



Royal Enfield *Productions*



"Made like a Gun"

A PROUD WAR RECORD

THE ENFIELD CYCLE COMPANY LIMITED

Board of Directors:

MAJOR FRANK WALKER SMITH, J.P., T.D., M.I.A.E.,
Chairman and Managing Director.

MR. GEORGE HENRY SMITH, Secretary.

ALDERMAN CHARLES TERRY, O.B.E., J.P.

MAJOR JOHN LEES, O.B.E., J.P.

Head Office and Works:

REDDITCH, WORCESTERSHIRE

Telephone:
Redditch 121 (8 lines).

Telegrams:
"Cycles, Phone, Redditch."

RECORD OF ACHIEVEMENT



FOR many years the expression "Made Like a Gun" has been the ROYAL ENFIELD slogan. The accuracy and high-class workmanship necessary in the manufacture of a gun have always been the targets aimed at and achieved by the Enfield Cycle Company and the ROYAL ENFIELD slogan has become the hall-mark of efficiency and satisfaction in the cycle and motor cycle world.

When the war started, ROYAL ENFIELD Bicycles became more and more difficult to obtain, while Motor Cycles and Motor Lawn Mowers disappeared from the market altogether. The question was often asked "Why, when it is possible to obtain the products of other makers?" The answer is that the Enfield Company concentrated the whole of their resources on the production of specialised equipment required for the prosecution of the war.

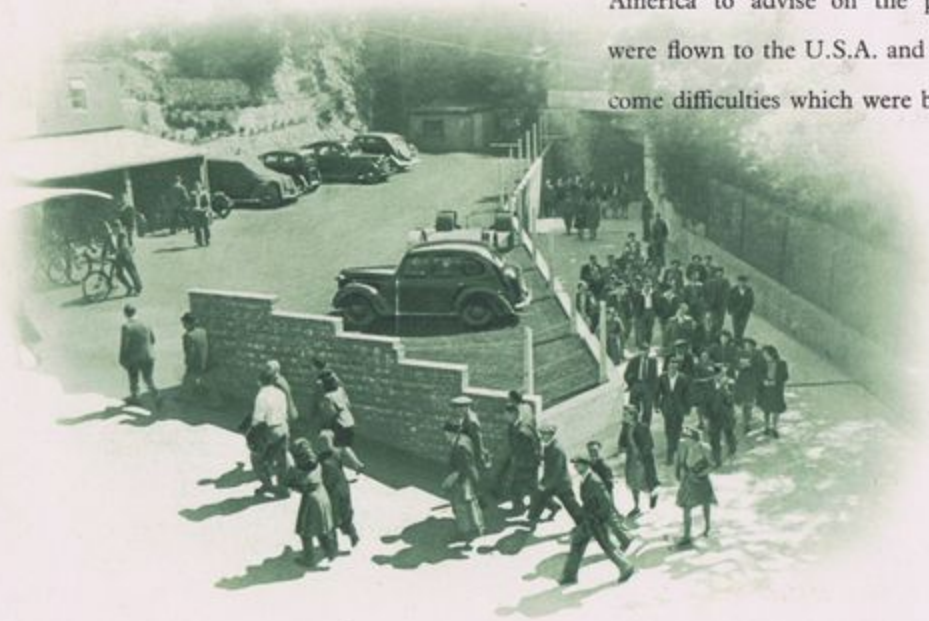
This meant losing touch with thousands of satisfied customers for whom the Company catered before the war. It is hoped, however, that the goodwill built up by years of service will not be forgotten but will be enhanced by the knowledge that the firm devoted everything to the furtherance of the National War Effort.



No. 1 FACTORY.

It is felt that it is an honour that the Enfield Cycle Company should have been called upon by the Authorities not only to make tens of thousands of ROYAL ENFIELD Bicycles and Motor Cycles but to direct their organisation and technique to the production of highly specialised instruments, the manufacture of which requires an engineering ability far beyond the scope of normal peacetime commercial production.

This firm was so successful in the quantity production of Oil Units—a task which had never previously been attempted—that in 1942 they were asked to send their Works Manager and the foreman of the Oil Unit Assembly Department to America to advise on the production of these complicated instruments. They were flown to the U.S.A. and Canada, where their experience enabled them to overcome difficulties which were being encountered.



No. 2 FACTORY.

The Company was honoured by the following awards—

Mr. H. T. GUISE, Works Manager, M.B.E.

Mr. V. L. YOUNG, Manager, No. 2 Factory, M.B.E.

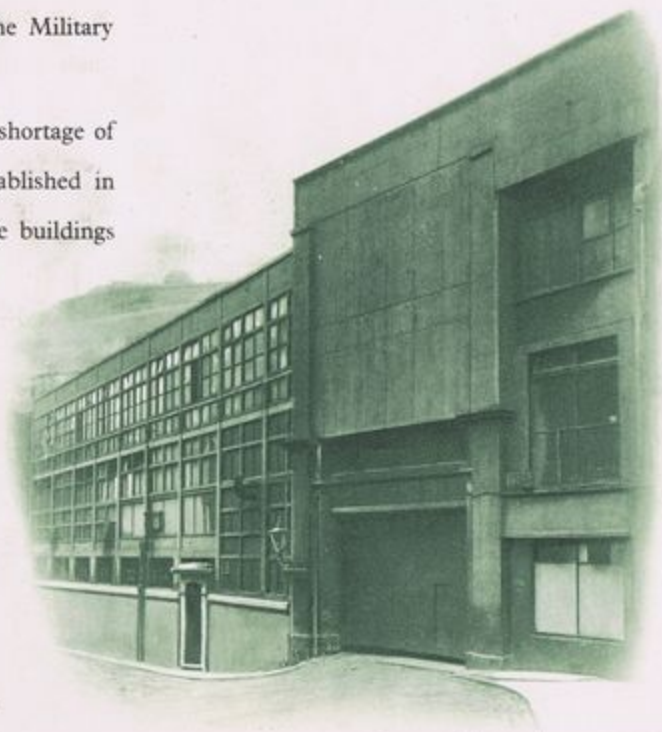
Mr. M. W. CAINE, Foreman, B.E.M.

Mr. A. H. ROBINSON, Inspector, B.E.M.

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In 1939 the whole of the manufacturing activities of the Enfield Cycle Company was concentrated at their old-established Works at Redditch. Soon after the commencement of hostilities, however, it was found that expansion was necessary in order to cope with the quantity and variety of products required by the Military Authorities.

It was not possible to extend the Works at Redditch because of the shortage of skilled labour in the district and satellite factories were therefore established in other parts of the country where labour was available or where suitable buildings already existed.



No. 3 FACTORY.

No. 4 FACTORY.



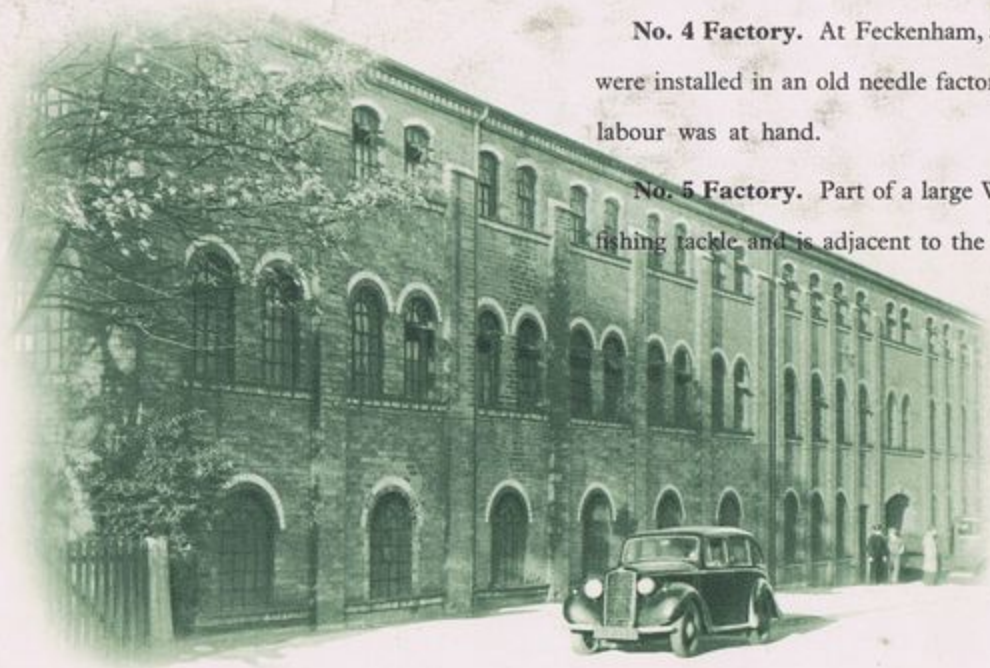
No. 1 Factory. The Head Enfield Works at Redditch, comprising large modern buildings covering some 25 acres—the chief centre for the production of Motor Cycles, Bicycles, Armour-piercing Shot, Oil Motors, Diesel Engines, Generator Sets, etc.

