids to end of 1941
COVENTRY			
14th November	...	400	1,236
8th April	...	300	
10th April	...	200	
BIRMINGHAM			
1st November	...	—	2,162
19th November	...	350	
22nd November	...	200	
3rd December	...	50	
11th December	...	200	
9th and 10th April	...	250	
BRISTOL (AND AVONMOUTH)			
24th November	...	50	1,159
2nd December	...	100	
6th December	...	50	
3rd and 4th January	...	150	
16th March	...	150	
11th April	...	150	
SHEFFIELD			
12th December 15th December		(2 nights) 300	624
MANCHESTER (WITH SALFORD AND STRETFORD)			
22nd and 23rd December (2 nights)		150	1,005

October raids, rose to well over a thousand. Bristol lost some hundreds of people and some of her finest buildings.

December saw nine nights of heavy raiding outside London. Besides repeating his attacks on Southampton, Bristol, Birmingham and—on an extended front—Merseyside, the enemy broke new ground in Sheffield and Manchester. The strategy was becoming obvious : attacks were distributed equally between the arms manufacturing centres and the ports. No special attention was reserved for either : the enemy was evidently just as well pleased to try to cripple Britain's own resources as to paralyse her centres of import.

The tactics of attack were taking shape, too. In the van of each raiding force came the Luftwaffe's skilled navigators and marksmen, laden with incendiaries, looking for the centre of their objective and loosing their loads to start the biggest fires they could. These beacons became targets for the high explosive bombs carried by later arrivals. It may well have been a part of the enemy's idea that to wipe out the civilian centre was the best way to break the spirit of the inhabitants.

However that may be, it is certain that during December the Luftwaffe quickly developed a reliance upon incendiary attack on city centres. They must have been aware of the fact that at night, especially on week-end nights, and most of all on Sunday nights, those centres were empty of the workers who could otherwise have dealt with a good number of incendiaries as they fell. So every Sunday night in the month a heavy fire attack was launched on the old, congested, inflammable centre of some city. On 1st December it was Southampton ; on the 8th, London ; on the 15th, Sheffield ; on the 22nd, Manchester ; on the 29th London again.

In the New Year the weather, and the active defences, slackened the attack for the first two months. The Luftwaffe came over

on most nights, but achieved only four heavy raids, on Cardiff, Bristol, Portsmouth, and the three-night raid on Swansea in the middle of February. When flying weather improved in March, the numbers of attacking planes went up, to 150, 200, 300, more than once to 350 machines. The last phase of the blitz began. In this phase, which lasted just over three months, the air war on Britain was almost entirely confined to the ports.

From 10th March to 10th May there were 34 very heavy night raids outside London. All but three of these were on the ports. About Easter time, Coventry had two big raids and Birmingham one. Otherwise it was Merseyside, Clydeside, Bristol, Portsmouth, Plymouth, Belfast, Hull—the changes were rung upon one after another. Merseyside had nine nights in all, Plymouth seven, Clydeside four, Belfast three. In the final fortnight, the first two weeks of May, the enemy put forth his greatest strength. He bombed Merseyside every night for the first week. This was a form of continuous attack inflicted on no other provincial target (though Plymouth had endured five big raids in nine nights late in April). In the same period he went to Tyneside, twice to Belfast, twice to Clydeside, and twice to Hull. The visitation upon London on 10th May will be borne in mind.

For the first week of the month an average of over 200 bombers a night came over; but defending night fighters and the guns were becoming much more formidable, and 53 bombers were brought down. In the second week the average attacking force fell below 200, but the total loss was 107.

The last visit in great force to any area was to the Midlands on May 16th. After that the Luftwaffe moved East, and the light forces left in the West seldom came much farther than the coast, where however they launched for many months to come a number of trying attacks on Hull, and a series of "tip-and-run" raids up, down and

THE ATTACK ON THE PORTS

Dates of main raids		Estimated enemy planes engaged	Total civilians killed in all raids to end of 1941
PORTSMOUTH			
10th January		110	756
10th March		120	
27th April		50	
SOUTHAMPTON			
23rd November		60	558
30th November	(2 nights)	200	
1st December			
CARDIFF			
2nd January		125	299
SWANSEA			
19th, 20th and 21st February	(3 nights)	250	352
LIVERPOOL (AND MERSEYSIDE)			
28th November		150	4,100
20th, 21st and 22nd December	(3 nights)	500	
13th and 21st March		250	
1st-7th May	(7 nights)	800	
PLYMOUTH			
20th and 21st March	(2 nights)	250	1,073
21st, 22nd, 23rd, 27th, 28th and 29th April	(5 nights)	750	
CLYDESIDE			
13th and 14th March	(2 nights)	460	1,828
5th and 6th May	(2 nights)	350	
BELFAST			
15th April		100	946
4th and 5th May	(2 nights)	110	
HULL			
18th March		75	1,055
7th and 8th May	(2 nights)	100	
17th July		75	

PORTSMOUTH : the Guildhall is in the background.

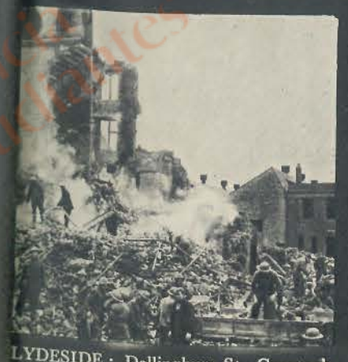
SOUTHAMPTON : near the city centre.

SWANSEA : Goat Street.

CARDIFF : Llandaff Cathedral.

PLYMOUTH : from the Guildhall tower.

LIVERPOOL : Lord Street ; South Castle Street ; Customs House in the background.



LYDESIDE : Dellingburn St., Greenock.

BELFAST : a burning church.

HULL : Newbridge Road.

THE SUN STILL SHINES. Bombing brought to the people of other cities an ordeal more intense while it lasted than the Londoner's. Most of them heard, or felt, the fall of every bomb. But each morning found them unsubdued.

round the coast from Cornwall to Aberdeenshire.

Thus six months elapsed from the first great attack on Coventry to the Luftwaffe's parting blow in the middle of May. In all that half year, its bombers were over Britain five nights out of six. The ports and a few armament cities were hit hard many times. But besides such spectacular attacks there was many another raid, not referred to in the communiques because of uncertainty whether its target was bombed by accident or design. There is no doubt it was sometimes by accident—a case of mistaken identity.

Names were never mentioned in the British announcements until it was certain that the enemy knew where he had been. Often our reticence was strikingly justified by the German communiques, which boldly claimed the destruction of a target that had not in fact been touched. So these "spill-over" attacks, or near misses, were apt to visit on some small town a great weight of bombs that was part, or even the whole, of a load intended for a bigger target.

Whether by accident or design, there were raids on Nuneaton, on Jarrow, on areas of Tyneside, on Newark, Scarborough, Brighton, Weston-super-Mare, and other towns not officially acknowledged at the time, which will live long in the minds of their citizens. By the giant measuring-rod of the raids on big cities, they do not show as very great

affairs. But to those who lived through them, even if only once, they loom up in the memory like a major earthquake, to be gossiped about for years to come, and used as a mark in the calendar for dating other and lesser events of the war.

To the civil defence services of the provincial target cities, the raids brought the same problems as to their brothers and sisters in London, and their achievement was the same. Indeed, what has been written of the performance of these men and women in the capital is just as much a part of the story of every other heavily raided town. It cannot be repeated in detail for each, but must be taken, broadly, as true for all. When the first bombs fell on each city, they brought the same swift test of fibre as in those early September days by the Thames, and they evoked the same response. It was some help and reinforcement to know that the thing had actually happened elsewhere, and been withstood by one's own fellows, trained and equipped like oneself. But if the nature of the onslaught was no longer a complete mystery, it remains true that no one really knows what a blitz means until he has lived through it; and the tremendous weight of many of the provincial attacks on their limited targets brought special tests and problems for the civil defence services just as for the general body of their fellow-citizens.

Nowhere was there anything but a heartening story to tell of the bravery of firemen and the fortitude, competence and humanity of wardens, rescue men, first aid men and ambulance drivers, control staffs, messengers and the rest. After six months of harsh endurance and strange adventure, these men and women could hold their heads high, and their fellow-citizens spoke gratefully and proudly of them. This was true also in a special degree of the police, who for historical reasons have different relations to the civil defence services in London and in the provinces. In London they turned their hands many a time to whatever civil defence work had to be done; but they stood, officially, apart from the locally controlled services. In the provinces they were part, and a great part, of civil defence: elder brothers to the wardens (the Chief Warden was usually the Chief Constable) designated as Incident Officers, and encouraged to serve as guides, philosophers and friends to all the services.

In the following pages the more detailed story of the air attacks outside London will be told in two longer and two shorter chapters—The Arms Towns, The Ports, The Countryman's Blitz, and Seaside Tip-and-Run. The first two deal with attacks on the cities. They do not attempt to give such an account of the raids on each one as its own inhabitants might wish to read, and as its sufferings and achievements richly deserve if they are considered in isolation.

Three points must be considered. The first has already been hinted at: the story of London is in many respects the story of other heavily attacked areas. What has already been written of the achievement of the civil defence services, the endurance of the general population, and the successful maintenance of essential services is true in broad terms of the whole country. Secondly, there is not space to do full justice to the separate story of each of the thirteen main target areas, while to attempt to summarise the whole of each story would produce but a bare and colourless outline—an injustice to the deeds it touched upon. Thirdly, one heavy air raid is not wholly unlike another, and it therefore becomes the task of a narrative such as this to dwell chiefly upon the features which distinguished the particular story of each target area from the rest, taking for granted those things which all shared in common.

It is hoped that from the sum of these separate special features there may emerge a total impression not entirely unjust to the many-sided, grim, and heroic reality.

COVENTRY FELT IT FIRST, when the Luftwaffe turned its attention to the Provinces and the centre of the city was devastated in one tremendous night. This was a busy shopping street.

AFTER THE RAID it is still washing day. In the shadow of Coventry Cathedral, now an empty shell.

10

The Attack on the Arms Towns

THE FIRST GREAT RAID outside London fell upon a city full to overflowing with the workshops and artisans of war. Coventry's population had increased fourfold in the last 25 years, and there was a severe housing shortage even before the swelling arms industries aggravated it. The arms factories and the little houses clustered round the lovely medieval Cathedral, standing on a hill with its silent spire above the humming crafts of war.

Over this small city of a quarter-million people, for eleven hours, under the bright full moon of 14th November, the Nazi bombers came and went. There were some 400 of them; and there might have been many more but for the attention which the R.A.F. had that afternoon devoted to their bases. They started great fires in the city, the greatest round the Cathedral itself. These they bombed until the Cathedral and a great part of the city lay in ruins.

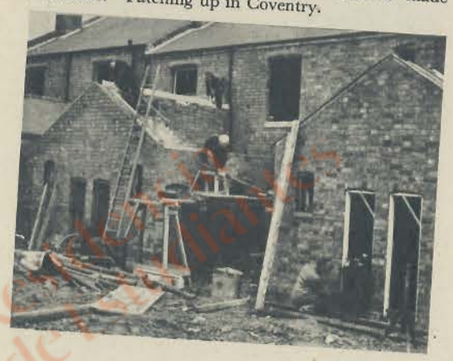
Some 600 incidents were counted. It was an experience without precedent in the history of any British city—a terrible test of the strength of the defensive machine. Inevitably there were some failures and weaknesses, as those who were themselves on the ground know best, and can best understand. But, in Coventry, Britain first learned that it was possible for the people and industries of a small target area to withstand and survive a long night's unrelieved bombardment on the very heaviest scale.

The city's essential services were for a time disorganised. (There had been 200 fires burning by 3.30 in the morning; many of the hydrants were buried under debris, and many water mains broken. Most of the fire-fighters had had to spend the night trying to relay water from the river and the canal.) There was a great rallying of civic and voluntary forces in Coventry itself, and the Region and the country quickly stood at its side. On the second day after the raid there was held the first of those emergency councils of action that became the practice in all the blitzed cities. National, regional and local functionaries met together, laid their plans, and set about the work of reconstruction in close mutual contact. Industry formed its own committee to work with the authorities. The first shock was soon over and restorative progress quickened. Here we can give but one pregnant example.

Transport was at first at a complete standstill. The Corporation Transport undertaking's garage was partly, and its offices wholly, destroyed; the tramway system unusable, almost half the buses damaged or wrecked, some big rail sidings hit, and all roads within a mile of the centre impassable.

THE STRICKEN CITY. *Above*, one of the many problems which heavy raiding creates. *Below*, the Y.M.C.A. comes to the relief of citizens deprived of their shops and restaurants overnight.

FIRST THE WORKERS' HOMES. In the arms towns, if work is to go on, houses must be made habitable. Patching up in Coventry.



Then the restorative forces got to work. By the second day, more than half the bus routes were being run, as near to the centre as they could get. Workers' buses ran to all factories. Other buses evacuated the homeless and brought in emergency food supplies. Damaged vehicles were replaced from outside, and in less than a week the regular services were almost normal. Railway engineers and breakdown gangs surpassed themselves. On the 15th, every line out of Coventry was blocked by bombs, and the station closed. By the evening of the 16th, the report came through: "Coventry-Birmingham and Coventry-Leamington clear. Coventry-Nuneaton passenger lines clear. Goods line to Rugby clear except for one stretch single line working."

Achievements in this spirit could be recorded for every service. Industry must go on. The world might linger in dismay over the wrecked Cathedral and in grieved admiration over the human endurance of the dazed and battered population. But it was for practical ends that the police and wardens had gone on their errands in the hail of death and the doughty women of Coventry's voluntary services taken their canteens out to the rescue men among the debris. The raid on Coventry was an act of barbarism, but it was also a calculated act of war. Its purpose had to be defeated in the shortest possible time. Attack alone was mere destruction, but attack and defence made a battle. Such fights had to be won. Lost, they would have threatened the survival of the nation and its universal cause.

Four nights later the second heavy attack fell upon Birmingham. The great midland city—one of Britain's four in the "million" class—had already suffered ten lesser raids, and nearly 400 of its citizens had lost their lives. But on 19th November came its first really big attack, with over 800 "incidents" in a night. Three nights later the enemy came again, in lesser force, but sufficient to start hundreds of fires and kill a

large number of civilians, including many of the civil defence services. One of the longest raids of the whole blitz followed on 11th December, after which the city was spared intensive raiding for four months, until the following Easter, when there was a very heavy incendiary attack. The number of fires was roughly proportionate to the worst that London had to face on any single night.

The impact of many bombs on a very big city like Birmingham is not the same as on a lesser one. From first to last, Birmingham learned very thoroughly what intensive raiding is; nearly a hundred thousand of its houses suffered, and one of its central shopping areas was much damaged. Yet on the whole, as in London, one must look for the scars. To say so does not offend Birmingham, whose bomb-pride takes the form, proper to a big city, of saying not "our raids were the worst," but "of course, you see, in a place of this size, and with our resources . ."

The Civil Defenders of Birmingham were a numerous and determined body, and at times they needed both their numbers and their resolution. In the last big raid there were over a thousand incidents, and the pressure was so great that services were interchanged—first aid parties doing rescue work

INDUSTRY UNDER FIRE. The Midlands arms towns were a constant target throughout the winter. These are the chimneys of Birmingham, 12th April, 1941.

and rescue men treating casualties before first aid parties arrived. From one depot alone over one hundred services were called out—sixteen first aid parties, fifty ambulances, forty-two rescue squads, and many cars for "sitting cases." Eleven thousand wardens were on duty that night.

Their mortality rate was over three times as high as that of the general population—a typical index of what the civil defence services consciously faced. Of the women in the services, their colleagues spoke enthusiastically. A rescue party leader said of the girls waiting in the ambulance stations for a call: "I used to see them just sittin' there doin' their nails, and I used to say to myself, 'you wait till the bombs fall, my girls, and you'll think very different.' And in the middle of the blitz I went in to fetch one of 'em, and I thought now we'll see, and there they all was, just sittin' there doin' their nails."

If Birmingham, like every other big city, needed help and reinforcement to fight the actual raids, it coped with their after-effects singlehanded, disposing of its own homeless, and tackling its own repair work. The spirit of Joseph Chamberlain lived again to fight the Nazis. The city's well-managed gas, electricity, transport and water undertakings, his legacies, showed themselves more than a match for the considerable damage the bombs inflicted. (Once four-fifths of the city was without mains water—but it was for a very short time.) The great corporation housing estates, again, played a crucial part in the work of rehousing the homeless, many of whom were billeted on the city's own tenants.

But not all the homeless needed the help of the corporation estates, and some had their own ideas about how to make use of them. One wintry day on the "morning after," a soldier's wife deposited four well-scrubbed children at an estates department office, which existed to arrange billeting and rehousing. She asked if the children might stay awhile as the roof of her house had collapsed, and hurried off without waiting for advice or an answer. Hours passed. At lunch time no sign of Mother, and food was shared round by the staff. The weather got worse. At 5 p.m. still no Mother—and no murmur from the exemplary quartet. Eventually, the soldier's wife appeared, wet but in triumph. "Thank you very much, me and the children will be staying at Grannie's to-night and I've found another house to go to to-morrow. Good-night."