No. 2 Factory. Situated 90 feet below the ground at Westwood, in Wiltshire—laid out primarily for the production of Predictors and other ancillary equipment.

No. 3 Factory. At Edinburgh. This Factory was equipped for the production of Motor Cycle Frames and Tubular Crates for Airborne Motor Cycles to be dropped by parachute.

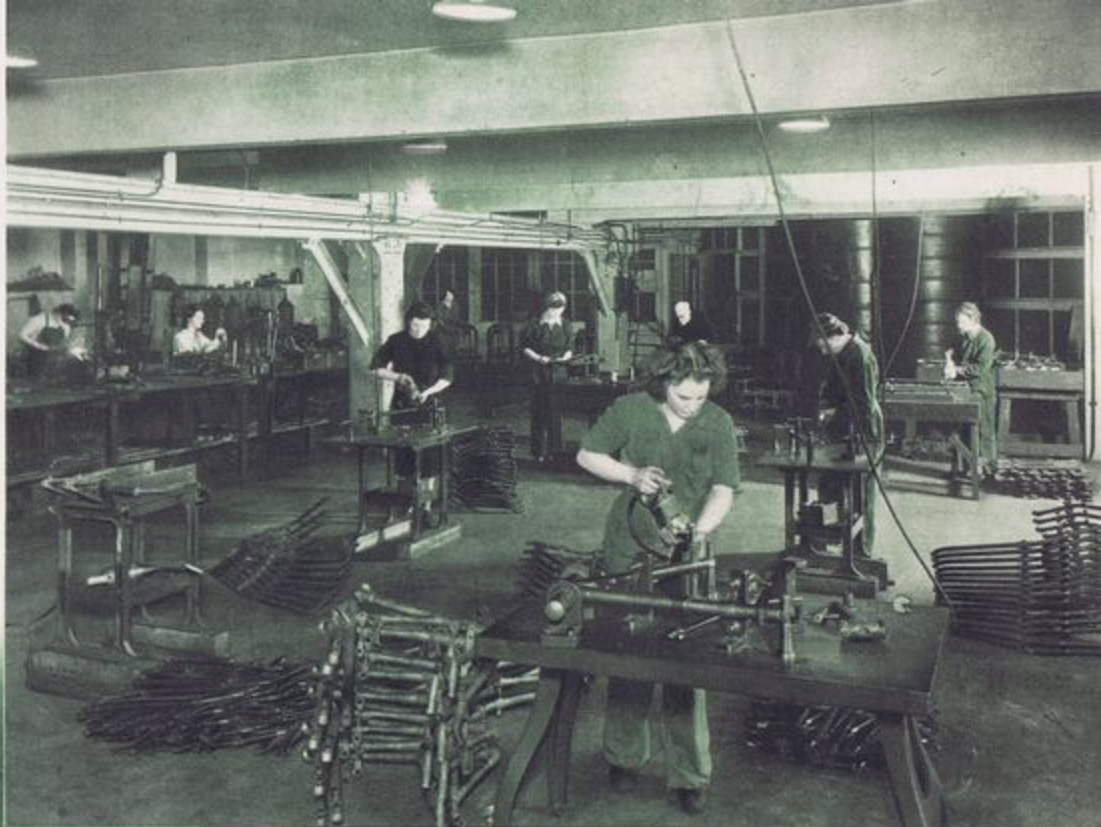
No. 4 Factory. At Feckenham, a few miles from Redditch, where machine tools were installed in an old needle factory because the space was available and adequate labour was at hand.

No. 5 Factory. Part of a large Works in Redditch which in peacetime produced fishing tackle and is adjacent to the main Enfield Works.

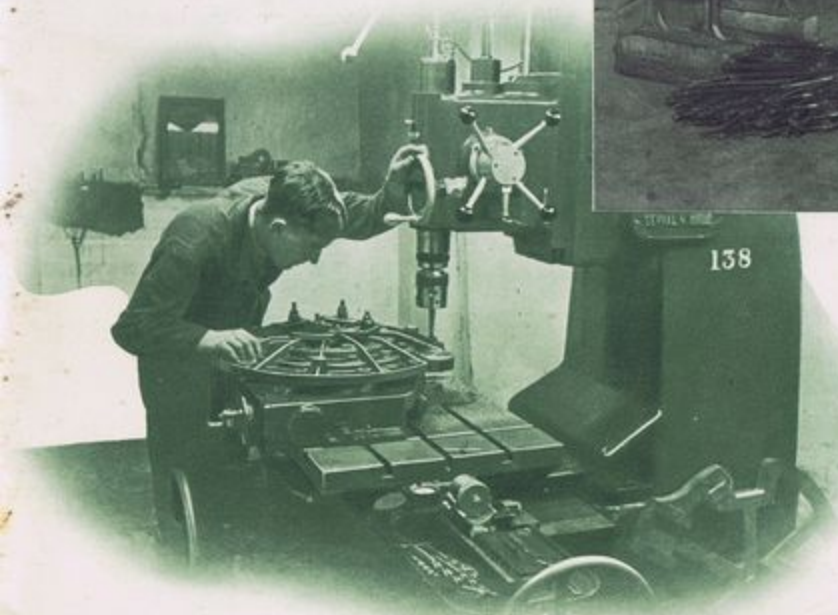


No. 5 FACTORY.

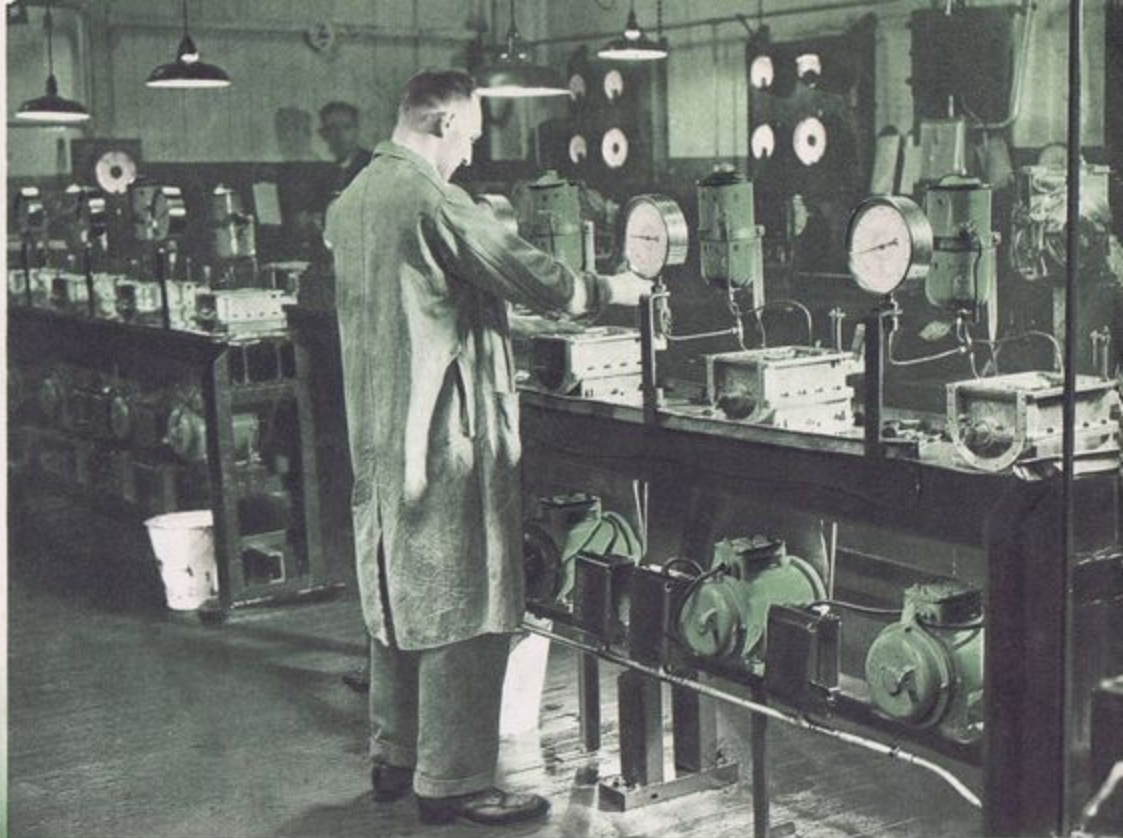
During the whole of the war period the five factories worked in perfect harmony and co-operation. In the following pages, which show some of the many manufacturing processes forming part of the Enfield Company's war effort, no indication has been given as to which factory was the scene of any particular illustration.



FRAME SETTING.



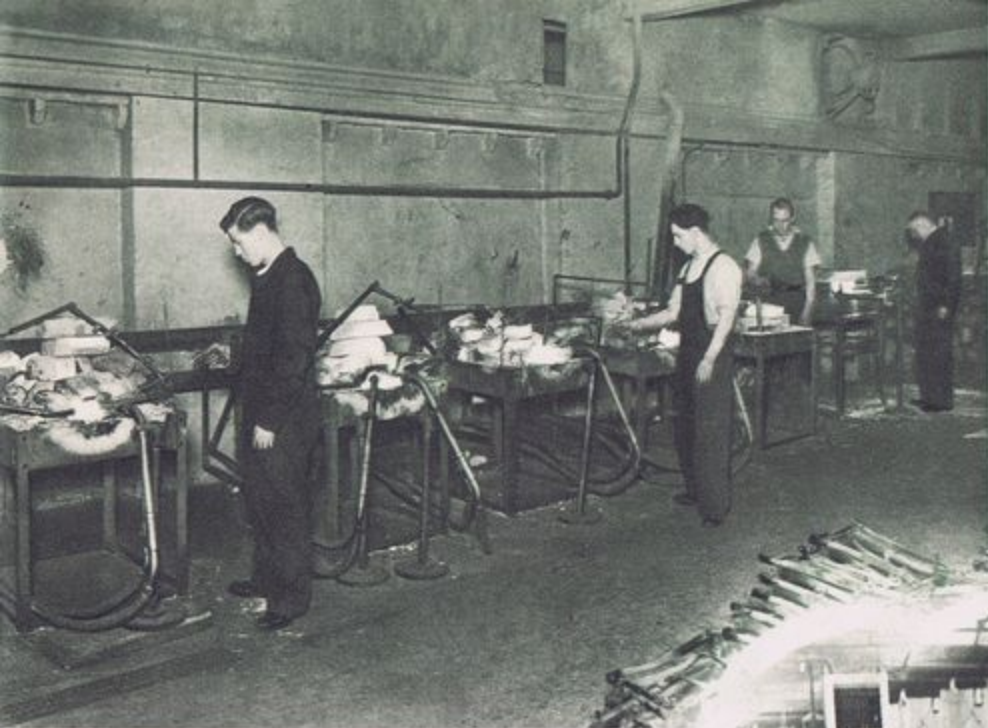
JIG BORING.



TESTING OIL MOTORS.



TESTING
MOTOR CYCLES.



LOW-TEMPERATURE BRAZING.



BICYCLE ASSEMBLY LINE.

DRIVEN UNDERGROUND

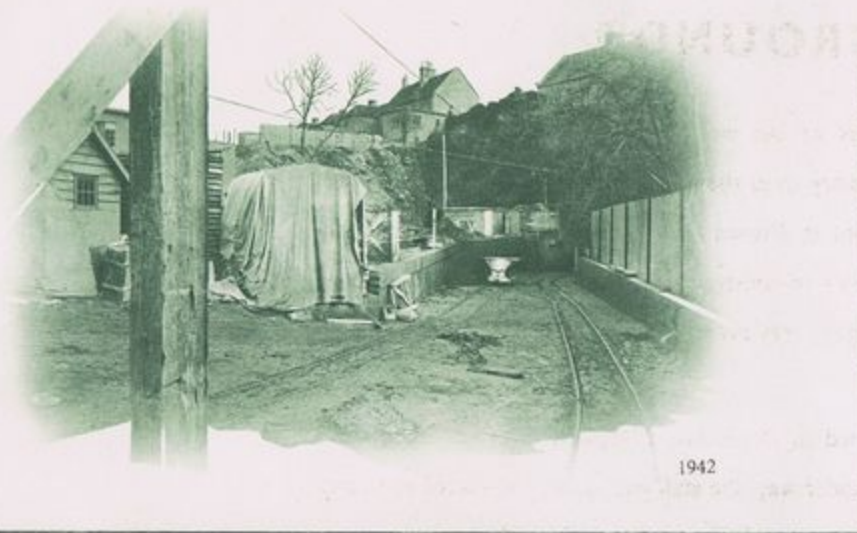


ONE of the romantic achievements of the war was the construction of factories underground to protect vital industry from the attentions of the Luftwaffe. In the West Country this was carried out in disused Bath stone quarries, an outstanding example of the speed and efficiency of construction being the Ministry of Supply Factory at Westwood, which the Enfield Company was invited to operate for the Directorate of Instrument Production.

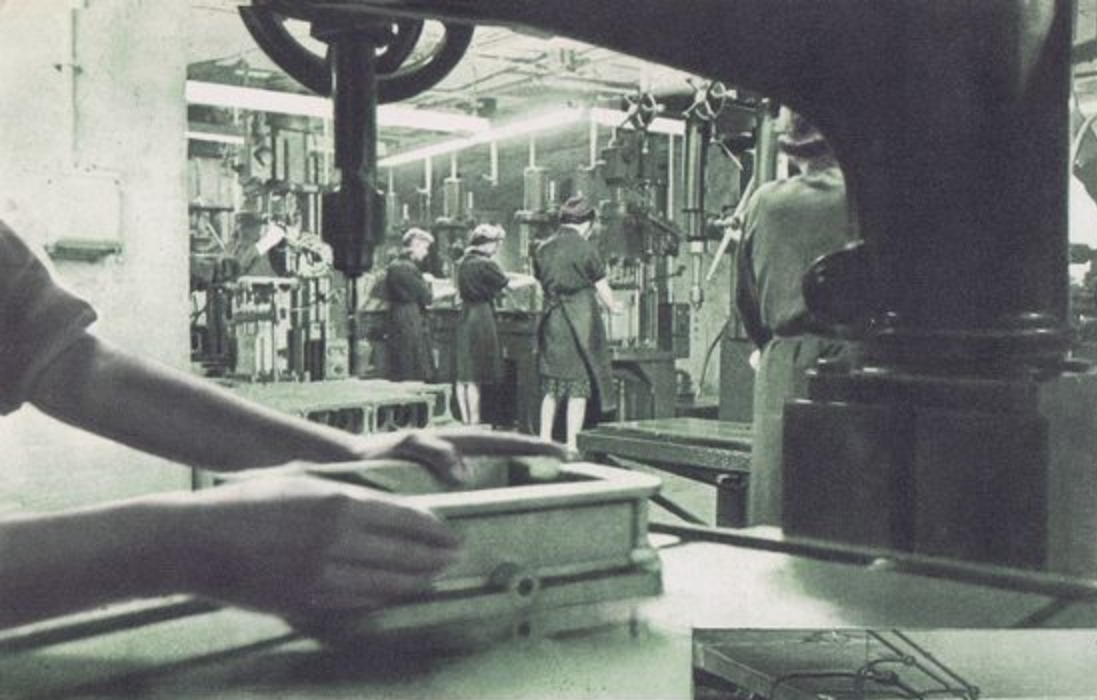
The clearing of the old workings was started in December, 1941, and in seven months the manufacture of Fire Control Instruments was under way, the staff and nucleus of skilled operators being transferred from the Head Works at Redditch. Most of the workpeople were, however, girls who had had no previous experience of factory methods apart from a short period of instruction at Government Training Centres. The fact that intricate and delicate instruments could be produced in these circumstances demonstrated the efficiency of Enfield jig and tool design and manufacturing methods and the exceptional technique employed in the production, not only of these particular instruments but of all the products of the firm.