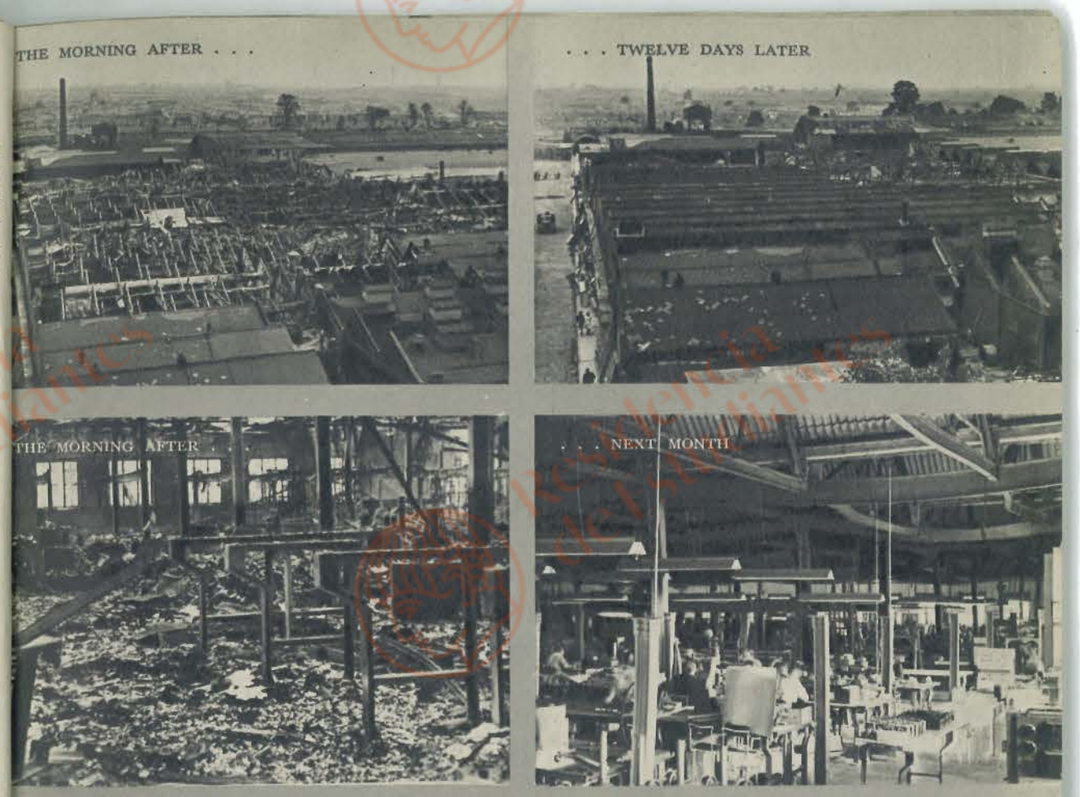
Birmingham is the home of medium-sized metal industries, all now adapted to war uses. Their factories and workshops are scattered among houses and behind stores higgledy-piggledy about the city. They had their A.R.P. squads, works fire brigades and (later) their Fire Guards. They had their share of bombs, too. Here is a plain tale of what happened to a group of such plants working in association on contracts for the Navy, Army and R.A.F. They are not typical, in that they suffered an altogether exceptional number of hits, but their story throws some light on the way other war factories in all parts of the country were dealing with "the bombing problem."

One works lost most of its floor space and roof by fire; tools and jobs were transferred to other buildings. The whole of the administrative offices, office machinery and furniture was destroyed. Records had been duplicated as a precaution; second-hand furniture, typewriters and adding machines were installed and the staff back to work within three days in space cleared from an allied assembly shop. Directors, executive staff, typists, office boys all sat in one large space without partition. It made concentration harder but communication easier; it saved time, and the firm later decided not to change it "for the duration."

Another works was struck by high explosive and the roof widely damaged. A small piece of plant was out of action for a few weeks while the roof over it was repaired; its work was done elsewhere. A third works was struck by high explosive which did a good deal of local damage to the roof without interrupting production. A fire put some plant out of action and led to the adoption of a different process which turned out to be more satisfactory.

A fourth works was hit by three bombs on the same night. Production was interrupted in various sections for an average of about three weeks, some of the work being transferred elsewhere for a time. Another plant, a large tool room, was damaged by high explosive, fire, and the water used to quench it. It was hit again next night by two bombs, which did some blast damage and started a fire. Soon afterwards two more bombs and some incendiaries again destroyed roofing and started fires. This chapter of injuries stopped half the work of the plant for some weeks. The remaining men carried on for two months under the open sky till the roof was repaired, merely covering their machines with tarpaulin when it rained, and greasing their tools.

A few months after the last of its misadventures, the works in this group were able to lay plans for an expansion of 50 per cent. in their combined businesses. One director gave his view:—



PRODUCTION GOES ON. In the Midlands—and elsewhere—factories handling war contracts performed miracles of reconstruction. In this one the roof was repaired in twelve days; inside, production can be seen in full swing again. Notice the use made of steel salvaged from the bombed structure.

IN THE COLD OF WINTER . . . Arctic weather added new trials to the tasks of civil defence. A destroyed building in Bristol docks after the big raid of 3rd January.

. . . AND THE HEAT OF BATTLE. Smoke and flames were the familiar accompaniments of night-time even in the wholly residential suburb of Clifton, which did not escape Bristol's blitzes. Merchants Road, Clifton.

" People are much less depressed provided that they can be given something really useful and constructive to do on these occasions . . . they are just burning to get on with the job and put things right. Our own men worked with a real will at salvaging their machinery and took great pride in getting it going again quickly."

Then there came Bristol, included in the arms towns because air attack on the port was negligible. Its raid of 24th November was the third great provincial attack : it was the city's first and in many ways its worst heavy raid. Though the attacking force was not great and the attack not very long, the damage was heavy, and fires in the city's centre got out of control for a time through the failure of water. The Art Gallery was destroyed, the University's fine hall heavily damaged. The A.R.P. Control Centre had to be abandoned.

This was a grievous tale of injury to fall suddenly upon a city that only four months earlier, before the fall of France, had been reckoned a westerly haven of refuge, had become crowded with evacuees, and been reckoned safe enough for use as the B.B.C.'s main studio centre. But Bristol had left nothing to optimism : its civil defence machine was well-drilled. It was what Bristol would expect of itself, that the shocks and losses of the first big raid should lead at once to progress based on the lessons learned, and that the shocks should be milder and the losses less with each succeeding attack. Three more heavy ones followed within a few weeks of the first, and soon after the New Year the death roll was about 600.

The raid in January took place on a bitterly cold night and produced some strange scenes. Two houses might be seen side by side, one in flames with the firemen at work on it, the other hung with long icicles where the streams of water had splashed and frozen. The brave and spirited women of the Women's Voluntary Services, taking their canteens out under the bombs with refreshment for civil defenders and anyone else needing it, had their own troubles that night. " The firemen put the cups with dregs down and they froze. The tea froze. The hose froze. We had a choice of being frozen, burned, blown up, or drowned in tea." These hazards of deep winter were additional to the normal ones that afflicted all who had to move about in the blitz—hidden craters, dark lumps of debris, tangles of firemen's hose, and trailing telephone wires. Messengers, ambulance drivers, and the W.V.S. had to learn a new technique of locomotion. One W.V.S. driver used to take her student sons out with her in turn. They lay along the bonnet of her canteen van taking soundings and calling back to her as she nosed forward.

When the real risks involved in fire attack became clear, the Civil Defenders and the people were among the quickest in all the country to tackle it at its root—the fire-bomb. The sequel was dramatically encouraging. One big attack was thoroughly defeated by this means. On a certain night incendiaries were dropped widely, in an effort to find and

light an objective. They were promptly put out everywhere except in one district. A message from the enemy force was overheard, " We have found the target," and it was the offending district, innocent of military objectives, that got the bombs.

Later, in one of the heavy raids, the police and other observers were much struck by the work of civilians in their home neighbourhoods. The police report remarked that " there did not seem to be enough bombs to go round." In the last of the big raids, on Good Friday night, the enemy began as usual with showers of incendiaries. More than one watcher, posted high, saw the white glaring patches all over the target area grow and brighten. Within a few minutes " it was as though someone was drawing a blanket over them. The light died down and disappeared." Three hours later, the bombers were still dropping flares to try and light their target. The bombs fell heavily but blindly. It was a big attack, but damage was limited, and not a single major fire developed.

Unhappily, earlier raids had been more harmful. A great part of the centre of the city was completely burnt out, and stands dumb witness to the meaning of total air war as the Nazis taught it to the world.

The next war-industry town to be attacked was Sheffield. Ever since Henry Bessemer built his first works at Attercliffe in the eighteen-fifties, Sheffield had been one of the world's great arsenals. When the sirens sounded at 7 o'clock on 12th December, they seemed to mean no more than they had done on many another night when the raiders had crossed the city, bound elsewhere. Normal life continued until showers of incendiaries, the thump of bombs and the bark of the guns brought home to Sheffield that the blitz had come at last.

For nine hours of the moonlit winter night the bombers droned across the city and unleashed death and damage on its crowded buildings and its untried people. As fire and destruction spread among the commercial buildings in the city centre, one basement shelter after another became uninhabitable ; 2,000 people in one main street alone had to be moved through a double line of fires

U.S.A. TO BRITAIN

GOOD FRIDAY, 1941.

SHEFFIELD'S ANSWER. There was no question of lying down under the blows the arms towns of England received. Emergency measures were quickly put in hand. *Left*, the army comes to the rescue when water supplies fail. *Right*, the bombed-out are fitted with clothing in a school Rest Centre.

to safer refuges. They marched quietly and in good order behind wardens who were themselves facing their first fierce experience of active service.

All over the city scores of thousands, in and out of the civil defence services, were rising to the occasion with a similar steadiness of nerve. As the hours went by and the bombs destroyed communications and made orderly action more and more difficult, improvisations became the order of the night. Wardens, failing to make contact with control, went and set the services in movement by direct action. They allowed their posts to become refuges for the homeless and distressed, who almost crowded them out. "The women wardens, who had with difficulty been kept indoors in most cases, calmed the shaken with kind but bracing words, dressed wounds, and in one case eased the last hours of a lost baby."

The first aid parties, when their vans could not get through, walked kit in hand to their destinations, bringing relief and assurance wherever they went. Ambulance drivers, if their vehicles broke down or were blocked, carried their patients to the first aid posts. Rescue workers, in inadequate numbers owing to a breakdown in organisation, did marvels of skill, strength and courage all night and well into the following day. The firemen, though they could not save the city centre, fought with limited water supplies to confine each fire to its own building—and succeeded, for only one blaze in all the central area spread to another building.

When morning came, it brought those scenes of desolation and mess so familiar in Britain at that time. "From the unlimited variety of emotions and experiences which are now only remembered with difficulty, two things only stand out as being universally true: everyone was dirty, and everyone was kind. Never in all the history of smoky Sheffield have such tons of dust, soot, and foreign bodies encumbered its celebrated atmosphere; never before have her citizens displayed in unison such spontaneous and heart-felt friendliness. Not only the reserves between neighbours, and between the distressed and their helpers, but those between

NINE HOURS OF BOMBING. When Sheffield's turn came it was mid-winter. In one long night city centre and suburbs alike were pounded with high explosive and scourged by fire. This is a store in the High Street, 12th December, 1940.

strangers broke down entirely ; every hospitable and generous impulse was given free expression without shyness and accepted without embarrassment."

There is no space to tell how the city coped with its immediate problems : how, before the days of emergency meals services, the staff of the Institution at Fir Vale turned out 60,000 meals in the first twenty-four hours, continuing to stand in the breach and serve the whole city's needs for many days so that the homeless housewives of Sheffield could still carry on—" arter all, we've soomat t'eat " : how, when the Rest Centre organisation was broken by bomb-hits and by the general weight of the burden upon it, all sorts of willing workers made their appearance and improvised substitutes in halls and first aid posts : how the medical and nursing staff of one first aid post turned it into a Rest Centre in a twinkling, and housed and cared for its crowded collection of bombed-out men, women and children day by day until a return to normal life was possible ; how great feats were done in record time in the restoration of water, gas, electricity, communications, transport and the clearance of roads ; how an Information Bureau was set up at the City Library which served as a many-sided link—the first outside London—between public needs and official activities, a standing demonstration of the vital importance of such a service, and a model of how to render it.

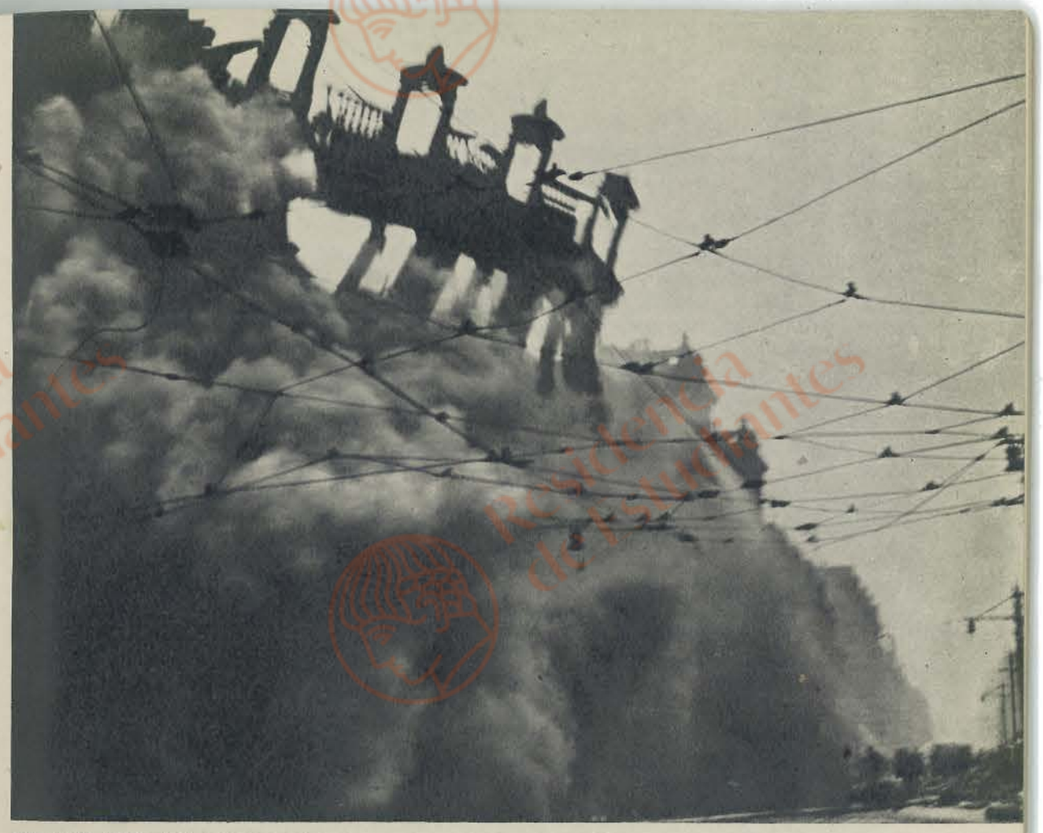
Three nights after the great raid of the 12th, Sheffield was attacked again—not lightly, but happily for not more than three hours, and in a limited area. The results were blended with those of the earlier raid and the city went on with the work of cleansing and restoration after both. In these and other, much lighter, attacks, about 85,000 houses were damaged.

Sheffield broke new ground in more than one direction concerned with air attack. Not the least valuable was its decision to prepare a full story of its raids. This was to be no mere official report ; it was also to pick up all the bright atoms of human action and suffering before they were buried beyond recall, and to piece them into a mosaic that would picture the rich and living truth about an air raid. The work was done with the fidelity and imagination it deserved. After the war it will add an invaluable section to the national record. Meantime this narrative has been able to draw upon it for the material of the preceding brief paragraphs.

The next great industrial city to be attacked was Manchester, which, with its neighbours Salford and Stretford, suffered three nights before Christmas a fierce incendiary attack. Shortly after dusk on 22nd December, the bright white light of flares lit the sky above the city from end to end. Soon the colour changed from white to red, as the incendiaries took hold and the clouds reflected the crimson of growing fires in the city centre and at Stretford.

On the following night, the attack was renewed with special attention to Stretford, where big fires were still burning at the end of the two nights. Oxford Road, Deansgate, and other central arteries in Manchester and Salford were blocked by debris of fire and high explosive, and the weary Civil Defenders, making their way home from the centre of the city, met another procession coming the opposite way, the black-coated army, moving on to do its daily work in shops and offices—many of which had vanished in heaps of ruin.

Yet, on the whole, Manchester was big enough to take the raid in its stride, without much upset or disturbance. The great northern city, with its neighbours, has long stood for a quality of freshness, breadth and humanity in political life and civic government. Manchester typifies many of the elements in British democracy to which Hitlerism is most repugnant ; the city had been early to perceive the threat from Germany and to respond to the Government's call for civil defence preparations.



FIRES BLAZED ALL THAT NIGHT. Manchester's first great raid was on the night of 22nd December. Tall city buildings crash to the ground at the corner of Deansgate, in the centre of the city.

When the test came the wardens, rescue and casualty services were ready.