THE ARRIVAL OF HER MAJESTY QUEEN MARY, WHO HONOURED THE COMPANY BY A VISIT TO No. 2 FACTORY ON MARCH 30th, 1943.





THESE PHOTOGRAPHS ILLUSTRATE THE TRANSFORMATION OF THE ENTRANCE OF THE ANCIENT BATH STONE QUARRY OF 1895 TO THE MODERN UNDERGROUND FACTORY OF 1945. ONE OF THE MEN APPEARS IN THE PHOTOGRAPHS OF 1895 AND 1945.



DRILLING.



GEAR CUTTING

DRILLING.





WELDING.



WELDING.

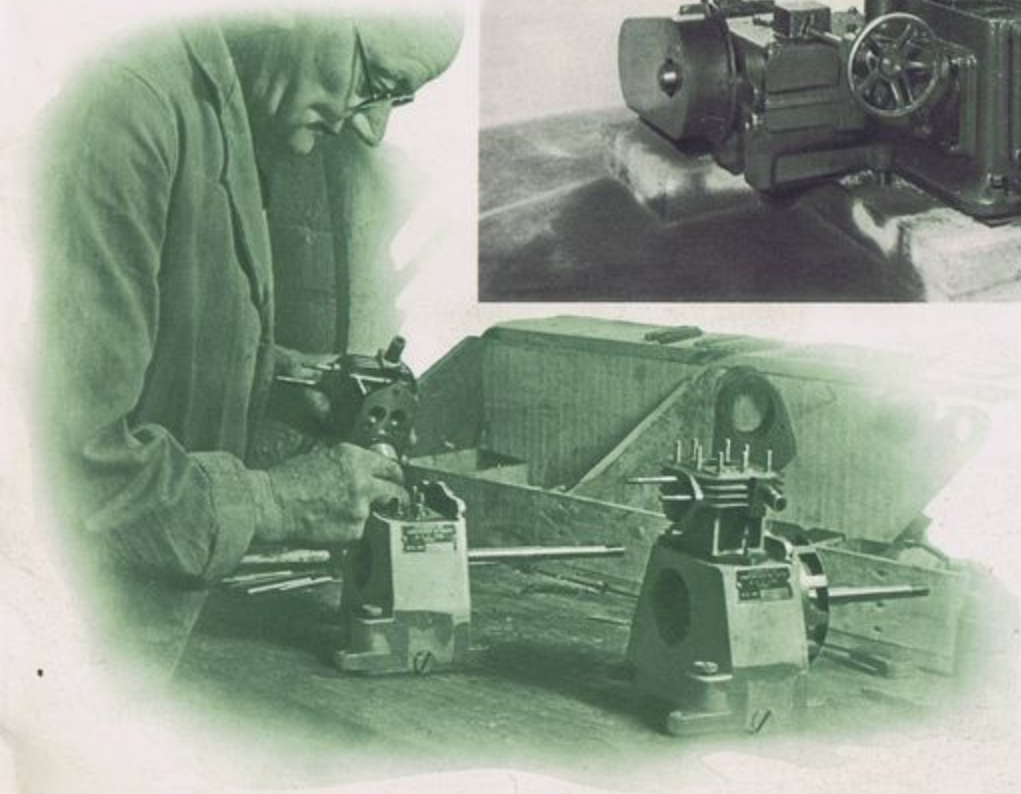
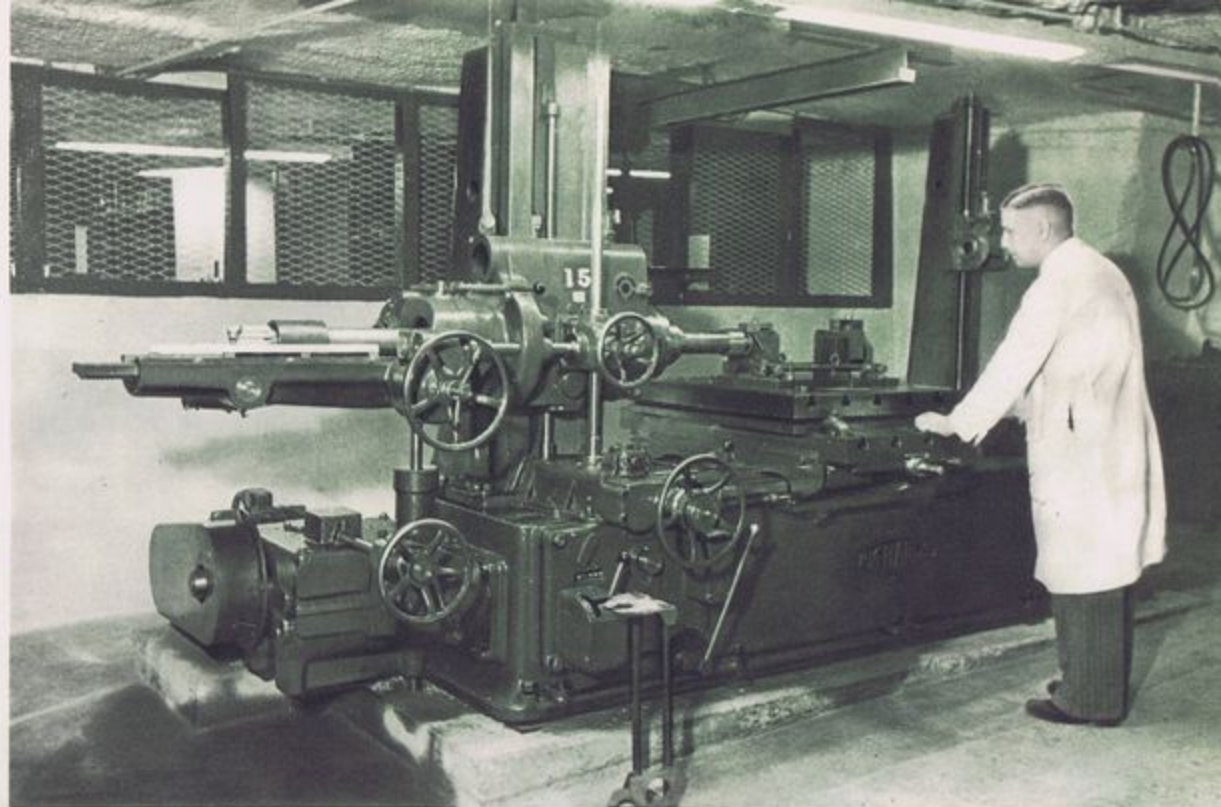
INSPECTION.



CAPSTAN
LATHE.



HORIZONTAL
BORING
MACHINE.



ASSEMBLING
35 c.c. ENGINES.



MINISTRY OF HOME SECURITY VOLUNTEER DISPATCH
RIDERS MOUNTED ON ROYAL ENFIELD MOTOR CYCLES.



PARACHUTE AND GLIDER TROOPS
WERE EQUIPPED WITH ROYAL
ENFIELD 125 c.c. "AIRBORNE"
MOTOR CYCLES.



RECREATION AND WELFARE



N all the Enfield factories the welfare of the workpeople has been a primary consideration. It is universally acknowledged, though not always put into practice, that maximum production can only be obtained under the best working conditions.

This is particularly true when working to limits of fractions of a ten-thousandth of an inch, as was necessary in the case of many of the Fire Control Instruments.

Facilities are provided for every kind of recreation, for good health is one of the main factors of efficient production. The activities include Football, Hockey, Cricket, Lawn Tennis, Bowling, Athletics, Swimming, Fishing and Rifle Shooting. Each works has its own Canteen, Surgery and Rest Rooms.

It is perhaps worthy of mention that, while it might be thought that working conditions underground would only be tolerated as a wartime measure, the conditions at the No. 2 Factory at Westwood are, in fact, better than in most surface factories. The majority of the workpeople there who have had previous factory experience do not wish to work elsewhere. Living accommodation was provided at Westwood in the form of hostels for single employees and bungalows as married quarters.

The Head Works at Redditch had its own Company of the 9th Bn. (Worcester) Home Guard and a Works Fire Brigade of 75 members, affiliated to the N.F.S., in addition to other Civil Defence Units comprising Decontamination, Rescue and First Aid Squads.



SUN-RAY TREATMENT.



ASSEMBLY HALL
AT No. 2 FACTORY.



CANTEEN AT
No. 1 FACTORY.



SPORTS MEETINGS
ARE HELD ANNUALLY.





HOSTEL LIFE.



ENFIELD WORKS
FIRE BRIGADE.



HELPING WAR SAVINGS—REDDITCH
"SALUTE THE SOLDIER" PARADE.

FIRE DRILL.



ENFIELD HOME GUARD.



FIFTY YEARS OF PROGRESS



R.A.F.



HE Enfield Cycle Company was established more than fifty years ago and it is regrettable that the exigencies of war prevented the fitting celebration of half a century of successful manufacture.

During this period hundreds of thousands of Bicycles have been produced, including tens of thousands for the Forces during the 1914-1918 war.

ROYAL ENFIELD Motor Cycles were first manufactured in 1902 and since then machines have been made ranging in size from 125 c.c. to 1,140 c.c. During the 1914-1918 war ROYAL ENFIELD Motor Cycles were supplied to the British, French, Belgian and Russian Governments.

The manufacture of Motor Lawn Mowers was commenced in 1931 but was, of necessity, entirely suspended during the war. Manufacture will recommence as soon as circumstances permit.

On the opposite page a list is given of the various articles manufactured by the Enfield Company during the second World War.



ROYAL NAVY.

During the War the Enfield Company produced for the Nation—

BICYCLES

Military Mark V and Civilian Types.

MOTOR CYCLES

- (1) 125 c.c. for Paratroops and Airborne Regiments.
- (2) 250 c.c. for Naval, Military, Royal Air Force
- (3) 350 c.c. and Civil Defence Services.
- (4) 500 c.c.

PETROL-ELECTRIC GENERATOR SETS

- (1) 80-watt Lightweight Charging Sets for distribution by Parachute.
- (2) 2.75 K.V.A. Three-phase Sets for use on Bofors Gun Sites.
- (3) Light Transportable Sets for operating Radar Stations.
- (4) Multi-Generator Sets for testing Aircraft and Radar Equipment.

DIESEL-ELECTRIC GENERATOR SETS

5.6 K.V.A. Diesel-driven Generator Sets.

ELECTRIC-ELECTRIC GENERATOR SETS

Electrically-driven Generator Sets for testing Aircraft and Radar Equipment.

PREDICTORS

- (1) No. 3, for use with Bofors Guns.
- (2) No. 7, for use with 6-pounder Guns and incorporating the use of Radar for Range-finding.

OIL MOTORS

- (1) For operating Bofors Guns.
- (2) For controlling Naval Searchlights.
- (3) For Ships' Stabilizers.
- (4) Tandem Units for Coastal Artillery.
- (5) Fuse-setting Units.

ARMOUR-PIERCING SHOT

For 40 m.m. Anti-tank Guns.

GYROSCOPIC SIGHTS

For Oerlikon and other Guns.

ANTI-VIBRATION MOUNTINGS

For Gun Sights.

PUMP UNITS

For operating the Gun Turrets of Tanks.

CAMS

Straight-line Cams for use in Precision Instruments where extreme accuracy is required.

GEAR CUTTING

Specialised Gears of all kinds for many different purposes.

MISCELLANEOUS COMPLETE UNITS

Resetter Boxes for Gun Sites.

Self-synchronising Equipment for 40 m.m. Guns.

Lag-compensating and Self-sectoring Equipment for Gun Sights.

DESIGNS AND PROTOTYPES

In addition to the above articles, which have been produced in quantities, the following have been designed and development work has been carried out on prototypes.

- (1) 10 h.p. Air-cooled Diesel Engine.
- (2) 500-watt Lightweight Generator Set.
- (3) 600 V.A. Ultra-Lightweight Generator Set.
- (4) 1,500-watt Generator Set.

ARMY.



N.F.S.



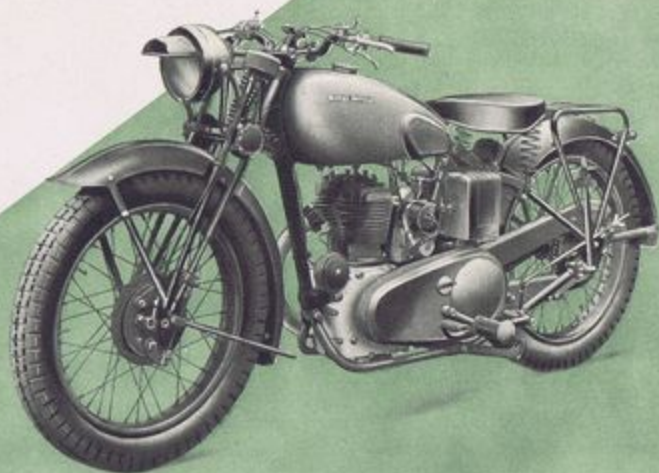
On this and the following pages are shown a representative selection of the Enfield Cycle Company's products during the war. Many of these articles were made by the thousand, while in other instances only a few hundreds were made and in one or two cases the end of hostilities came while the first prototypes were still undergoing test.

MILITARY MARK V BICYCLES.

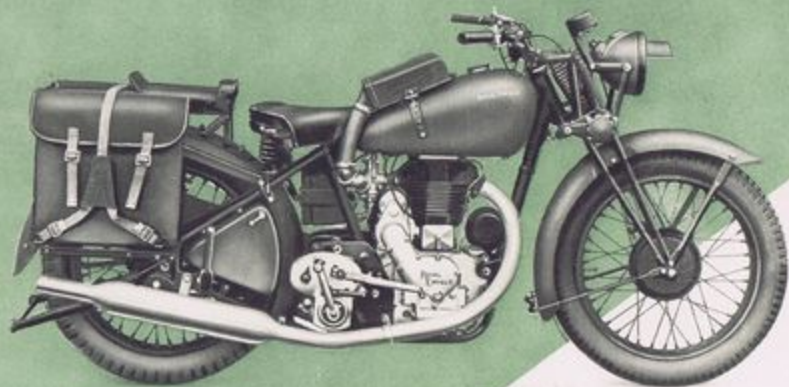




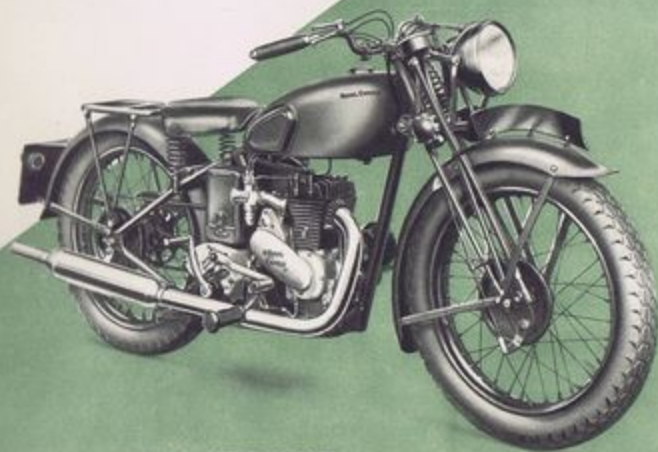
MOTOR CYCLES
FOR THE SERVICES.