The enemy launched his high explosive towards the fires that were starting in the centre of the city ; but many fell in the poorer streets, and worked havoc among the small houses. In such circumstances the work of the wardens is of especial importance, and all authorities are agreed that the working class wardens, whole-time and part-time, even those with least advantages or experience of responsible leadership, acquitted themselves with exceptional credit. Salford's well-disciplined force, which had a positive and universal rule against going to shelter or indoors at any time during a raid, put up the performance for which sound planning and thorough training had paved the way.

But fire was another matter. The first raid took place on one of the unhappy December Sundays. Manchester, like most of the rest, was caught off guard. Some of the shops and offices were well protected by roof watchers, who were able to cope with fire bombs, plentifully though they fell. Other buildings were quite empty, and the fire sentries elsewhere had to look on across the chasm of an intervening roadway, powerless and in fury, while two or three incendiaries slowly—so slowly !—burned their way

through the roof and the top floor, until the whole building gradually roared into flame and was lost.

It was the fire brigade's first raid in their own city. The auxiliary firemen and their regular comrades had not yet had an opportunity to become welded into a single well-exercised unit, and the problems of mobilisation, command and water-relay were thereby the more formidable. Wind and weather seemed actively unhelpful to the defenders. Many blocks in the middle parts of the city were burned right out or severely damaged. All this marked no failure of heart or will on the part of the fire-fighters, but a lack of experience of what the most concentrated kind of fire raid could achieve, and of advance measures to cope with it. The events of that night were not peculiar to Manchester ; and the city, true to its best traditions, was quick to learn some of the main lessons of its own and other raids. It pioneered a new organisation of compulsory fire protection in business areas, and established a thorough scheme of compulsory fire guard work in advance of the national measures.

The Battle of the Arms Towns was brought to an end some four months later, when on four successive nights in early April, Coventry, Birmingham, Coventry again, and Bristol were attacked in turn.

One aspect of Civil Defence in these raids may be noted as typical of a vital problem that was met and solved in every target area —housing repair. In Coventry, from which our example comes, it had always been a front-line question : by the end of April 70,000 houses in that city had been damaged and their temporary loss could ill be afforded. In the November raid, a sudden round-up of men and materials had enabled roofs and windows to be patched with no great loss of time. In April, an officer concerned with house repair thought it his duty to go round to the biggest fires and other incidents for some hours under the bombing so as to estimate the probable damage. In the morning communication would be difficult, and he meant to be away moving labour and material at once. When you were working to a schedule of days, hours were worth saving. For these houses were the arms makers' bases, and could not be restored too soon.

11

The Attack on the Ports

THE GERMAN ATTACKS on British seaports and dockyard towns can hardly be fitted into a single strategical pattern. In November and December, the ports took their turn with other vital centres as part of the targets in a general onslaught, which by striking at civilian communities was meant to slow down and cripple the British war machine. Then the world panorama began to change, and the German plan with it. At first, to the Nazi leaders, and perhaps to world opinion, Britain was the single enemy, to be hit hard and often until she made terms. But when the world saw that London could withstand tremendous pressure, and to the discerning eye her victory was marked by the Nazis' abandonment of their exclusive concentration on the Capital, opinion changed. As President Roosevelt later wrote, the British defence "showed that Britain was able to hold off disaster until adequate help could come from ships, airplanes, tanks and guns from the United States." And the help began to increase in

volume. Then the Germans' problem came to be to stop it.

In 1940, between the attack on Coventry and the end of the year, there were three major attacks on Merseyside and two on Southampton. But in the whole of 1941, out of some forty night raids on particular targets other than London, only six were not on ports : and this half-dozen included three attacks on Bristol, two at least of which may well have been originally conceived as part of the blockade.

At the same time the earlier ordeal of the ports was not inflicted wholly by heavy concentrated attacks. Liverpool, Portsmouth and Southampton all had a large number of lighter raids, by day and night. Liverpool was attacked 57 times and lost 520 of its citizens before its first heavy night raid on 28th November, when some 150 enemy planes attacked. Portsmouth and Southampton had even more frequent attention.

Portsmouth is accustomed to disaster. No big ship or submarine has ever gone down in war or peace without bereavement to many Portsmouth families. Their connection with the Navy is one of glory and sorrow, and the raids of 1940-41 were only an intensification of something which has long had a prominent part in the city's life.

Portsmouth is but a few minutes' flying distance from France. Up to 8th August, 1941, it was warned 792 times—nearly twice a day on the average ever since the German raiding began. And a warning in Portsmouth usually also meant an ear-splitting barrage.

The city has had four major raids besides some fifty harrassing attacks. The first serious action was near the beginning of the Battle of Britain when on 24th August, 1940, seventy H.E. bombs were dropped on the city in five minutes in broad daylight and 125 people were killed. But the heaviest raid came on 10th January, 1941, when 450 bombs were dropped. Another raid of about half the weight came in March and there was a heavy attack at the end of April. In a year of air attack over 1,500 bombs were dropped. Of the city's 70,000 houses, 65,000 suffered some kind of damage, in most cases repairable.

It was in the raid of 10th January that the city's splendid Guildhall was gutted. Both the main shopping centres and many a public building besides the Guildhall were completely burnt out. It was a bad night of fires in Portsmouth. As a fireman on duty put it, "Here, alas, as in many another fine town, the constant cry was for water, water, and still more water. . . . It was eventually relayed from a distance of over three miles, measuring the round-about route made necessary by bomb damage."

Wardens and police worked closely together, earning and enjoying a full degree of public confidence. Naval tradition had one interesting effect on the civil defence services. Senior officers of these services would tell you that elderly men were of more value and were perhaps more highly regarded both individually and as a body in Portsmouth than almost anywhere else. "You get an old warden and he seems to be nothing wonderful in exercises or his routine jobs, but when bombs start, he's a sailor again."

The Navy showed itself a very good neighbour to the city in their joint ordeal. The city will not forget the gesture that, after the sudden shattering fury of the daylight raid in August, sent a substantial Naval party doubling smartly through the streets to the Guildhall to report for any service they might be required to do. The Navy's concern for the dockyard, which must come first, never prevented it making such contributions. It lent a hand with putting the town to rights after the January raid, repairing utilities, helping to feed the services, clearing the streets and demolishing buildings. Quite a large number of sailors went out in small detachments as Friendly Aid Parties just to see what you wanted done. You were standing by your front door, looking and

65,000 PORTSMOUTH HOUSES WERE DAMAGED out of 70,000 in the city. But services were restored and life went on. *Above*, a mobile laundry. *Below*, Free French sailors help.

feeling rather lost, and the Friendly Aid Party would help you to patch up your windows, or move your sick wife, or take the broken glass out of the larder. Such things were the small change of after-raid work, but they are the very stuff of memory.

Like its neighbour Portsmouth, Southampton is only a few minutes away from the Luftwaffe's French bases and it was warned, bombed and blitzed with the frequency that was to be expected. It had fifty bombing raids up to the summer of 1941, three of them heavy night attacks. Its introduction to serious business came in three daylight attacks on 11th, 24th and 26th September, 1940. It had some 2,200 bombs in all and over half its houses had some damage.

The city's heavy night raids, on 23rd and 30th November and 1st December, inflicted an amount of senseless damage that shocked and roused a people not yet used to the new standards that the Nazis seemed intent upon setting. The Civic Centre was hit many times. The commercial centre, the long shopping street above and below Bargate, was very heavily damaged. By 1st December, only one building on its east side was left intact between the Civic Centre and Bargate. Three-quarters of the old district in the centre of the town was destroyed, largely by fire.

The A.R.P. services came with credit out of an unusually severe ordeal. In one of the raids, centralised control was made impossible, and the services had to operate each for itself, district by district, as the needs of the moment required. The machine was not intended to work in this way, but being a flexible thing planned to allow room for initiative at the bottom, it could withstand

SOUTHAMPTON HAD FIFTY RAIDS, in which 2,200 bombs were dropped. *Right*, street scene. *Above*, close-up. They lived here till last night.

disasters that would have dislocated or paralyzed a more rigid organisation.

In January, 1941, the Luftwaffe's New Year gift was an attack on Cardiff, on the second night of the month. The white buildings of the Welsh capital's Civic Centre gleam in the clear air. But the city is not far in space or spirit from the mining valleys where black dumps are always encroaching on the green hillsides and toilsome lives are lived under the shadow of daily risk of sudden catastrophe. Even the savagery of Nazi air raids does not fall with full surprise upon a people thus inured to shock and terror.

There were thirty raids on Cardiff. One at least was heavy enough to test and prove the nerve of the people and the effectiveness of their defences. To many a policeman or rescue worker, the night of 2nd January will always be the most vivid experience of his life. Its bombs and fires brought their wonted sequel of personal tragedy and physical damage. The splendid Cathedral of Llandaff suffered greatly. But neither that nor any other raid cut too deeply into the city's tissues or seared its memories too painfully.

The civil defenders and citizens themselves have a strong claim to the credit for the defeat of this raid. It began with a heavy incendiary attack, but this was one of the very earliest raids in which police, wardens and householders showed themselves able to deal thoroughly and quickly with the bombs. In consequence the fires which did spring up were never really out of hand. There were remarkably few hits on important targets, though a great many small houses near the docks suffered, and some heavy bombs were dropped at random in residential areas on the outskirts. It was one of these that fell on the Cathedral.

The Cardiff raid was in almost every aspect an example of effective defence, the more creditable and satisfactory in that here, as in the rest of South Wales, an exceptionally high fraction—indeed almost the whole—of the civil defence services were

SOUTH WALES HAD ITS TURN early in the New Year. Cardiff's biggest raid was on the night of 2nd January. It was the same story here as elsewhere: fortitude in the face of destruction; unfailing courage on the part of the civil defence workers. A stretcher party carries a casualty to safety.

voluntary part-time workers. One small episode of the raid is worth recording because it so faithfully exhibits the spirit of the Welsh cities under bombing, and the roots of that spirit. When a rescue party set to work to see who might be buried in the debris of a demolished house, they were warned of life to be saved and guided to their mark by the notes of "God Save the King" sung at the top of his voice by a little boy of six. It turned out that he was trapped under the staircase, where he had to stay for six hours until rescued. He was singing most of the time. His rescuers asked him why. He told them—"My father was a collier, and he always said that when the men were caught and buried underground they would keep singing and singing and they were always got out in time."

The same spirit showed itself in the other principal Welsh target, the port of Swansea, which was attacked for three nights running in the middle of February with a savage determination that perhaps gives these raids some claim to be called the opening of the air blockade proper. But the method of the attack was significant, and typical.

The whole civilian centre of the town was levelled to the ground by bomb and fire. The Luftwaffe was issuing the same direct challenge to the people of Wales as it had done and would do to the people of England and Scotland, with the same result. The machinery of defence and reconstruction worked well; though losses were suffered, the attack was defeated.

The great fires that raged in the central part of the city area put those who were sheltering there to a severe test of nerve. The record of peace-time fires in crowded places contains enough instances of wild panic to make it clear that mass good conduct on such terrible occasions cannot be taken for granted. But the people of Swansea had the personal discipline of free people at war, and in their wardens they had leadership. Though not an army, they produced when occasion demanded it the essential characteristics of a disciplined body. After waiting for hours in some large basement shelter, knowing that the next bomb might hit it and that there were fires all round them, they were nevertheless quite ready, when the menace of flame became too pressing to march out under the wardens' direction into the blazing streets and make their way quietly or with singing to some haven less threatened.

The wardens themselves took these episodes in their stride. Such a raid might tempt faint-hearts, after one experience of its terrors, to find some reason for not appearing the next night, particularly if it were not strictly their turn of duty. There was no such sign of weakness. The wardens and the messenger service had the same number on duty on the third night as the first.

After the raid one immediate task was to make food available in a city with many thousands of damaged homes, a burnt-out shopping centre and 200 food shops and stalls out of action. This was done in a few hours. Alternative food shops were arranged and the emergency food services did not fail. The striking and colourful vans of the Queen's Messenger Convoys were cheered in the streets when they arrived. Communal feeding centres were set up. Mobile canteens took hot food to the people, and sought them out in their damaged homes to give it them.

The third and last raid took place on a Friday night. The rate of Swansea's mental recovery can be measured by the fact that in the blitzed streets, still filthy with the litter of the blast, one of the most normal of all Welsh sights was seen on Sunday afternoon. Group after group of children in clean frocks and well brushed suits set off to Sunday School. The sight of them brightened the desolate suburbs. Parents took for granted, with good reason, that though churches and halls had suffered, arrangements would have been improvised so that the Sunday Schools could carry on.

After Swansea, the next really heavy raids took place three weeks later on Merseyside, where a million people cluster about the estuary through which so much of the country's trade has passed for two centuries. We shall not tell the enemy where his bombs dropped on particular nights, by mentioning individual boroughs. In their ordeal Liverpool, Bootle, Birkenhead, Wallasey and the rest learned fresh solidarity as Merseyside. Merseyside let them be in these pages.

Measured by number and weight of attacks and number of casualties, this must rank as Hitler's Target Number One outside London. To the first Merseyside raid on 28th November we have referred. The second was spread over two nights (three if some stray raiders are counted) a few days before Christmas. It was a heavy attack, with many hundreds of deaths, widespread fires, and a good deal of civilian damage.

Then, in the middle of March, came two nights of brutal raiding, bombs crashing upon houses and streets for eight hours the first night and six the second. The impact of the two raids combined, measured by the death rate they caused, was as great as that of the Coventry attack, though the damage was less concentrated. With the shining water to help them the German bombers could not fail to drop many of their missiles on the docks themselves, and if they did great damage among densely packed houses away from, as well as close to, the waterfront, as they did in all the Merseyside raids, it was no doubt their usual policy of striking at the nerve and courage of civilians and disorganising their normal life to the utmost.

The civil defence machine was by this time well tested and hardened and the services went about their work with full mastery, though the fire-fighters in places were hindered by lack of water. In these earlier raids two boroughs had 30,000 of their houses damaged—about two in every three. The people endured their ordeal with stubborn and uncomplaining fortitude.

Six weeks later came the next, and for a long time the last, chapter: Merseyside's "May Week," the series of attacks on the docks and their neighbourhoods that marked the first seven nights of May. Only two of these raids were extremely heavy, but none was negligible. Between them they killed 1,500 people. It was estimated that more than 2,000 bombs fell on land during the week and that the brigades fought over 1,200 fires.

The policemen and firemen who guarded the docks in May were perhaps under as fierce an attack as any men in the whole course of the onslaught on Britain. High explosive and incendiaries fell in great weight upon the dock basins, the quays, the ships moored at their sides, and the store sheds hard by. There was damage, but the marvel is that it had so light an effect, and for so short a time, on the working of the port.

Policemen moved arms and ammunition to safety from blazing sheds with their own hands or put their shoulders to trucks laden with shells and forced them away from spreading flames. Firemen fought all night to check the fires on a blazing munition ship. All these men, every instant for hours on end, were consciously staking their lives on the race they were running against time, the threat from flames and falling embers, great as it was, being less than the chance of immediate explosion at their sides if the flames moved too fast for them. Volunteers from among the dockers worked to unload special cargoes while the bombs fell, and cleared in record time some naval vessels which the Admiralty wanted to move from the danger area.

At the end of this week of desperate risk and heavy labour the docks were working: handling a reduced volume of traffic for a time, but working. As blocked roads and cratered railway tracks were reopened, and the chaotic reminders of fire and bomb cleared from the quay sides, the turnover of the port moved back towards normal. The

THEY DROVE THROUGH THE NIGHT. A cheering moment for the exhausted men and women of a devastated city was when the Queen's Messenger Convoys, with their cargoes of food, arrived in the stricken area.

enemy had done his worst to Merseyside for a week, and there was much to do outside the docks as well as within. Vehicles, civil and military, were mobilised from the nearer parts of Lancashire, and for days the work of clearance and repair went quickly forward. In all the Merseyside raids a total of over 150,000 houses were damaged.

Forty thousand homeless people were billeted inside the city in one week: others moved to Rest Centres and billets on the outskirts and in the nearby villages and towns. It might have been feared that sections of the dockside population would show some weakness of nerve. But every testimony agrees that there was no sign of it: they moved to their temporary outstations cheerfully and in cold blood, grateful no doubt for the prospect of some nights' peace and quiet. The police, who have had past reason to take a cool view of some of the dockside neighbourhoods, spoke in praise of the way they had stood up to their ordeal.

Some of the housing districts were affected worse than others. In one section almost every warden was homeless after the first few nights. They took their turn of sleep in shelters or Rest Centres and worked straight on, day after day, part-timers as well as whole-timers. Other services had still worse ordeals to face. Of the First Aid Party Depots, only one was left unaffected at the end of the raid. A bomb fell directly upon an Ambulance Station, killing 17 drivers at a blow. One of the divisional Control Centres had a bomb through the

middle of its ceiling. Happily it did little injury: eyewitnesses said it "tore its side out on a girder and went off like a squib."

Some thousands of houses in Bootle were roughly handled by blast and bomb-splinter, and parts of the borough looked very untidy towards the end of the raids. But the inhabitants were not to be driven into taking things too seriously. On the morning after the last raid—no one of course then knew it was the last—an observer, picking his way through the streets, saw women at work in the habitable houses, and in a good number that did not deserve that description. They were scrubbing the steps, polishing the door handles and cleaning the remaining panes of glass, as they had done before the raids started and are no doubt doing at this day. Another observer who knows Merseyside well, summed it up for an inquirer a little time after the raids. "Of course there's no doubt," said this authority, "that if Jerry kept up continuous raids night after night on a place like Liverpool a lot of the people would disappear."