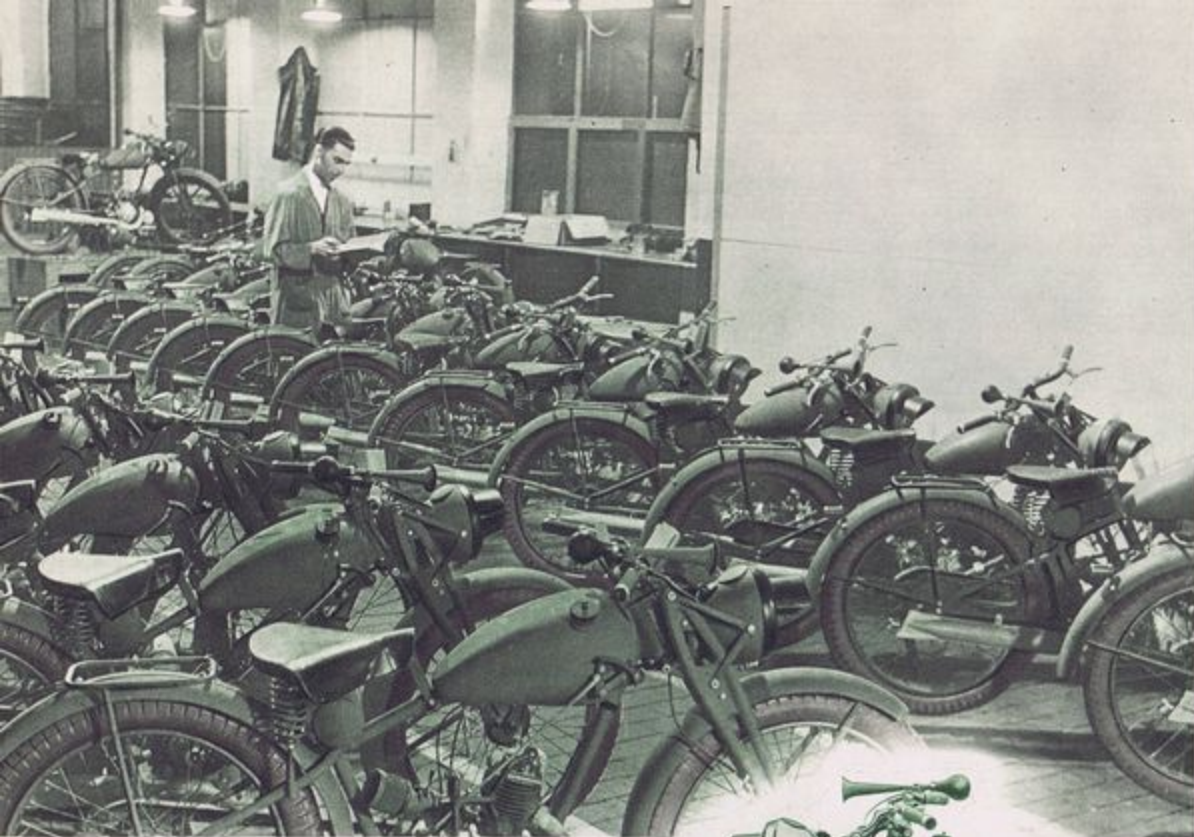
350 c.c. SIDE-VALVE.



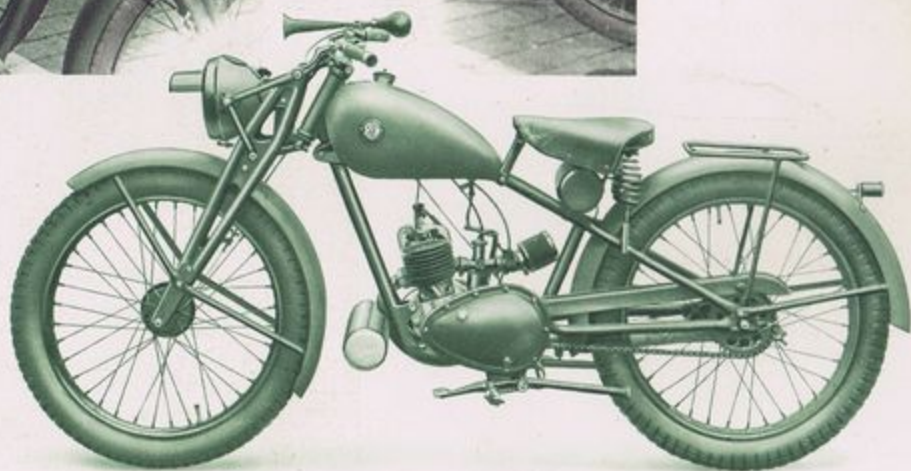
350 c.c. O.H.V.

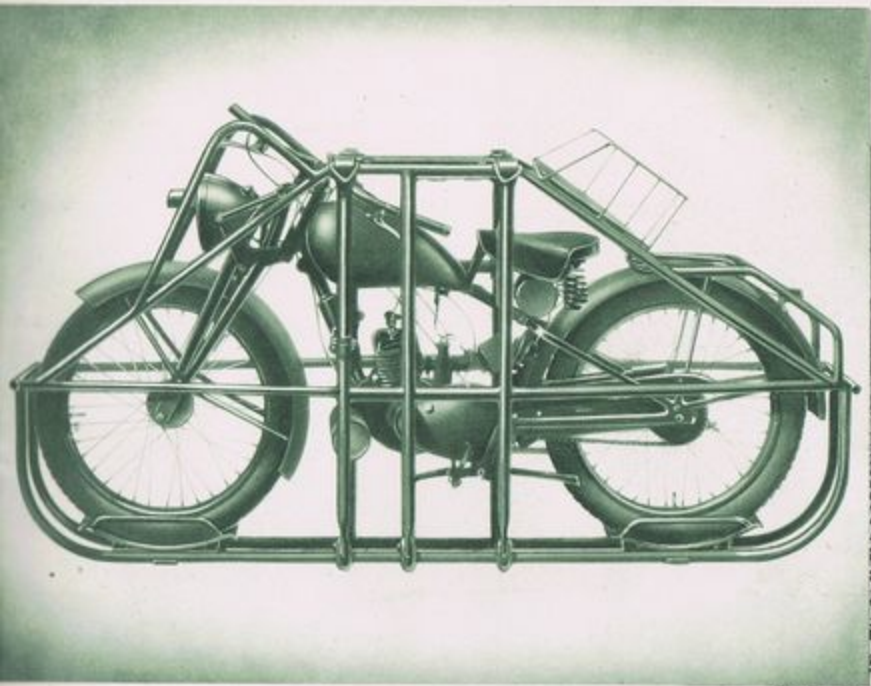


250 c.c. SIDE-VALVE.



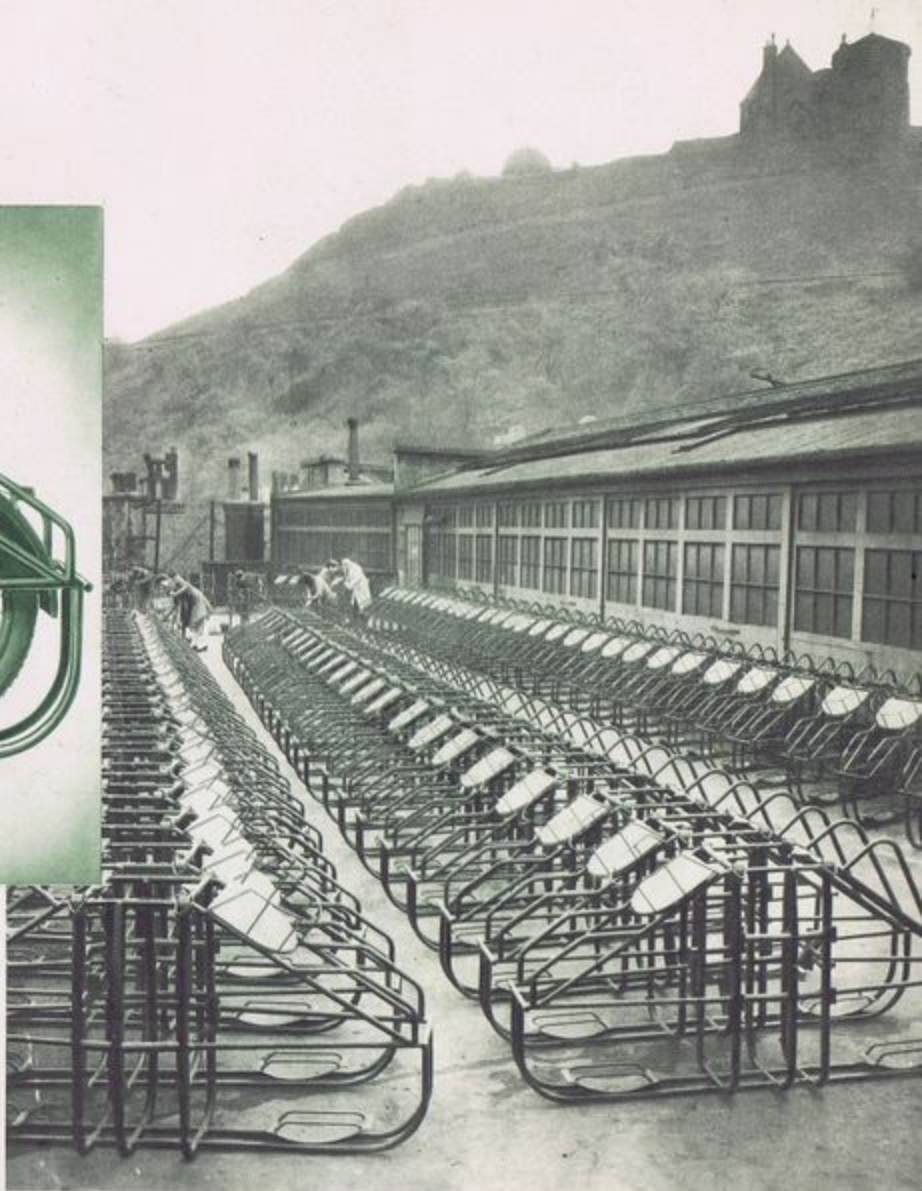
125 c.c. "AIRBORNE"
MOTOR CYCLES.

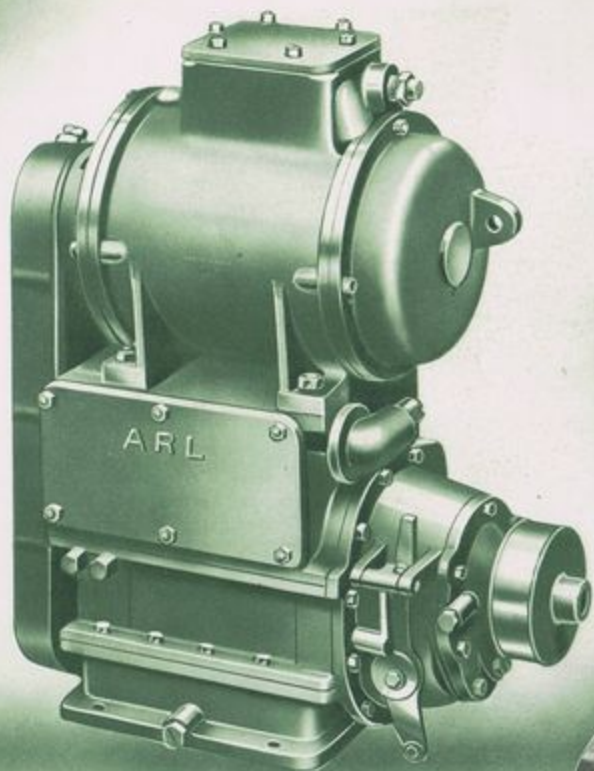




TUBULAR CRATES

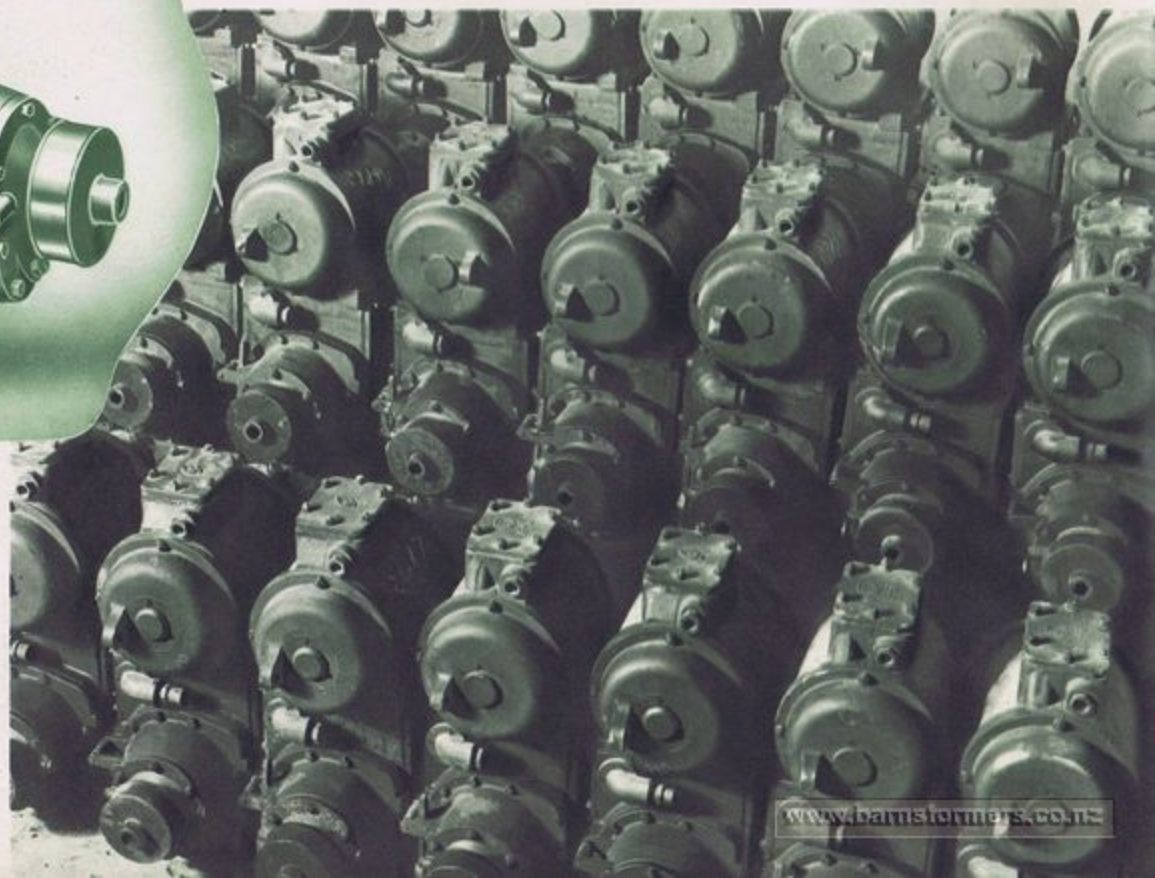
FOR DROPPING 125 c.c. MOTOR CYCLES BY PARACHUTE WERE
EXCLUSIVELY MADE BY THE ENFIELD CYCLE COMPANY.