"And when would they come back?"

The authority smiled. "Next morning."

Next to Merseyside perhaps the most intense and continuous attack upon any provincial target fell upon Plymouth towards the end of April. In Plymouth there are normally 195,000 people living in the Navy's shadow and working in its service, whether in the dockyard or in the provision of its many needs. On this community the enemy, apart from a long tale of lesser raids, twice inflicted the most savage bombing attacks: one of two nights in March and one of five in April; in the latter 549 civilians were killed. The enemy destroyed the Guildhall, the Law Courts, the Municipal Buildings, the General Post Office, the old Guildhall, the Library and the City hospital, and completely wiped out the main shopping centres of both Plymouth and Devonport. Most of this damage was done by overwhelming fires which presented problems of water provision and of reinforcement that were almost insoluble in the conditions then and there obtaining. It would be a different story to-day.

There were defeats as well as triumphs on Plymouth's home front. But on the whole what did the enemy succeed in achieving apart from a sad tale of physical destruction? What did he do to the people of Plymouth? He drove many of them out of their homes (first and last over 50,000 houses were damaged in the various attacks on the city); he destroyed many of their shops; and he gave them two spells of intense strain and effort. It is unlikely that he can have regarded this result as sufficient to justify his own performance.

Here as elsewhere he evidently hoped to put the docks out of action by dislocating the life and labour of the town. This he was very far from achieving. He did not put the people in a state of siege, deprive them of supplies or cut them off from needed help. If shops were destroyed others took over their work. If food supply was interrupted by one channel it came by another. The enemy's bombs did do great damage, which affected not only buildings but for a time utility services and general communications. But repair and reconstruction was always more than adequate to ensure that the essential functions could carry on.

There was only one other way in which the raids on Plymouth could have achieved any substantial reduction in the British war effort. That was by driving the population out of the town, and this they failed to do. Wholesale damage to houses did compel extensive rehousing and billeting in the town itself and in the countryside round about. Women and young people, whose duties or business did not require them to be in Plymouth, stayed quietly in their billets on the outskirts until repair work had made the necessary progress. The dockyard workers, homeless civil defenders and others with business in the city, travelled a few miles back and forth each day. But even this limited adjustment of normal ways of life affected only a small percentage. Despite the worst the enemy could do with H.E. bombs and fires, and the temporary havoc that he wreaked upon window panes, walls and roofs, about nine-tenths of the inhabitants were able to stay in their city throughout the raids and after.

The enemy certainly did not cripple the civil defence services or destroy their spirit. He killed over 40; he demolished or damaged one of their control centres and many depots and posts; but he did not interrupt their work. On the last night of the April series there were no fewer than 12,000 ordinary citizens organised and brigaded as fire-bomb fighters, with who knows how many unorganised and uncounted to add to their number. In a normal shift 140 members of the casualty services were maintained on duty; the average

THE BLITZ STRIKES MERSEYSIDE. More than 2,000 bombs fell during Merseyside's "May Week". In Rimrose Road, Bootle, restoration has already begun; demolition workers are clearing debris, the Pioneers have arrived and the Food Flying Squad brings supplies right to the front line.

THE HOMELESS LEAVE, their spirits high. More than 50,000 houses were damaged in Plymouth, but emergency homes were found and life went on.

attendance on the five nights in April which were the climax of the attack was 300.

The wardens, who in April lost 27 dead and seriously injured, including six women, maintained their entire whole-time strength, regardless of shifts and rotas, on every night of the attack. On the last night, the part-time wardens on duty made a total remarkably close to that of the first night. These part-time Civil Defenders in all the services were householders as well as citizens. Their houses were being damaged night by night, their homes temporarily broken up, members of their family injured or worse. They had their businesses to carry on or their daily work to do. They might be on duty in one building and see another, their place of work, in flames. They might pass down a street, see their shop intact and return within an hour to find it gone. These are the hazards of civilian warfare. They did not cause the civilian services to forget the greater objective which they had volunteered to achieve.

The story of the ports now moves north to the Clyde. All the way from Glasgow westwards through Clydebank and beyond, the banks of the river are lined with docks and shipyards. Parallel to them, and hard by on the north, is the main road from Glasgow through Clydebank to Dumbarton. Between the highway and the river is the kingdom of ships; north of the road are the tenements and houses.

It was bright moonlight on the two nights of 13th and 14th March, when the first heavy concentration of German raiders appeared over the Clyde. Incendiaries came down not in scores or hundreds but in masses, like raindrops in a storm or locusts settling upon ripe grain. The fires thus started, fed with more incendiaries and stoked with high explosives, spread and raged with tremendous fierceness. It was said that the glare above the Clyde on these nights could be seen by British airmen patrolling above an Aberdeenshire aerodrome over 100 miles away. Three nights afterwards a German bomber pilot, broadcasting on his exploits, spoke of the clearness of the night and said: "The multitude of ships in the river was tempting, but our orders were different."

If their orders were to destroy the docks and shipyards, they most conspicuously failed. If they were deliberately aiming at men, women and children in their homes,

they were successful. In Glasgow and Clydebank some 40,000 houses were damaged on those two nights and the deaths in the whole area totalled over 1,100. There was ugly, brutal damage done to some of Glasgow's great tenement blocks, and a long list of casualties. But Glasgow is a great city; her share of the raid, grievous though it was, did not seem conspicuous. Nor were her civil defence services for the most part heavily taxed.

Whether by the accident of where the first fires started, or for some other reason, Clydebank was attacked with the most savage fury. It is a small town with little more than 12,000 houses; on the morning after the second raid those which were completely undamaged could literally have been counted on the fingers of the two hands. The deaths there were small in proportion to the damage. They would have been much worse but for the Anderson and surface shelters which put up a performance that astonished their occupants themselves.

That night both in Glasgow and Clydebank countless deeds were done which belong to the fighting traditions of Scotland, though they were done not by picturesque kilted figures at the charge but by drab, dungareed men and women in "tin hats." There is a fine fire-fighting story of the battle at a group of oil tanks, one of the few "military objectives" hit in the raids. Some of the men were fifty hours continuously at work, and at the end there were ninety-six high explosive bomb craters in the limited area over which they had fought. They waded through the moats round burning or threatened tanks; they climbed up the ladders and blacked out jets of burning oil gas pouring from holes in the crown of the tanks; they worked near the sides of the tanks under the blazing drips falling from above. They hosed one another as they worked to make it possible to go on. Not only did they save a good number of the threatened tanks but they extinguished some that had caught fire and been burning for as long as two days—an excellent rare feat.

Such an attack as Clydebank experienced left policemen and wardens to cope, often single-handed, with the bombed-out, the

THE NAVY ENTERS, to clear the way for restoration. Plymouth is a dockyard city; the Navy is part of its life.

trapped, the bomb shocked, the injured, and with uncountable fire bombs. In the dry language of the official report: "in many instances wardens were cut off from all sources of authority and continued rendering valuable service on their own initiative by putting out incendiary bombs, helping the homeless and rendering first aid." The same document dismisses the work of the rescue parties with the two words "beyond praise."

The Control Centre was hit directly. "The building shook and the dust of ages came down on us. The lights went out, and we did not know whether we were going into Kingdom Come." The lights were in fact off for sixty seconds—a long time it must have seemed in the black dark after a great bomb explosion—but "the girls behaved with remarkable calmness. Everyone was just waiting until we got the lights going." The Control Centre continued to do fully efficient work for the rest of the night. Its ninety messenger lads, boys of sixteen to eighteen, the eyes and ears of the Control on a night when communications were badly interrupted, coolly went their rounds back and forth among the bombs and wreckage.

Sixty thousand people of Clydebank came out of their shelters or from battered homes, or gathered themselves together after their fire-bomb fighting, to find much of their burgh uninhabitable, many of its essential services interrupted, practically all its Rest Centres demolished, and its civic organisation for the time being cut to pieces. How did a population so afflicted carry on? Before the raids some professional observers had uttered gloomy forebodings about the Red Clyde. Solemn listeners to the plentiful grumblings at street corners had been duly impressed and had gone away shaking their heads. Was the Clyde whole-hearted about the war? Now, after an ordeal undreamed of (for the superstition that "they would not raid Clydeside" had been fairly widespread) the people showed the bearing of hardened warriors—a quiet, tough resolution that impressed observers, skilled and unskilled alike.

"On neither day was there any sign of panic or of a blind rush away from the devastated area in spite of the great intensity and long duration of the attacks. Besides official schemes for the homeless, there was, of course, a considerable private evacuation, but the people moving out knew what they were doing. On the Saturday morning (the second day after the raids) men were active in and about their ruined houses. Women and children were cheerful."

Was it not a Clydebank woman, as she cleaned away the broken glass and debris from her front path on the morning after the second raid, who said to her neighbour: "Well, there's one thing about these raids, they do make you forget about the war."

The docks, shipyards and industries were ready to carry on. Their men were ready—at once. Said a contemporary report: "The most vital sign of the unified defiance and determination of Clydebank has been shown by the return of the workers. On Monday of this week, the Apprentices' Committee decided to recommend all striking apprentices to get back to work, but the bombed-out apprentices had already made up their minds. They had been to the gates of Yarrow's that morning trying to get in. The great bulk of the workers had made their way back to Clydebank from wherever they were, anxious to start. We made some enquiries as to where the workers normally resident in Clydebank intended to spend the night. Those who were preparing to stay in Clydebank had no anxieties as to where they would go. They were going up to such and such a shelter; they were sleeping in the works shelter; no, they weren't worrying about special billets in Clydebank. All they wanted was their grub, and when was the Town Hall going to open for tea? At this point the Town Hall opened and the men swarmed in to enjoy a remarkably large and appetising meal."

THE ATTACK MOVES NORTH. Blocks of tenement dwellings were brutally shattered in the Clydeside blitzes, with severe loss of life. Deaths totalled over a thousand in two nights.

The feeding of Clydebank was, with Glasgow's help, quickly and comprehensively arranged. A big communal feeding centre was set up to serve many thousands of meals daily. Works canteens that had not existed in a district where the men's homes were only minutes away were quickly and effectively improvised. For the men billeted with their families outside Glasgow and Clydebank, a special transport scheme was running. Quick jobs were done in the maintenance and restoration of telephone cables and the repair of damaged water mains. As for the houses, within a few hours after the first raid, men were surveying the damage and estimating the size of the repair problem. Many hundreds were hard at work on the site within a day or two. Clydebank would carry on with its essential war work even if many of its people had to make their base elsewhere; but they were coming back to live in Clydebank just as soon as walls and a roof were there to cover them.

The second big Clydeside raid came about seven weeks later. This time it was more widely spread and the bombs fell on most of the areas round both banks of the Clyde. At Greenock the enemy succeeded in starting some big fires and bombing them hard after his fashion. He damaged many houses though very much less in proportion to the town's resources than in Clydebank. For a second time the hospitable countryside and nearby burghs absorbed a proportion of the homeless while repair work went on at top speed.

Greenock's ordeal, though not as heavy as that of Clydebank, was met in the same spirit. Many of the fires were extremely dangerous, and the fire-fighters showed outstanding

gallantry and endurance in tackling them. The widespread disbelief in the probability of raiding had perhaps been responsible for the fact that the wardens' service before the raid had been a little short of its establishment. Afterwards recruiting quickened, and before long there had been an increase of over forty per cent. in spite of the fact that many of the existing service had been called up or taken into other war work. These volunteers were mostly shipyard and engineering workmen. It had not been easy to move them before they saw the bombs on their town. After that it would not have been easy to keep them out.

Here are two episodes from Clydebank in March :

When the second night of raiding began, they went up on the moorland above the town—father, mother and baby, with blankets, food, milk for baby's bottle and a pan to warm it in. At 10 o'clock it was time for baby's bottle, and would father take it to a nearby farm and get it warmed? Father went off with milk and pan but found the farm deserted. He tried another building farther on with the same result. Just as he turned back a misdirected shower of incendiaries fell all about him in the farmyard. His civilian training strong within him, he began to throw earth and manure on the bombs. Suddenly it struck him—this was a waste of opportunity and waste of heat. He uncovered his latest bomb, poured the milk quickly into the pan, brought it to the right temperature over the bomb and took the bottle back in triumph.

A Clydebank householder in his garden, after putting out some incendiary bombs, heard the whistle of a falling bomb and at the same time the steps of a passer-by in the street. Shouting "fly for your life, there's one coming," he rushed behind a bank and flung himself on the ground. After a terrible explosion he picked himself up and went to see what had happened to the passer-by. He found part of a body visible from the

THE PEOPLE RALLY TO THE PEOPLE'S NEED: CLYDESIDE FEEDS ITS HOMELESS.

TIME IS NOT LOST when neighbours may be buried in the ruins. Glasgow rescue workers dig by the light of floodlamps.

waist upwards, the rest being covered with debris. He felt for the face which was stone cold and shouted, "Are you alive, are you alive?" After a moment's silence—"by gosh, I believe I am, I thought I was deid till you spoke." It was a lad of about fourteen, unscathed except for the loss of his trousers which had been blown completely off. When he saw the damage the victim's only remark was, "ma maw will gie me a hell o' a row for wasting ma guid troosers."

In April, the air war moved to Northern Ireland. As the early months of 1941 went by, the great ship-building port of Belfast was left free from attack. Its people might be forgiven for making up their minds that their remoteness from enemy bases was a permanent safeguard. Happily for them, a raid of no great severity on 8th April came to rouse them to the peril in which they stood. When a fierce and heavy attack was loosed on them a week later, they had at least had time to take necessary precautions at home and to revise their attitude to the limited civil defence services and the shelters.

On 15th April, the night of its greatest ordeal, the city had to withstand seven hours of heavy bombardment. Streets of houses and shopping centres blazed into walls of flame in which bombs exploded with a

continuous rumbling crash. Whole sections of the city, far from military objectives, were laid in ruins, and an interrupted water supply left the flames free for a time to make progress unchecked. The A.R.P. and Fire Services did their varied tasks with courage. From the less affected parts of the city volunteers came in hundreds to reinforce the heavily stricken areas. Fire-fighting reinforcements, sorely needed, crossed the sea from Great Britain. From the south, too, came help. The moment the need was realised, the volunteer firemen of the neutral state of Eire turned out and came racing through the night with their peace-time headlamps blazing, across the border to fires on a scale that none of them could previously have imagined.

For this good-neighbourly help the Government of Eire in due course made it clear, that no question of cash repayment had ever been considered, and the Northern Government, in rendering grateful thanks, made it equally clear that the help given was not to be valued in financial terms and could be repaid only in kind if ever the need arose.

When morning broke, parts of the city were a gruesome sight. The ruin-fringed roads were blocked by heaps of smoking debris and acrid-smelling craters. Water ran through the rubble, gas mains spouted fountains of flame, and where the fire-fighters were still at work every now and again a wall crashed. Through the mud, past the rubble, climbing over the wet charred wood and the twisting hoses, householders were making their way to Rest and Feeding Centres, or back to their ruined homes, to stand numb before the wreckage or to pick it over forlornly in search of belongings. The civil defence services, black faced, red eyed and nearly exhausted, carried on during the morning hours, getting relief when they could and staying on the job until it came.

That evening many people made their way out into the countryside for refuge. At the feeding centres 70,000 had been catered for by day, and the official Rest Centres were overflowing. Some of the refugee women and children went as far afield as Dublin, where they were welcomed both privately and publicly in the same spirit of compassion and kinship as had been shown during the raid itself. Before long Belfast's essential services had been fully restored and the number of those needing emergency food and the help of Rest Centres had shrunk to a small fraction of the first waves of the distressed.

The city's respite was not for long. On 4th and 5th May the enemy again made Belfast his target. This time the visits were a good deal shorter, and the weight of damage to houses and shops less. So were the casualties. But the fire-fighters once again had to contend with broken water mains, while in the battered streets the civil defence services and police did their work for hours under heavy bombing. Once again fire brigades from Eire came to give their help and reinforcements poured across the Irish Sea. Soon after daybreak water supplies were restored and the fires mastered. A German pilot who had taken part in the attack, broadcasting on his exploits, said that from high above Liverpool on his homeward journey he could still see the fires in Belfast. This time he was sure they had achieved their purpose: Belfast, with its shipyards and industries, was completely destroyed! In spite of this optimistic conjecture, the Germans came again for a few hours on the following night but the attack was comparatively light, and so was the damage.

In the months that followed these attacks Belfast profited from the lessons it had learned. Volunteers for the civil defence services came forward in large numbers—tough men and women, who knew from experience exactly what they might have to face. But they knew also the measure of the threat to their city, and they had learned

BELFAST: CHILDREN'S WARD. The enemy's attack was directed against the whole life of the people, their homes, hospitals, churches, their food, their daily work.

that it is easier to face a blitz with active work to do than to sit and wait in idleness. The auxiliary fire service was greatly strengthened in men and material, and other services were also much increased. Belfast Civil Defence became as strong in numbers as the raids of April and May proved it to be in fortitude and resolution.

One last target, Hull, remains on the list of heavily bombed ports. Its first attack came in March, but it is placed last because it was the object of heavy attacks for some time after they had stopped elsewhere, and of lesser raids for a longer period still. Hull is on the coast and also on the route from enemy bases to other targets. Not surprisingly, therefore, it had experienced forty-nine raids between the Battle of Britain and its own major blitz in May. It was also to be subjected after that to a steady series of what came to be called tip-and-run raids—one of them, in July, a heavy attack.

The big attack in May was a shattering ordeal for the civilians who endured it. The German tactics were familiar—showers of incendiaries followed by high explosives as soon as the fires took hold. On these nights they did take hold and raged in various parts of the city, very largely destroying the centre and wreaking great damage to houses, though little to industry.

Quite apart from the normal shocks and terrors of such nights, these were difficult raids for the civil defence services because early bombs badly damaged their communications. As usual the wardens, 400 of them women, and the rescue men, more than half of them part-timers, stuck to their work without regard to shifts or rotas and came back in their full numbers on the second night despite the fact that many of their own homes had in the meantime been destroyed or damaged. (In the two nights more than 200 of the wardens were made homeless.) The firemen had fiercely exacting nights. Eleven of them were killed. Their women colleagues in the fire stations, on the word of their senior officers, "braved the blitz and turned out and did wonderful work. The coolness of the younger ones was an inspiration, even when stations had direct hits, lights were extinguished and control rooms on fire."

These May raids were followed by frequent warnings, many bombs and appreciable raids in June, July, August and September. All that the German forces left in the West after the attack on Russia could achieve was nuisance raiding, militarily insignificant, but a test of civilian nerves from which Hull was one of the principal sufferers. Many of its people were made homeless at various times and some of these, as elsewhere, were billeted in the surrounding countryside. After very heavy raids some weary families, not officially designated homeless, spent several nights in neighbouring villages for the sake of rest. At no time did their numbers reach two per cent. of the population. The remainder stayed in their own homes, if these were not damaged, unmoved by what they saw around them.

The main raids on Hull came comparatively late in the story of the blitz—nearly eight months after the painful teething troubles in the East End of London in the previous September. Time, the crystallized experiences of all parts of a bombarded country, and the enterprise of the solid community of Hull itself, had worked great changes in after-raid measures.

For instance, in the May raids twenty-four of the city's Rest Centres were damaged. But this made no difference to the working of the after-care services. On the first night forty-one Centres were open and received nearly 10,000 people; on the second night forty-six took 6,000. The homeless were fed, cared for, listened to, fussed over, and in all necessary ways mothered; all were out into billets before the evening of the following day. These centres were staffed by 1,200 W.V.S. women, working in relays and reinforced by squads drawn from the nearest towns.

There were in all 40,000 homeless people. Many took care of themselves. Twenty-four thousand were billeted from the Rest Centres, nearly all on the relative, friend or neighbour with whom they had previously made a mutual aid pact. This plan made it unnecessary for the authorities to search for billets, avoided the need of pressure or intrusion, and ensured that like would go to like. The questions and difficulties that afflict the bombed-out were dealt with at twelve special district offices, combinations of Administrative Centre and Information Centre. At each one the various official agencies who could meet the needs and answer the questions of the homeless were gathered together.

Lastly, food. In the May raids many of the public and private warehouses in the city containing bulk stocks of foods were destroyed or damaged. There was a great deal of damage to distributors' premises, and one of the city's own large emergency food stores was gutted by fire. Reserve foodstocks were rushed to the city and put into emergency dumps for wholesalers to draw upon. Customers of the many food shops so badly damaged that they could not carry on were quickly switched to undamaged shops. Twenty-two thousand people were affected by these changes, all of them being quickly notified by letter of the new arrangements. Two big bakeries were destroyed, a loss the more serious because there is always a rise of two to three hundred per cent. in bread consumption after a big raid; but plans were ready and there was no shortage.

Meals for the homeless and for those whose domestic routine was upset by the raids were provided not only by Queen's Messenger Convoys and fleets of mobile canteens, but by many different forms of communal feeding. Hull's three big municipal kitchens provided meals to be served and eaten in thirteen British Restaurants, including four in the docks. They also cooked the food which was supplied through twenty-four cash-and-carry food offices, forty works canteens, many emergency feeding centres and the Rest Centres. In the eighteen days after the May raids 460,000 communal meals were provided, averaging more than 25,000 a day. A far cry indeed from the troubles of Thames-side in September.

RESCUE AND RELIEF. *Left*, A.R.P. men at work in Mulgrave Street, Hull, the day after the raid of 13th July. *Right*, a mobile laundry comes to the aid of Hull housewives.

CASCADES OF SMOULDERING GRAIN from shattered warehouses slide into the River Hull. This was Hull's second big attack, on the 7th, 8th and 9th of May.

12

The Countryman's Blitz

AWAY FROM THE MOUNTAINS of Scotland, Wales and the Lake Country, there are few villages, farms or homesteads on British ground but can tell of bombs fallen within a mile or two, at some time during the air raids. To the south eastern counties and Essex, the Battle of Britain brought continual heavy attack: and the night raids on London were accompanied all the time by the fall of bombs in the Home Counties. Just outside the wide ring of the anti-aircraft barrage there was always a belt of bomb craters, and on country estates in this part of Kent and Surrey men told of picking up burnt out incendiaries from the fields "by the cartload" after a heavy raid.

Similarly, around every other target area, any spot in the countryside might find its fields the recipients of sticks of high explosive and showers of incendiaries. Sometimes a new hollow in field or ploughland was the only result. But the senseless tragedy of broken homes and slaughtered children seemed to reach its zenith of brutal idiocy when a bomb struck some cottage on a byway or some farm on a windy hill-top.

Here are three sidelights on rural air attack. The first is from the south eastern counties.

"During the Battle of Britain, on the afternoon of 16th August, 1940, about 180 bombs were dropped by the fleeing German bombers around the village of X near Tunbridge Wells, causing great hardship to a number of local farmers.

CRATER IN THE COUNTRYSIDE. Ploughland and meadow had their share. This is one of thirteen bombs that fell round the same Hampshire farm.

"Milking was nearly finished when a bomb exploded in the farmyard of Mr. A. The house was damaged, and Mr. and Mrs. A. were taken to hospital suffering from shock. The cowshed was demolished and Mr. A.'s two sons, who were in the building, were both killed. Mrs. A. never recovered from the shock and died a few months later. This was not the end of Mr. A.'s loss. The farm roof and walls were blown in, and other buildings were severely damaged. Sixteen cows were killed and four more had to be destroyed. Mr. A. carried on.

"The village had its fill of bad luck that afternoon, for fifty-three bombs were dropped on Fred B.'s farm. The barn was made unusable for three months, the house and cowsheds were damaged, and six bullocks in the field were killed, seven cows and a horse being wounded by shrapnel."

The second is the tale of a head shepherd on an estate in Somerset.

"On 3rd January, 1941, at about 6.30 in the evening when he was looking after his ewes that were lambing, an air raid alarm went. For the next seven hours this shepherd and his sheep and their lambs were in the thick of an air raid. Thousands of incendiary bombs were dropped. All round fields were blazing with light. Five incendiary bombs actually fell on the lambing pens which sheltered thirty-four ewes and their lambs. The pens were highly inflammable, being made out of wattle hurdles and straw and in a few seconds were blazing from end to end. The shepherd was alone, no help was available, and he tried to put the fire out but had to give up when the fire reached one ewe and lamb. He dashed in, picked up the lamb and carried it to safety, the mother following close behind. He ran back six times, carrying out lambs. Then he tried to drive out the rest of the ewes but they were too frightened and the scheme was too much for his dog which ran off and didn't turn up for twenty-four hours.

"However, the shepherd stuck to the job and eventually got every sheep and every

TARGET IN THE HILLS. A direct hit on a lonely farm in Westmorland. Civil defence workers search the ruins.

THEY JETTISONED THEIR BOMBS. A Kentish farmer and his family watch their farmhouse burn. Kent lies beneath the path of retreating aircraft.

lamb through the flames and into the open field, while high explosives screamed and exploded all round the blazing pens. Many of the lambs that he saved were not twelve hours old. By this time some other farm men arrived and helped to save the hay and three wagons of straw but the pens were completely burnt out. At midnight the shepherd went to the Home Farm to see how his other sheep were getting on. High explosive bombs were still coming down. He fed some of the lambs with bottles of milk and stayed with them till the All Clear sounded. Every sheep and every lamb was saved and came through that night apparently none the worse. After he had saved his sheep and his lambs he was almost completely exhausted, and made his way wearily back to his house. As he entered the back door with a sigh of relief at 4 o'clock in the morning, a bomb went off in his front garden and blasted the walls, windows and roof of the front of his house.

"Apart from that, he said, he had a very successful season."

The third comes from Wales. What may be the resemblance between the rocky crest of a Welsh mountain and an arms factory or dockyard the German pilots must explain. On a night in the Spring of 1941, the people of the mining village of Cwmparc, twenty miles from Cardiff, were making ready for bed. They heard the warning as usual, and, as usual, thought it nothing but the sign of planes on their way to more important objectives. Suddenly the hills above the village were ringed with hundreds of incendiary bombs blazing up brightly and setting light to the hillside grasses. This was evidently enough to make a target for the planes which dropped a dozen large bombs upon it, filling the quiet little valley with such sounds as it had never heard. In a few minutes twenty-seven of the villagers had lost their lives (six of them children), one of its chapels was destroyed, and more than half its thousand houses had been damaged. But Cwmparc, if remote, was not unprepared. As soon as the incendiaries fell, in the words of an eye-witness :

"There came into action the fire-bomb-fighters—troops of them, a whole army of them, advancing along the main road, emerging from side streets and whooping some indistinguishable form of war cry as they swooped upon the incendiaries with a kind of suppressed fury and extinguished them with a precision and certainty born of months of preparation for just such an emergency."

The wardens and the rescue services got to work soon afterwards, among the tumbled heaps of slate and grey stone where their friends and relatives lay. The task was not long, for Rhondda buildings are not large, and its collier sons have little to learn about digging and tunnelling at speed.

When morning came the village was a wild and gloomy sight, but the work of recovery began at once. The family intimacy of village life—nowhere closer than in Wales—may make every death a personal bereavement to the whole population, but it also means that every bombed-out person is a friend and neighbour to be taken in as soon as seen. Cwmparc probably holds the national record for swift dealing with the homeless. It had them all billeted by mid-day.

East Anglia also had a full share of attack, no doubt because of its aerodromes. Here, as in most country districts, the casual nonchalance with which the inhabitants insisted on treating the fall of bombs was a trial to the civil defence services, who sometimes found their ministrations disregarded and themselves deprived of practice. When an isolated building was moderately damaged, the inmates and their neighbours patched it up and carried on. Farmers were apt to plough over unexploded bombs in their fields without waiting for the disposal squads. One elderly farmer heard a bomb drop in the night outside his farm. In the morning he found the crater outside his cowshed, but the cows were all right, so he got on with the milking and did not trouble to report. Another old man who was hit in the back by a machine gun bullet refused to go with the first aid party for treatment, insisting on staying home and looking after himself. Even the enemy missiles sometimes refused to take matters too seriously. Thatched roofs should be very bad fire risks, but in practice the incendiary bombs usually bounced or rolled off them.

This was perhaps a little disheartening for the civil defence services, who—apart from a few months in Kent and Sussex—performed interminably the peculiarly testing task of standing and waiting. Moreover, theirs was sometimes a difficult position to carry off with dignity. You didn't want to make people laugh by pretending that your village or district was more important than it was, yet you must keep up enthusiasm and efficiency locally, and must represent your needs and conclusions firmly to higher authority. Besides, if invasion came, you knew that civil defence on the front doorstep, or in the aerodrome counties, would be very important indeed. Yet no one seemed to care very much about you, and they called up all your men and women, and "they never *tell* you anything," and your few vehicles were harder and harder to repair or replace. The rural civil defenders had a good deal to put up with, and they did their jobs with great good humour and good will.

13

Seaside Tip-and-Run

OTHER TARGETS had bouts of bombing and spells of peace and quiet. Many of the coastal towns were (and are) bombed all the time. For this there are a number of reasons, some operating at one period, some at another.

To begin with, a knowledge of the coast and what is happening there is important to the enemy on several grounds ; so that he reconnoitred it continually. Reconnaissance planes carry bombs. Secondly, minelaying is a dull and boring job, and the German crews carried a bomb or two for launching as a treat, or to relieve their feelings : the coastal towns were (and are) the victims. Thirdly, planes on the hunt for shipping treated the smaller seaside towns as alternative targets. Lastly, not all these places were heavily defended : any irresolute crew could bomb them in comparative safety and then go home to report Fierce Fires and Great Explosions.

Indeed, in the later months of 1941 it seemed evident that Goebbels had replaced Göring as the directing mind behind the Luftwaffe's air offensive on Britain : targets

were selected largely for the propaganda value of being able to report raids to the German public without risking comparatively heavy losses to the slender bomber-force left in the West. All this lay (and lies) behind the frequent communiques announcing " a solitary aircraft dropped bombs last night (or in daylight to-day) at some points on the coast of England (or Scotland)."

The outcome may be seen in the following table, which shows coastal bombing to November, 1941, in round figures.

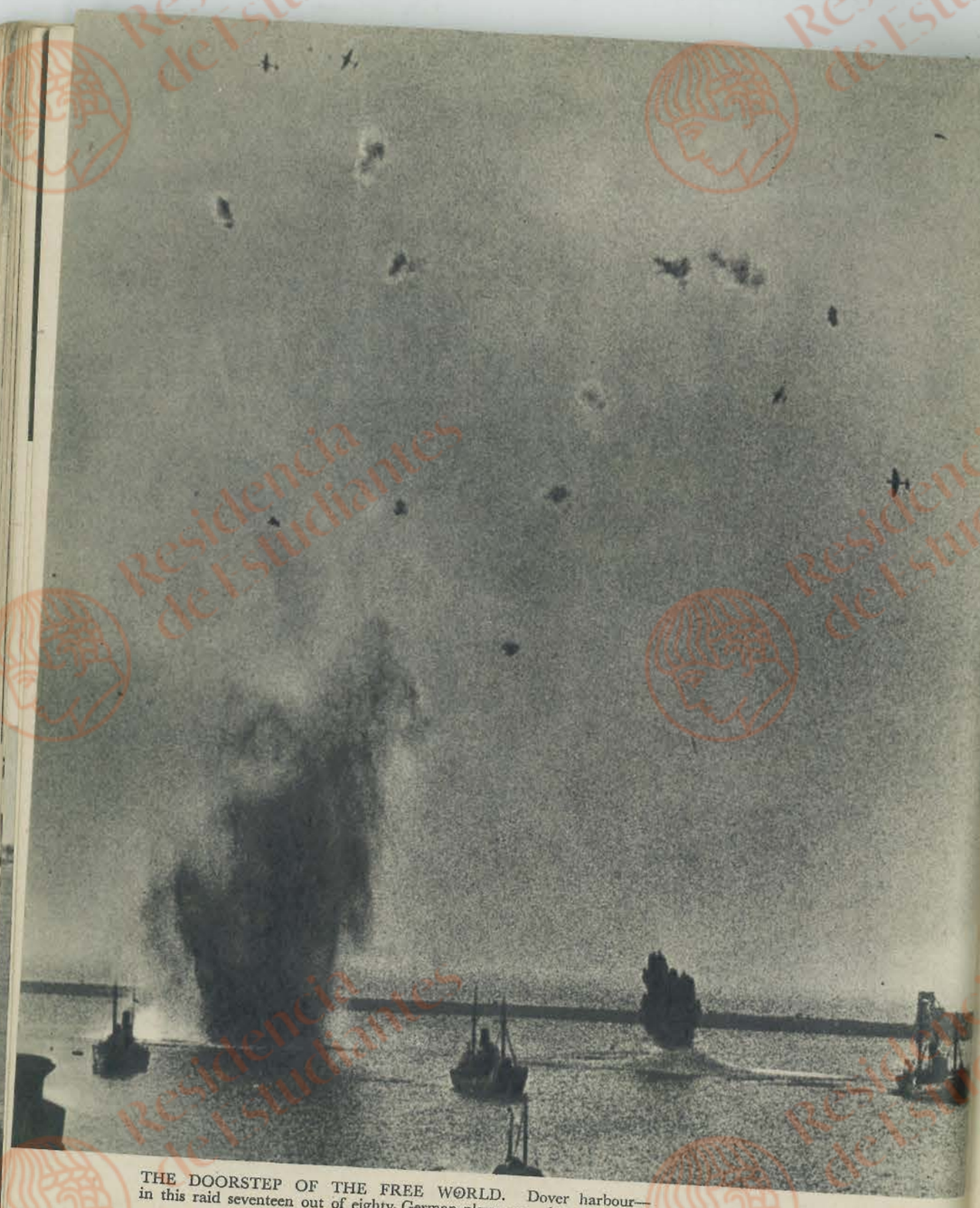
Town.	Number of Raids.	Civilians Killed.	Houses Damaged.
Fraserburgh ...	18	40	700
Peterhead ...	16	36	700
Aberdeen ...	24	68	2,000
Scarborough ...	17	30	2,250
Bridlington ...	30	24	3,000
Grimsby	22	18	1,700
Gt. Yarmouth ...	72	110	11,500
Lowestoft ...	54	94	9,000
Clacton	31	10	4,400
Margate ...	47	19	8,000
Ramsgate ...	41	71	8,500
Deal	17	12	2,000
Dover	53 (and shelling)	92	9,000
Folkestone ...	42	52	7,000
Hastings	40	46	6,250
Bexhill	37	74	2,600
Eastbourne ...	49	36	3,700
Brighton Hove ...	25	127	4,500
Worthing ...	29	20	3,000
Bournemouth ...	33	77	4,000
Weymouth ...	42	48	3,600
Falmouth ...	33	31	1,100

NORTH-EAST HERO. In one of the countless tip-and-run raids with which the Luftwaffe harried Britain's coastline this 14-year-old schoolboy worked all through the night rescuing buried people.

This is by no means a full picture of the " drip-bombing " to which the coast is subject. The intermittent raids on Tyneside killed nearly 400 people between July, 1940, and December, 1941, in Newcastle, Wallsend, Tynemouth, South Shields and Jarrow. Many a small place is omitted from the list, in the east, south, and indeed in the south west too, for a number of the small Cornish ports and fishing villages came to be regular targets, and very steadfast they were under this trying form of attack.

To be subjected to a series of tip-and-run raids is more than a test of nerve. The smallness of the casualty figures in the table should not obscure the actual weight of the onslaught in relation to the size of the target. There are towns in this list whose death-rate

NEWCASTLE: THE MORNING AFTER. Firemen at work on the smouldering wreckage of a Tyneside target.



THE DOORSTEP OF THE FREE WORLD. Dover harbour—in this raid seventeen out of eighty German planes were brought down.

from bombing is as great as that of inner London at the end of all its long ordeal. Yet it almost goes without saying that the life of every one of them has been steadily maintained and their spirit has been exemplary. A comment from Fraserburgh might apply equally well all round the coast: "Aye, we can stick it. Fit else is there tae dee?"

There is one town in the list which has a special burden of its own to bear—Dover, the target of the enemy's shells as well as his bombs. Dover is the front doorstep of the free world, in very truth. From the cliffs you may see German Europe and often, as you look, you will see a flash on the distant coastline. It comes from the muzzle of one of the guns on Gris-Nez and means that in a minute or so a shell will burst on Dover, or thereabouts. Day in, day out, the civil defence services of Dover probably have a busier time than most outside the great target areas. This has been true since a time before Britain was seriously bombed at all. In the weeks after Dunkirk the fire, rescue and casualty services used to go down to work on the battered smoking ships that had met the enemy's onslaughts in the Channel before the day of convoys, and put in to Dover's little harbour for refuge. Since then they have had over 50 raids, and very few homes are free from personal or material loss.

There are still many thousands of people in Dover. They cling to their windswept cliffs and their battered houses. They walk past the peeling, windowless terraces overlooking their harbour and glance out across the Channel to where Calais lies—Dover's twin: the bond and the free.

FRONT LINE STREET. Dover and its people have a special burden to bear. Tip-and-run raiding is continuous and shell-fire is added to bombing. The enemy is only 22 miles away.

THE ARMY OF CIVIL DEFENCE

14

The Plan of Battle

THE CIVILIAN FIGHT against the Luftwaffe was a soldier's battle if ever history saw one : but it was fought to a plan, and the members of the civil defence services were indispensable to its conduct. Long before Munich brought the threat of air attack right home to the whole nation, men were at work analysing and estimating its terrors and making the blue-prints of resistance. They had little enough to go upon.

Our own experience of bombing in the last war bore little relation to the new scale of possibilities. There were only about 300 tons of bombs on Britain from 1914 to 1918, and they killed but 1,400 people. However, by 1937 we came to know that the Germans visualised air attacks in daylight by bomber formations with fighter escorts : these would be low-level attacks making possible not only a better aim, but a plunging, forward fall of bombs in which one missile could wreck a street. We saw the technique in operation at Guernica, the little village in northern Spain whose name became a synonym for the new savagery of the air.

The whole scale of air operations in Spain was of course small. At its height at the end of 1938 there were 250 aircraft of all sorts on the Government side, 660 with General Franco. In 1938, Barcelona was raided about 180 times by an average of from five to ten aircraft, and at the peak in March, with twenty raids in three days, only forty-four tons of bombs were dropped—much less than sometimes fell in a night on British towns of half the size. But this was enough to cause 3,000 casualties, and to disorganise the whole life of the city. Such evidence, along with estimates of the number of squadrons the Germans could send over Britain, led to apprehensions about the way civilians would react and to enormous forecasts of the probable number of casualties.

The conclusion made known by the strategists to the planners of civilian defence was that squadrons of bombers might attack one after another, devastating areas a quarter of a mile square each time, launching hundreds of tons of bombs a day. Happily for the people of Britain this was an over-estimate of the enemy's powers and a great under-estimate of the defensive strength of our own fighter squadrons and A.A. defences.

Much less was in fact dropped on London in daylight in a year of bombing than had been estimated as a daily bombardment : the heaviest night raid, in all its hours, did not reach much more than half the tonnage originally allotted to a day of air assault.

The assumption of daylight attack on people in the streets led also to an estimate of the killing power of steel and high explosive which was far beyond its actual effect on a population under cover at night. The raid on Coventry produced only a fraction of the casualties per ton of bombs estimated before the war.

These figures are not quoted as historical curiosities, but to show what difficulties confronted the planners of civil defence—and also to remind ourselves of the extent of that

deliverance which the Royal Air Force brought its country in winning the Battle of Britain. For had systematic daylight bombing in formation been possible, as the Germans had hoped and expected, the rare experiences we had of it suggested that the pre-war calculations might have been more nearly borne out by the event.

One valuable lesson pre-war experience did teach—the power of anti-aircraft gunfire. The Germans in Spain attacked at first from two or three thousand feet, but were forced up to 6,000 or 8,000. (The Italians did not come below 12,000 feet.) Poland showed the same truth in reverse: when the Polish planes and guns were put out of action, the Luftwaffe came down from 7,000 feet and attacked from sixty to one hundred feet, hedge- and roof-hopping. The victim's weakness led inevitably to greater brutality by the bully. The Nazi pilots, freed from fear for their own skins, took to machine-gunning civilians, even solitary workers in the fields, and sometimes amused themselves by slaughtering cattle with their machine-gun bullets. Or rather, it is an injustice to the Nazis to suggest that they were merely amusing themselves. What they did was according to the rules laid down in *Die Luftkriegsführung* (The Conduct of Air Warfare). That, given the chance, they would do the same in Britain was a foregone conclusion.

Such was the limited basis of factual knowledge and assumption available in advance to those who planned and directed British civil defence. Evidently they had need of foresight—indeed of second sight—to make good the deficiencies in information. They made their forecast of the nature of enemy attack and laid their plans to meet it. By the time the need arose, the spadework had been done.

HOW CIVIL DEFENCE WORKED. The diagram facing shows how wardens' posts, fire stations, first aid depots and rescue stations were distributed evenly over the area. When an "incident" occurred, the warden reported it from his post to the Control Centre and, if fire was started, to the Fire Control. The Controls ordered out ambulance, rescue and fire parties; the warden returned to the incident. These photographs of a demonstration incident are continued on page 140.

1 A bomb falls. The warden runs to his post to report.

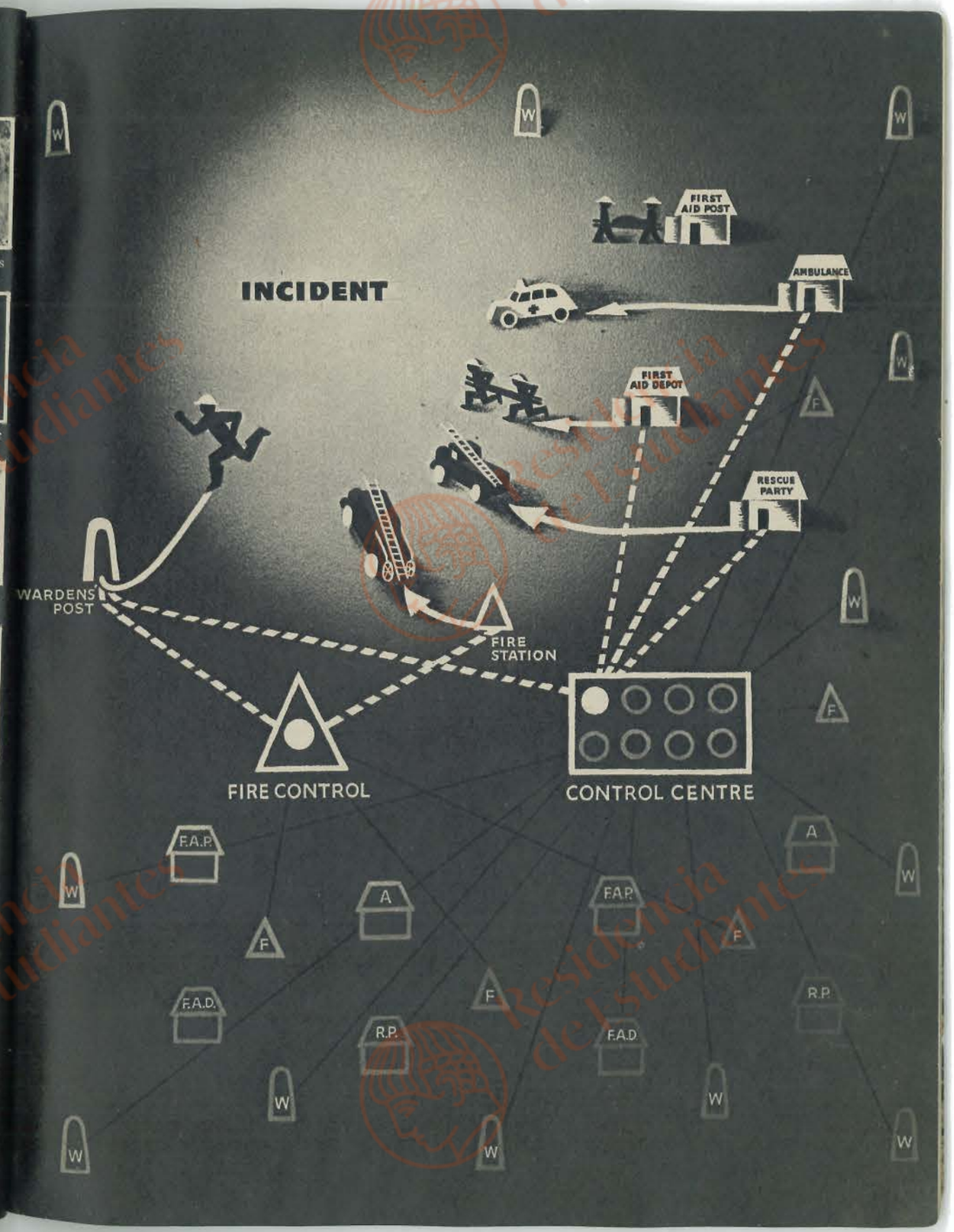
2 The wardens' post informs the Control Centre.

3 The Control Centre decides how the "incident" shall be dealt with.

4 Control sends out instructions to the services needed.

5 The services ordered out are recorded by Control.

6 The fire brigade receives its call direct from the wardens' post.



7 The stretcher parties leave with cars for minor casualties.

8 Ambulances are directed to the incident by a policeman.

9 Incident Officer takes charge, with messenger in attendance.

10 Firemen get to work. Rescue goes on in the background.

11 Heavy Rescue men search for casualties. One calls for a stretcher.

12 Rescue men and stretcher parties prepare a casualty for removal.

13 Other casualties are let down from the upper floors.

14 A mobile medical unit is set up in the street.

15 Stretcher cases are loaded on to the ambulance.

16 Walking cases are taken by car to a first aid post.

17 The first aid post; doctors and nurses at work.

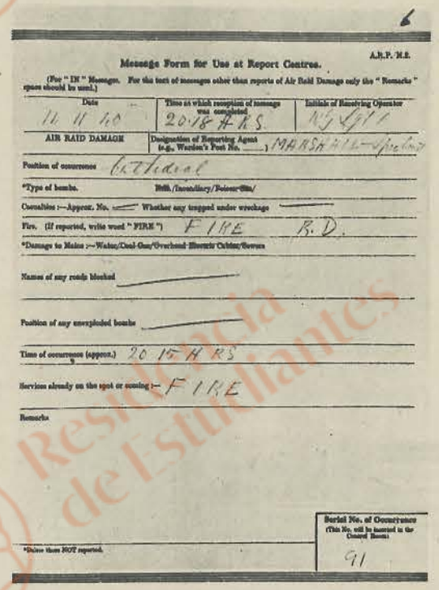
18 Incident under control; services on the spot relax.

The attack must be conceived as taking place always upon two fronts at once, the moral and the material, or if it be preferred, the social and the physical. Again, the results were felt in two phases—the immediate impact of bombs with their direct effects, and the subsequent call for restorative effort. Thus the pattern of operational civil defence took shape.

	Personal and social needs (the succour and protection of human beings).	Material needs (the defence and restoration of the physical basis of life).
During Attack	The police The wardens' service The rescue service The casualty services.	The Fire-fighting Services Fire Prevention (the Fire Guard).
After Attack	Immediate after-care (Rest Centres) Emergency feeding Information and instruction Rehousing and Billeting Money compensation Salvage and replacement of personal possessions.	Food: maintenance of supplies Factories: repair and reconstruction Housing: repair Communications: repair or restoration of roads, railways, telephone, telegraph and postal facilities Essential Services: repair of gas, water and electricity mains and sewage pipes Salvage of damaged materials for further use.

This pattern was not fully realised in all parts at the start of the air attack, and it was some time before its various sections were developed to an equal standard. For reasons already apparent there was overestimation of the risk of casualties. Again, there turned out to be some horribly expensive lessons to learn in the technique of defence against the most intense kinds of fire-raising attack. (Nevertheless it remains true that over two and a half years before the war many of the essential features of the coming fire raids had been grasped and guarded against in plans, duly realised, for a more than tenfold increase in men, stations and pumps. It is believed that Great Britain entered the war with a fire-fighting machine very much closer to the scale of modern fire attack than any other country, including Germany.) Lastly, the social results of material damage were not fully foreseen, so that the plans for immediate after-care of a bombed public, for emergency feeding, and for rehousing the homeless, at first fell short of needs.

The A.R.P. Services proved to be soundly conceived. In this respect the British, who have been said to begin each war in a state of some preparation for the one before it, had succeeded in correctly appreciating the



A.R.P. M.S.

Message Form for Use at Report Centres.

(For "IN" Messages. For the text of messages other than reports of Air Raid Damage only the "Remarks" space should be used.)

Date	Time at which reception of message was completed	Initials of Receiving Operator
14.11.40	20.18 HRS.	N.J.Lyt

AIR RAID DAMAGE — Designation of Reporting Agent (e.g., Warden's Post No.) MARSHALL—Spotter

Position of occurrence: Cathedral

*Type of bombs. Hill/Incendiary/Poison-Gas/

Casualties:—Approx. No. — Whether any trapped under wreckage —

Fire. (If reported, write word "FIRE") FIRE R.D.

*Damage to Mains:—Water/Coal-Gas/Overhead Electric Cables/Sewers

Names of any roads blocked —

Position of any unexploded bombs —

Time of occurrence (approx.) 20.15 HRS

Services already on the spot or coming:— FIRE

Remarks

*Delete those NOT reported.

Serial No. of Occurrence (This No. will be inserted in the Control Room): 91

FIRE IN THE CATHEDRAL. At 8.15 in the evening of the great Coventry raid, a Special Constable sent, on this form, the first formal intimation that the Cathedral was on fire.

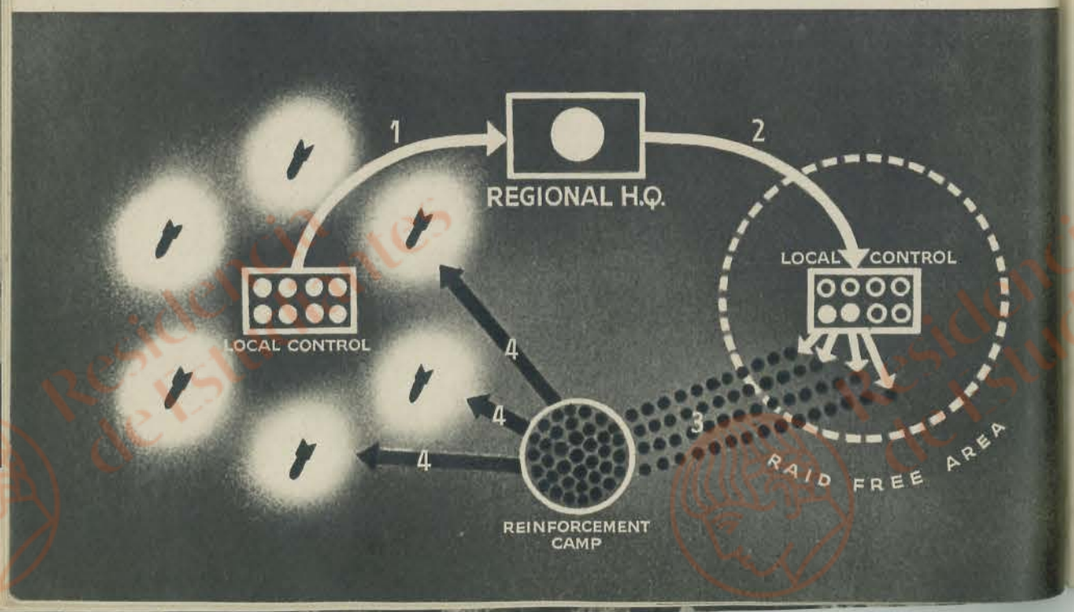
fundamentals of a form of warfare never before practised, and in making provision against it. As an illustration of the feat of insight involved, here is a definition of the work of the Warden, the special functionary who gave British civil defence its peculiar character and was greatly instrumental in its success.

"Street wardens will be required to act as guide and helper to the general public in the area to which they are allotted. It is particularly important that they should help to allay panic and give assistance to any families and persons in their districts, e.g., those who may have been driven out of their houses, etc. They should help to direct people in the streets to the nearest shelter. They should report to the Police or the local intelligence centre the fall of bombs, dangerous fires, presence of gas, blocking of roads, damaged mains, and any other information that may be required to enable a particular situation to be dealt with. They must be trained to give accurate reports and to assess the situation."

These words, though dated many months after the idea of the Wardens' Service was actually born, were written before any city in the world had been attacked from the air in the modern manner: before the Spanish war broke out: about the time when the British people, busy with other matters, let Germany march unchallenged into the Rhineland. In fact, in February, 1936.

Civil defence is an affair of streets and neighbourhoods, mostly on a small scale of movement. The rescue, care and treatment of bombed people must be provided from close at hand. In Britain it was one of the essential ideas of the Service that help should come from neighbour to neighbour, and be largely rendered by volunteer workers in their spare time. A heavy attack at a point would for a time require reinforcement from elsewhere, but this could be secured without cutting at the local roots of organisation.

HOW AREAS HELPED EACH OTHER. 1—when bombs produced more incidents than local services could handle, a call for reinforcements was sent to Regional Headquarters; 2—the call was passed on to another area less heavily attacked; 3—men and appliances were sent from there to a "camp" on the fringe of the raided area. They were then under the control of the raided area's organisation and, 4—were sent to wherever they were needed.



The units of operation therefore became the Local Authorities (who were also in charge of some of the most important tasks of post-raid welfare work, notably immediate after-care in the Rest Centres and the rehousing of the homeless). The Town Clerk, or some other Chief Officer, became the A.R.P. Controller. His senior officials became the heads of the services. He and they worked, when the time for action came (and when they were not themselves out in the field) from a Control Centre, a protected place linked by telephone to the wardens' posts, ambulance stations, rescue depots, first aid posts, and the rest. In big cities and the counties there were sub-control centres each in charge of its own area, and responsible to the Controller. The diagram shows how the machine was laid out.

It was set in movement by the use of the report form illustrated here. During the great attack, hundreds of thousands of these were filled in by wardens, and their contents telephoned to the Control Centre. In the control room there were maps on which each bomb-scar upon the face of the land was marked by a coloured pin. The officers in charge could read off the weight of attack on different parts of the area and the kinds of incidents at a glance. There were tally-boards, showing how many parties of each service were in action, how many immediately available, how many in reserve. As the reports came in from the wardens on the field, the telephone clerks passed their contents to the officers.

On the first bare news of an incident (the express message—what a newspaper man would call the "Flash"), one first aid and one rescue party were ordered on the scene. When the fuller report arrived, the group of officials at the control tables could judge how many wardens, rescue first aid parties, and ambulances should be sent. Orders went by telephone to the depots, and the parties were set on the move. If the telephone broke down the Control Centre had messengers—despatch riders, cyclists, or runners—to take its place. If there were not enough parties for the needs of the night, the Controller asked for outside reinforcements. He did not go direct to another Controller but reported to Regional Control. This was linked with all local Control Centres, and ordered additional parties in from other centres to the hard-pressed area.

The civil defence services, about the time when the big raids ended, totalled about a million and a half. About four-fifths of these were voluntary part-time members. Nearly a quarter were women.

15

The Front Line Troops

"Is it the smallness of the country, or is it the pride and affection of race—they have solidarity, or responsibleness, and trust in each other. Their minds, like wool, admit of a dye which is more lasting than the cloth. They embrace their cause with more tenacity than their life. Though not military, yet every common subject by the poll is fit to make a soldier of. These private reserved mute family-men can adopt a public end with all their heat."—Emerson.

The Warden

For some time before the blitz he was regarded by most of his charges with anything from cool indifference or mild amusement to active suspicion as a Nosey Parker.

"But it's 'Saviour of 'is country'
When the guns begin to shoot."

The wardens' day came, and it was a

glorious one. Their highest chieftains saw the "Cinderella Service" surpass itself and exceed their best hopes of it. Its performance must be written down as a principal reason for the success of the civil defence services. The men and women of the blitzed towns came to know, and say, that there wasn't half so much to worry about with the warden on his beat.

He played two separate parts, and each was vital to the whole working of civil defence. He was the eyes and ears of the Control Centre in the field: and the chartered "good neighbour" of the blitz. As a reporter in the field, his just judgment of the extent and severity of bomb damage was what enabled Control to send the right services to the right places. Smooth working and human lives depended on help being sent without excess or deficiency. When it came he must be able to tell the rescue parties what bodies, living or dead, might be beneath the debris—and where. This he could do only by knowing his neighbourhood and its people as a good gardener knows his rose-beds.

Here the warden's second function met his first. He had not only to know his people, but to earn and keep their confidence. He might need it as much as a subaltern needs his men's, for they might have to follow him through deadly danger and put their lives in his hands. He must get the bombed-out, unharmed and with due cossetting, to the shelter or the Rest Centre. He must infect them and every citizen on his ground with his own steadiness. If his people were trapped, and no rescue party at hand, he must get them out, no matter if it meant working for an hour among fallen brick under blazing timber, or protecting them with his body from the risk of falling debris, or fishing for them in the dark in a basement thick with escaping gas, where every second added to their peril and his. The risks he must run in their service were as various as bomb-damage itself; but his purpose was constant. They were his charge and his responsibility was absolute.

Next day he would go to work at his desk or bench, for in more than nine cases out of ten he was a part-time volunteer. But if the raid was bad he might forget his daily bread and carry on helping to clear up, lending a hand with rescue or shepherding the homeless. In the provinces, when raiding was repeated for a second or a third night, wardens often went on working day and night till it was all over, snatching an hour or two's sleep when they could, and getting little or no news of their own homes and families. For they shared the lot of all civil defenders; their battlefield was their own street, and they found their fighting duties and family ties much mixed up together.

They might have to disregard the passing sight of their home ruined, or work for hours on end for other families after hearing news that brought nagging uncertainty about the fate of their own. Sometimes when the bombs began to fall their wives, in the first moment of weakness, might try to claim first place. It happened in one household (not likely to have been unique) that when the siren went a wife asked her warden husband, as he put on his steel helmet, "Don't we come first?" There followed, as he said, "a spot of argument" until his little girl said, "Shucks, Mummy, let Daddy do his stuff." She carried the day. Soldiers, sailors and airmen are spared such stresses.

These warriors-on-the-hearth were racy of the soil of their own neighbourhood. In dockside areas they were dockers and shipyard engineers; in the more expensive residential districts bank managers and architects; in the arms towns, fitters and riveters; in suburbia, clerks and shop-keepers; in the country, farmers and men of the manor. Each area produced its own leadership. Some joined because they had an ingrained sense of public duty (or, as they might have put it, because they liked to lend a hand);

THE GOOD NEIGHBOUR. Besides their function as the eyes and ears of the Control Centre in the field the wardens had another, equally important, that of the "good neighbour" in the blitz, earning and keeping the people's confidence. In this role the work of the women wardens was outstanding. One warden in every six was a woman.

some, because they didn't like the way things were going with that man over in Germany; some of the whole-timers because they were out of a job and this was one they thought they'd like to do.

The wardens were more than half the membership of the civil defence services; in cities, there were normally six wardens to a post, and a post to every 500 people. They were "thick on the ground" because they were not specialists but men-of-all-work and had much to do. Nearly all the part-time volunteers reported for every raid, disregarding shifts and turns of duty.

The Woman Warden

One warden in every six was a woman. The work suited them, they found; and if they couldn't always turn a hand to the heavier jobs, they had their own touch with the nervous or the restless, while their reports lacked nothing in balanced accuracy. Here are two thumbnail sketches from life.

Mrs. A. was a district warden in charge of

seven unusually large posts, having under her 250 wardens, and 25,000 people. When she was appointed, she found some resentment among wardens at the appointment of a woman to a post of such authority. She is a small slight woman, whose children must find her a very gentle mother. She called a meeting of her wardens and told them she would never ask them to do anything she wasn't ready to do herself. She had no trouble afterwards, and found that her undertaking often helped her to keep her own nerve at a pinch.

"I'm not brave," she said. "When the warning goes or a bomb falls, my inside turns over and I have to get a grip of myself. But when I go out and can see what's going on and have something to do, I'm all right." She was grateful to the senior wardens with whom she worked when she first joined the service. They took her about, showed her when to duck, and taught her never to feel depressed however wretched the prospect. One of her difficulties was to make recommendations for gallantry awards, for she was usually so absorbed in her job as to be quite unaware of the colleagues next to whom she might be working.

One night she was carrying to a police station an incendiary bomb which had not gone off. Someone offered to take it for her. She handed it over (for she had other things to do) explaining carefully and at some length just where it should be held and the importance of not knocking it. Not until breakfast next morning did she learn that her helper had been her husband.

Mrs. B. was present at the birth of three babies during heavy attacks on her town. She is not a certificated midwife but, as she said, "I knows it all." At two of these births bombs were dropping, but doctors attended, so she didn't think they quite counted. The third was her own affair. Neither doctor nor nurse could be got, and she took charge. Immediately the baby was born the roof of the house fell in. The mother refused to be moved, and Mrs. B. spent the rest of that night sitting at her side under a tarpaulin hoisted on tall furniture and broken joists. She became the baby's godmother.

She developed a sharp nose for coming danger. (This was not uncommon.) One night she dragooned the people out of their houses and into shelter just before a heavy bomb demolished the whole street. "When the sirens went and it was bad," she said, "if they couldn't hear my voice they used to get a bit panicky. When they heard me they were all right. They'd say, 'we can't hear B.—it must be bad.' Then I'd shout from one end of the street to the other, telling the children to get inside. That was my one consolation: whatever I said was right, and the people would always do it."

The Fireman

The fireman was taught to avoid heroics. Only the prospect of saving another life justified risking his own. But he found what seemed to him many good reasons for forgetting to calculate chances. He always knew that he was working in the foremost of danger, for fires were the enemy's normal targets.

Sometimes he stood firmly on a flame-lit roadway, as the pictures so often show him, knees a little bent and body braced against the thrust of water through his hose. Sometimes he sank to his chin in oily mud, waded through hot rivers of paint, or leapt to dodge fiery streams of petrol. He was not always "on the branch," holding the nozzle at the point of attack. Often he stood to serve his pump for hours at a time as it relayed water from a distance, until so deafened by its never-ending roar that he could hardly hear the bomb explosions.

He worked at times in heat that blistered the paint on the pump, and turned to steam the water of his jet before it reached its mark. He was taught to "get at it," to close in, with his head held down near the branch where the jet's draught made a channel through the smoke, inching forward until he could pour water on the fire's red roots. This might mean perching a ladder on the steep slope of a roof and climbing fifty feet. It might mean taking a quick chance under burning rafters, or in a corridor roofed with stone cracking in the heat. Having got into a building, he might find himself lost in utter darkness, unable even to find his hose and trace his way back.

He saw the broken bodies of comrades tossed high in the air with their pump by the direct hit of a bomb. He saw walls fall on them, roofs crash through buildings where they were at work.

He fought in churches where the water steamed in the font and the big bell crashed to earth behind him. Many a time he saw a building that he had quenched by hours of toil re-ignited in an instant by the fall of another bomb.

While he had water he had hope, for who knew what great skyscraper of flame might not be mastered by dogged patience? But the water sometimes failed. The jet would die away, the hose go limp. Oddly enough, when it did he always looked back along its length with instinctive expectation; but he knew it sometimes meant defeat. That really depressed him—watching a great blaze burn itself out with the mains broken, the emergency basins empty, and every line of access to distant supplies cut off. On those nights he would go back to the station with no songs or joking.

FRONT LINE UNIT. It is not only the man on the branch whose job takes him to the forefront of danger. The whole Fire Brigade is in it together. Here are women members in charge of a mobile canteen, serving tea to men who have come straight from fighting a fire nearby.

Sometimes he worked as a reinforcement in a strange town after plunging for miles on his appliance through moonlight, or pitch dark, over strange roads. Then from some nearby hill he would see below him the enemy bombs falling on the blazing city into which he must make his way.

Often he crawled among debris in the dark. But when his turn came he would be lifted aloft, a hundred feet up on the turn-table ladder, holding his branch with all his strength waiting for the shock of the oncoming water, which might easily "whip" him six feet sideways, in an instant jerk on his aerial platform. He saw it like this :—

"You get the best view of all, and you have to give the men down below a running commentary on all that happens. From time to time the smoke billows up and you can see nothing below you. Then you feel horribly alone.

"A flare comes down making a peculiar glare that scares you. Yet when you hear a bomb falling you feel as if you could lean out and catch it.

"When you are playing down on to the top floors of a building and the fire is burning downwards, the floors give way in time. Then comes that great whiff of heat and flame, licking up towards you, and you think yourself lucky if you get out of it unscorched.

"On big blitz nights when there are any number of fires going round you, you wonder how they'll get them all out. But they do begin to die out one by one, except for two or three big chaps that keep going. You can see the crews of your own fire worming their way into the building and attacking. The next moment almost, they are up on the next floor, and so they creep up towards you until it's all over.

"There's nothing really exciting about being on top of a turn-table ladder—you get used to it, like most other things."

Those are the words of an ex-milk-roundsman. Like the rest of the civil defence services, the auxiliary war-time firemen were from every walk of life : seamen, solicitors, taxi-drivers, motor-car salesmen, bricklayers, warehousemen, hairdressers, mechanics, fishmongers. Many were unpaid volunteer part-time firemen. They did their day's work normally, and often had one night in three on duty, another on call and the third free. It might well happen that they would come in at the end of the day's work, turn out again after an hour or two and work hard all night, then do the same things next day and next night—and to work again the day after that.

The Rescue Man

The war has brought prominence to some strange techniques, like armed parachute jumping and the defusing of delayed-action bombs. But so far it has bred up only one completely new craft. It is a sign of the meaning of total war that this should be the craft of burrowing for broken bodies among the ruin of homes. There has never before been the opportunity to develop an intense scientific interest in the behaviour of broken buildings and the way their fragments lie. Until our own generation, it was hardly a matter of general concern that a house could collapse in three different ways—by total disintegration into mixed rubble, by the curving fall of roofs and floors, held at one side while the other swung downwards, or by the breaking of floors in the middle while their sides held, so that they formed a V beneath the arms of which men on the storey below might be preserved alive.

The Rescue Man was the new technician of the blitz. His pre-war training taught him much, but when the bombs fell he learned much more. He learned how to tunnel through shifting masses of rubble on unstable footings, using whatever head-support he could find—sometimes his prepared lengths of timber, but sometimes a kitchen table or a wardrobe-frame which he pushed before him as he went on. He learned to be very delicate with his big hands, for if he could not withdraw a lump of brick-and-mortar without disturbing by a hair's breadth the broken timber beside it he might bring the tons of stuff above down upon him.

He learned the strange ways of furniture—how a piano might fall half forward and lock with a chair, far below the surface of a dense mass of debris, leaving beneath its tilted keyboard just one clear space with a woman pinned in it. He grew used to clearing a passage for himself among materials under tremendous pressures and learned to take advantage of their stresses so that when he had finished his picking and hollowing, the sides and roof of his zig-zag corridor were firmly held, and he could come back by the way he had gone in.

His was the most laborious of all the tasks of civil defence. He had been known to keep straining away at a difficult piece of rescue for seventeen hours on end. His work had also its special risks. Underground his fate was always poised precariously over his head. Above ground he often worked under a tottering wall and lacked the time to deal with it. What couldn't be shored must be ignored. In basements there might be water from broken pipes, rising steadily towards the roof as the parties struggled to get in and release someone, or to get out with him. Gas often leaked from fractured mains or household pipes ; it might make any enclosed space into an immediately fatal trap. And so often there was fire, to give the rescuers minutes instead of hours, and threaten them as they hurried.

TO FIND AND SUCCOUR THE INJURED. Working in the dark, or by the light of incendiaries, the Rescue Men and First Aid Parties had a dangerous, gruelling and nerve-testing duty.

IT WAS HER BUSINESS TO GET THERE.
The girl Ambulance Driver sets out through the blitz.

But there was another side to this. Rescue was not only a craft, it was a calling ; it took firm hold on the tough builders' labourers and the others who practised it, and filled them with pride and interest in their work. For they had a quarry. They were working towards a living being—or several. The warden, or the woman next door, had told them definitely of people under that wreckage, who might well be alive. So every now and again as they struggled noisily forward the party leader would call for silence and they would strain their ears for voices, a muffled cry, even the noise of breathing. As they drew nearer they might be able to talk to their " patient," perhaps for the hours that it took to get through those last few impenetrable feet. Later still they could give the kid, or the old girl, or grandpa, a drink—water or stimulant out of their cupped hand.

This was what gripped you, what made worth while the hours of heavy labour in the thundering blackness — this prospect of

THEY TOOK WHAT THE AMBULANCE BROUGHT THEM.
In a First-aid Post, doctor and nurses examine a casualty.

" getting the old boy out." It was something you liked to do yourself, you and your party, and when you'd got to him you had been known to pick him up, cold-shoulder the stretcher party with a muttered " this one's mine," and take him to the ambulance in your own arms. Though the ones you rescued never knew who you were, and couldn't very often find you to thank you afterwards, you could (and did) find out from the Town Hall or the Hospital how they were going on. The satisfaction was therefore greater if you were working in your own area for your own people. " We done all the rough work, see, twelve hours it might 'a bin, and then they want to send us home and let these reinforcement chaps from Walthamstow get the old boy out ! "

Not if you could help it !

First Aid Party

The First Aid Party, waiting in its depot, was ordered out by the Control Centre to

any spot where bombs had caused injury. Four men and a driver made a party. Each was an experienced first aid worker. Perhaps before the war he was a member of the Red Cross, St. John or St. Andrew's Society; he was in any case a man drawn temperamentally to the work of healing, ready to face the full risk of war but happiest in one of its most constructive callings. His work did not call for the highest medical skill, but for speed, sound judgment and steady nerve.

The party's first task was to help the Rescue Men to release trapped casualties. Then they must decide whom to treat, whom to send home: of the more serious cases, who should go to hospital and who to the First Aid Post. On the soundness of these rough and ready diagnoses lives would depend. It was dark: bombs were falling: perhaps it was raining: and there was not a second to be lost. In the earlier days of the attack, before the practice grew up of sending an "Incident Doctor" to the scene, the First Aid Parties made these crucial decisions unaided, as they bandaged and splinted in the night. And the doctors at hospital or at the Post usually found they had decided rightly.

Ambulance Driver

They went out together, driver and attendant, from their depot to the bombed site; and it was the driver's business to get there, whatever craters, fires, trailing wires, boulders or hoses might be in her path. She had volunteered because she had been used to driving her own car, most likely, or the family's. "Civil Occupation: Housewife," she had written on the application form: or "Typist," or, occasionally, "None"—what they called a Bright Young Thing.

She had shuddered at a dead bird on the footpath, and now she was going out to deal with death and mutilation in forms as horrible as any battlefield had ever seen. If she told the truth she might confess that

THE W.V.S. DID MANY JOBS. They manned the Rest Centres and the Clothing Depots, drove mobile canteens, cared for the bombed-out. Here is a W.V.S. woman managing a field kitchen, part of one of the emergency food convoys that were held ready to be rushed to stricken towns.

when she swung her ambulance out of the depot gates that first night, what set her heart thumping in her chest was not the bombs but the thought of facing and dealing with her first casualties.

Yet when she got there she could think only of the people she had come to help. Before very long nothing could move her. To be sure, it was unnerving when you found that, by some mistake, what you had been given as a casualty was in fact a corpse. It was worse still, for a second, when a corpse suddenly asked for a drink of water. That worried you. But having to drive for miles under bombs or through flames, or to sit for hours in the blitz waiting for your casualties, to all outward appearance did not.

First Aid Post

There were the doctor, the trained nurse, and the nursing auxiliaries. They had an area with something like 15,000 people in it for their own. They took what the ambulances brought them. They worked away as though there were no air raids, and no such thing had ever happened as a bomb falling on a post like theirs, adding the names of its staff to their own casualty lists.

This was the "fixed" post. There were also mobile posts or units, made up in the same way, on call to any "Incident Doctor," or ready to reinforce a hard pressed fixed post or even a hospital. At a bomb incident, it might fall to one of the nursing auxiliaries to follow a rescue worker down a tunnel into a basement where people were trapped, and there to give them what help was possible. She might sit there for hours relieving their pain and giving them the comfort of her presence until rescue was complete.

The splendid work of the Emergency Hospitals and their staffs is not touched upon in these pages, but will be the subject of a special publication later on.

Women's Voluntary Services*

Sometimes they wore uniform, sometimes overalls. Sometimes just a green armlet over "kitchen dress." On the shoulders of these million women whose home duties forbade their doing whole-time war work fell much of the burden of the after-raid welfare services. Without them the job could never have been done.

In the early stages in each raided city they did for the bombed-out all those simple, human things that official planning had not caught up with. Later they staffed many of the Rest Centres, and came to know a great deal about air raid sufferers. They learned to distrust the first false elation bombed-out people feel at finding themselves alive, and to be ready for the succeeding depression when the full significance of ruined home and lost possessions sank in.

They knew that too much organising wasn't a good thing, and that people would sort themselves out very well if left alone at the right moment. They filled hours with washing up and washing towels, serving breakfasts and dishing out uncountable tea cups, slipping home—if they could—to see to their own husbands' dinners and then back to reach down the plates for their charges.

But Rest Centres were only a part. They staffed the brightly coloured Queens' Messenger Convoys that went into the raided towns and cooked and served hot food in the first hours of muddle and distress. They drove and worked the mobile canteens, cutting, stewing, and tea brewing; sometimes on the morning after, but often in the

* The W.V.S., formed with the State's encouragement, was in a special position. But it was far from being the only voluntary organisation to do fine service. Others included the Y.M.C.A., the National Council of Social Service (especially their Citizens' Advice Bureaux), the war organisation of the British Red Cross, the Order of St. John of Jerusalem, and the Friends' Ambulance Unit. There were many more.

blitz when the civil defence workers as well as the homeless needed quick sustenance.

After a big raid on some nearby city, a group of well-found country ladies from manor, rectory and doctor's house would set off in their canteen van on what might turn out to be a six-day gipsying expedition, sleeping where and when they could in the city, and taking up their pitch day by day wherever they found a need.

When America as well as Britain turned out all its attics for clothes for London's bombed, it was the W.V.S. who manned the clothing depots, as they afterwards did all over the country. They looked after those who "had nothing but what they stood up in" and those who stood up in nothing but their night clothes. It was their business to make every case a special one, from the outsize man who had to be given a voucher on the neighbouring stores to the old lady who timidly whispered, "I s'pose you haven't got a shemmy, love? I don't feel dressed, like, without."

They drove vans day and night, sometimes taking people to shelters or centres from homes at which the flames were already licking, sometimes just moving blankets. Later in the blitz their "housewives' service" organised the hundred and one small errands of compassion that are so large a part of work after the raid.

"After the raid" was an elastic term. W.V.S. women might have to get up at four in the morning for days on end to come from their own peaceful town as reinforcing parties and be at their Centre before the All Clear. Or they might be seen walking in the

TO SIT THERE AND CARRY ON as though nothing was happening outside was not easy. Both G.P.O. and Control Centre telephonists were called upon to do their ordinary jobs coolly and patiently in the presence of danger.

blitz from their home to the Rest Centre nearby, aproned, and with basins and colanders held above their heads against falling shrapnel. Mobile canteens often came in with radiators, windscreens and drivers' cabins pitted with holes from machine gun bullets and bomb fragments. In the ports, as the women fed tea and sandwiches to dockers working an urgent load in the dark, a nearby bomb blew them and their canteen into the dock basin—icy water on their backs and scalding hot tea down their fronts at the same instant.

Like all other civil defenders they had their own homes bombed, and their own relatives killed, as they worked.

Two Telephonists

(i) Control Centre

She took messages from the wardens and passed them to the service chiefs nearby: or she passed their instructions to the depots where the service parties waited. It was a simple job. All it needed was a clear head, a total disregard for bombs, and the kind of self-control that could take a message about a big incident somewhere in one's own street and pass it on as though nothing had happened.

Often bombs fell near enough to make the floor of the Control Room heave: sometimes nearer, so as to bounce the rows of girls a foot out of their chairs and back again: or nearer still, to put the lights out and leave everything in darkness till the emergency lighting came on. Or you might get a direct hit. Control Centres had done more than once. Then anything might happen. But it hadn't happened yet, and meantime the messages must get through, quickly, because there were lives to save and Jerry to beat.

(ii) G.P.O. Exchange

"Number please? Would you mind speaking up—there's some noise going on round here." In heavy raids, the girl operators dealing with emergency calls at the G.P.O. exchanges were workmanlike about their duties. Sometimes they could sit at their switchboards in shelter, but if anything went wrong they or their men colleagues might have to climb to a top floor and there handle special business while the raid went on. Bombs blasted in the windows of exchanges, incendiaries fired their buildings, ceilings and rooms filled with rubble, dust and smoke. Operators crouched beneath their switchboards to avoid flying bomb fragments and then got out to carry on.

The exchange might be a one-woman affair in a small village, on which depended the prospect of help for the civil defence services under one of those senseless and devastating attacks that did afflict villages. Then some elderly woman would sit at work for hours among the bombs and fires, all night and well into the next day. Upon her, as upon telephonists in every raided area, pivoted all the complex working of the defence machine.

The Messenger

Two extracts from official reports will tell the Messenger's story. This is the first:

"*John Smith.* Aged 16. Cyclist despatch rider (part-time). Normal civilian occupation: schoolboy.

"During last Thursday's enemy air attack, telephone communications were put out of action at an early hour. Smith maintained contact between the Report Centre and services in action by carrying operational messages on his cycle, riding the whole time except for three short intervals, once when he dismounted to extinguish an incendiary bomb that had fallen in dangerous proximity to a wooden fence, and twice when he was forced to disentangle his cycle from loose telephone wires fallen across the roadway. The roads were also seriously obstructed by bomb craters and debris, as high explosives were falling continuously in the district.

Though exhausted from his efforts, he insisted on continuing to carry messages throughout the area all night. During the ten hours he was on duty Smith was the main channel of communication with the services."

This is the second :

" Particular praise is given by wardens to several boys who frankly confessed themselves frightened, but still did not hesitate to go out on long and hazardous journeys, not even when flat tyres could have been used as an excuse. Among the messengers was a small pale boy who begged to be allowed to take a message, but the Chief Warden, feeling that the danger was too great for him, put him off time after time with various excuses, the final one being that he had no bicycle. ' Please, sir,' said the lad eagerly, ' Billy will lend me his bicycle.'

" After some hesitation the Chief Warden finally sent him off. After a long time he returned, breathless, wild eyed and bleeding, and covered with dirt. He asked to speak to the Chief Warden privately. ' Glad to see ' you back, my boy,' said the Chief Warden as he bent down to listen to the lad's agitated whisper. ' I daren't tell Billy, sir, but I've lost his bloody bicycle. I was blown off it, and when I got up I could only find the front wheel.' "

The Policeman

There was nothing in civil defence that the policeman did not do. He reported incidents to the Control Centre, and got the services into action, as did the warden. He moved people from threatened shelters. If an unexploded bomb fell he warned the nearby householders, evacuated them, and diverted the traffic. When he came upon people trapped, he went to work to rescue them, until the specialist parties arrived. If they were injured, he applied a tourniquet or splint, or dressed their wounds.

Everywhere outside London it was his duty to take charge of an incident, co-ordinate the work of the parties, and give general direction to their operations. (In London this was the warden's responsibility). If incendiary bombs fell, he must help to put them out and to deal with the fires they caused, unless these were big enough to need the attendance of the fire brigade. He had been known to conduct fire-fighting himself ; if all the pump crews were out, he could borrow appliances, muster wardens or civilians from the neighbourhood, connect up to the hydrants and get to work until the brigades attended. Was a shop front smashed and valuable goods exposed ? It was the policeman who found members of the Home Guard and posted them as sentries or mounted guard himself if there were nothing more urgent to be done.

THERE WAS NOTHING HE DID NOT DO, from moving people out of threatened shelters to mounting guard over unexploded bombs. Rescue work, first aid, shepherding the homeless, incident control—the police turned their hand to every task of civil defence.

His continually varying work called always for personal initiative. All of it was responsible, and all of it was dangerous. It meant activity in the open, under bombing, for as long as there was work to be done in his neighbourhood. Some of the rescue work done by the police takes rank with the most heroic episodes of that hazardous craft : in a heavy raid, when the calls on the rescue services were many, police constables might work for hours among the debris in imminent danger of death. When the raid was over, and the count of dead and injured had to be made, it fell to the police to keep the tally, to notify the next of kin, and to deal with the mass of enquiries from relatives and friends that descended upon them by every possible channel. They had to make known their tidings, often bitter and grievous, to people already overwrought by their own personal experiences. There must be no failure in tact and kindness—and there was none.

Every one of these tasks grew directly out of the normal function of the police as upholders of order and guardians of the public welfare. One would hardly compare closely a street collision with the fall of a large bomb ; yet both logically and in practice there are points of resemblance between them. So there came to be a saying among the police that an incident was just a large accident. The risks were more severe, but the police were chosen and trained to face risk. The complexities were greater, but one learned to cope with them. The conditions of work were infinitely more difficult, but the issues at stake were greater and with experience one rose to the occasion.

All these extra burdens, and others not directly arising from civil defence, needed extra shoulders to carry them. So the Auxiliary Police War Reserve was recruited before the war and called into being on the outbreak. It was a whole-time force. The part-time Special Constables also played an essential part. It was a testimonial to all concerned—to the comradely spirit of the regulars, and the keen intelligence of the newcomers—that the latter so soon learned to show themselves in practice worthy of the traditions of the British police.

In the provinces the police forces were the linch-pins of civil defence. The services were built around the police. Their members looked to the police for guidance and leadership. The wardens, within their own sphere, became a younger brotherhood to the police forces : more often than not the Chief Constable was Chief Warden. In London, for administrative reasons arising out of the special status of the Metropolitan Police, who are not a local authority service but are responsible directly to the Home Office, the position was different. The police stood a little apart from civil defence, with their own functions of traffic control, movement of the public and preservation of order. But the distinction was more complete in theory than in practice. On the ground, the constable many a time worked shoulder to shoulder with the warden, the rescue man or the first aid party, just as he did outside the capital.

16

The Achievement of the Many

THE STORY OF HEAVY RAIDS, Chapter I, ended in May, 1941, though the story of civil defence did not. How far the Blitzkrieg itself may come to have a second chapter is a question to which the answer is hidden in the dark recesses of the minds of the German General Staff. When they calculate the chances, there may be many a new prospect or device that will tempt them not to regard too closely the lesson of their past experience. But if, and in so far as, they may think it salutary to look back, what will they see as their achievement?

They will see that (as their propaganda showed) they misread their enemy's mind and miscalculated his attitude to the war. They will see that they were not bombing a deceived, disillusioned and dispirited people to whose other burdens air bombardment would be an intolerable addition. Such an enterprise, which they had undertaken with some success elsewhere (and which may yet be carried to a conclusion against them in their turn) was this time denied them. When they look back, they can see only failure.

During the air attack on Great Britain some 190,000 bombs were dropped up till the end of 1941; 43,667 civilians were killed—20,178 men, 17,262 women, and 5,460 children under the age of 16 years. The seriously injured numbered 50,387, 4,061 of them children. The damage has been sufficiently indicated in preceding pages. The failure to disturb civil morale or to reduce appreciably the flow of production was complete. The great German air offensive against the back kitchens and front parlours of Britain met with total defeat. This fact can no more be obscured by telling a grievous tale of death and material destruction than can the Royal Air Force's defeat of the Germans in the Battle of Britain, by pointing to the casualty lists of our fighter pilots. The enemy came: he spared nothing that it was in his power to destroy: and he went with his purpose unachieved.

But the history of the air raids of those months is more than a tale of attempt and frustration. The manner of the attack and of its repulse made it an episode of crucial importance in the history, not only of Britain and Europe, but of our civilisation. The great dragon of barbaric reaction that had reared his head in Central Europe stood for the creed of Force. In every threat and every act he trumpeted his belief in the power of matter over spirit. For three densely-packed months in 1940 he seemed to make good his philosophy.

It was the conscious privilege of the British people to teach him two lessons—the earliest of all those which the free peoples of the world will yet enforce upon him. The first was the Battle of Britain, when the finest squadrons of his chief weapon of terror were brought low by lesser numbers of freer men. The second was the defeat of his air bombardment by a general and widespread power of thought, action and endurance, based upon the clear consciousness of a just cause.

The first was the triumph of the few; the second the achievement of the many. The first was the more brilliant; but the roots of the second struck very deep. Before the war it was the British people, the many, who discerned Hitler for what he is; it was they, in 1939, who willed his destruction. They had earned their privilege. Mr. Churchill said of Hitler: "He knows that he will have to break us in this island, or lose the war." The civil defence of Britain, by all the men and women in the front line of 1940-41, showed which of these two things it was to be.

"I see the damage done
by the enemy attacks;
but I also see,
side by side with
the devastation
and amid the ruins,
quiet, confident, bright
and smiling eyes,
beaming with a consciousness
of being associated
with a cause
far higher and wider
than any human
or personal issue.
I see the spirit
of an unconquerable people"

WINSTON CHURCHILL
April 12th, 1941