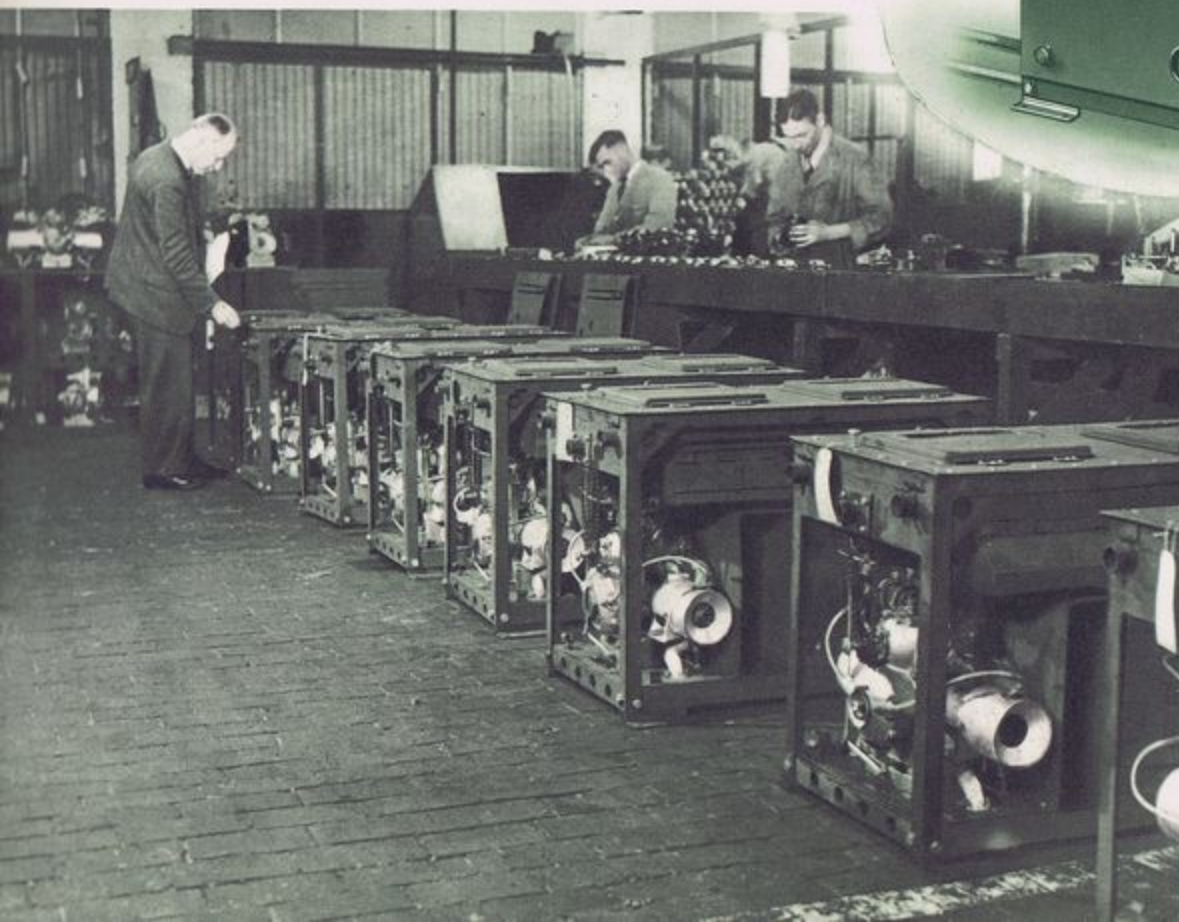
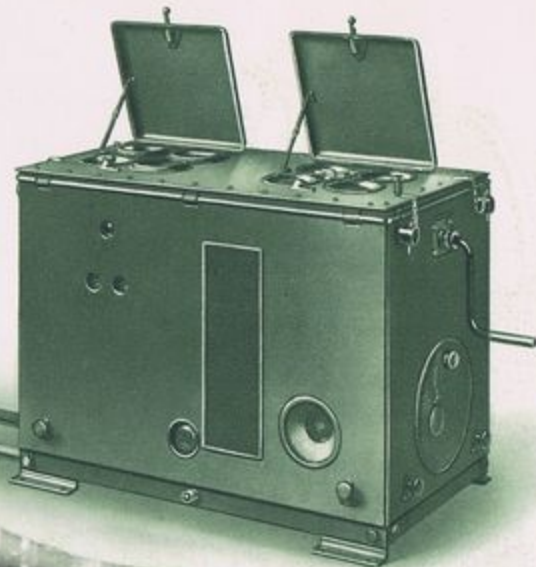
OIL MOTORS

FOR OPERATING BOFORS GUNS, SHIPS' STABILIZERS,
SEARCHLIGHT CONTROL, FOR FUSE SETTING, Etc.

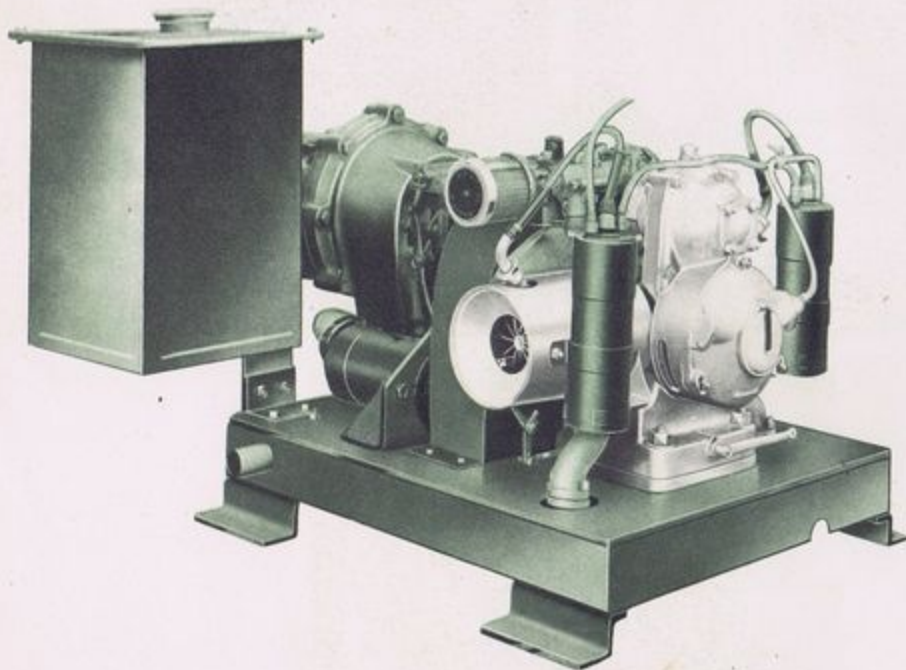


2.75 K.V.A. PETROL-ELECTRIC GENERATING SETS

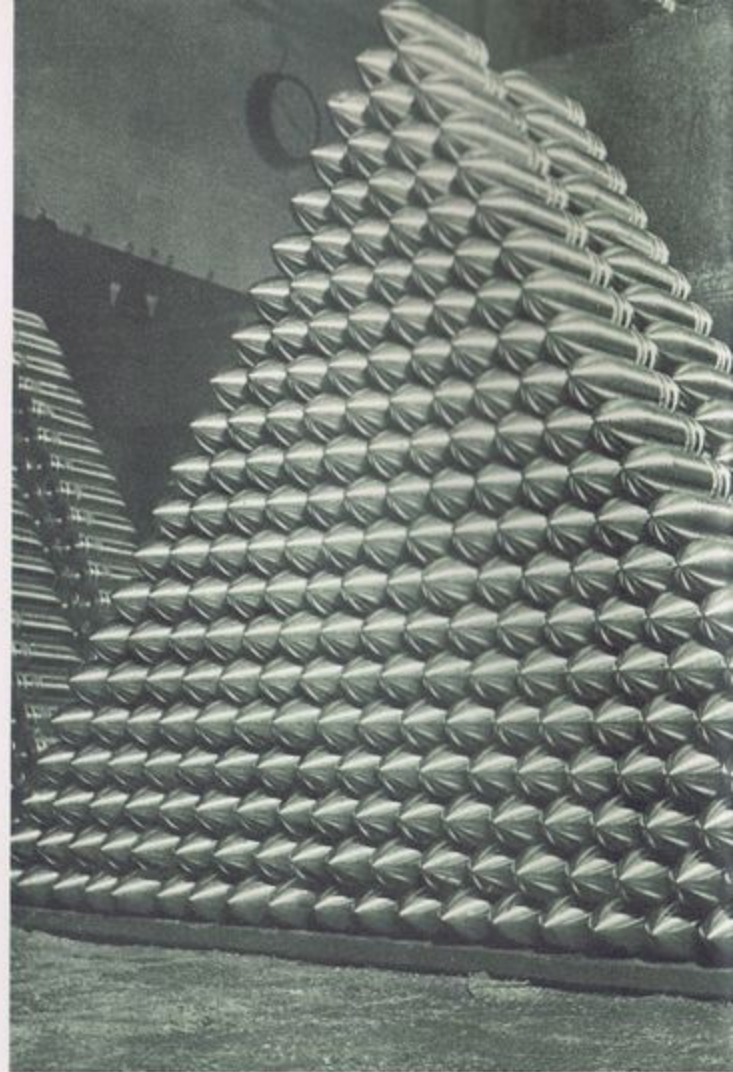
USED ON BOFORS GUN SITES.



TWO-POUNDER ARMOUR-PIERCING SHOT.

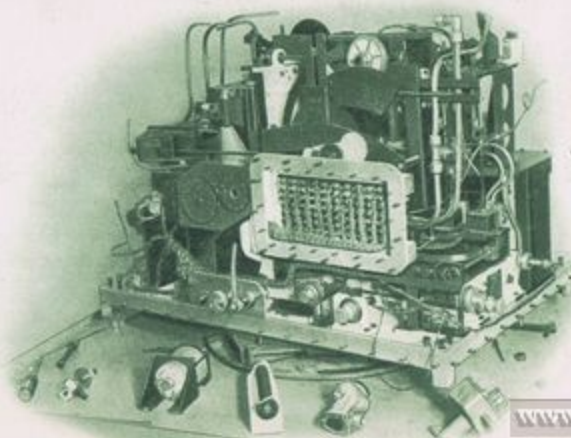
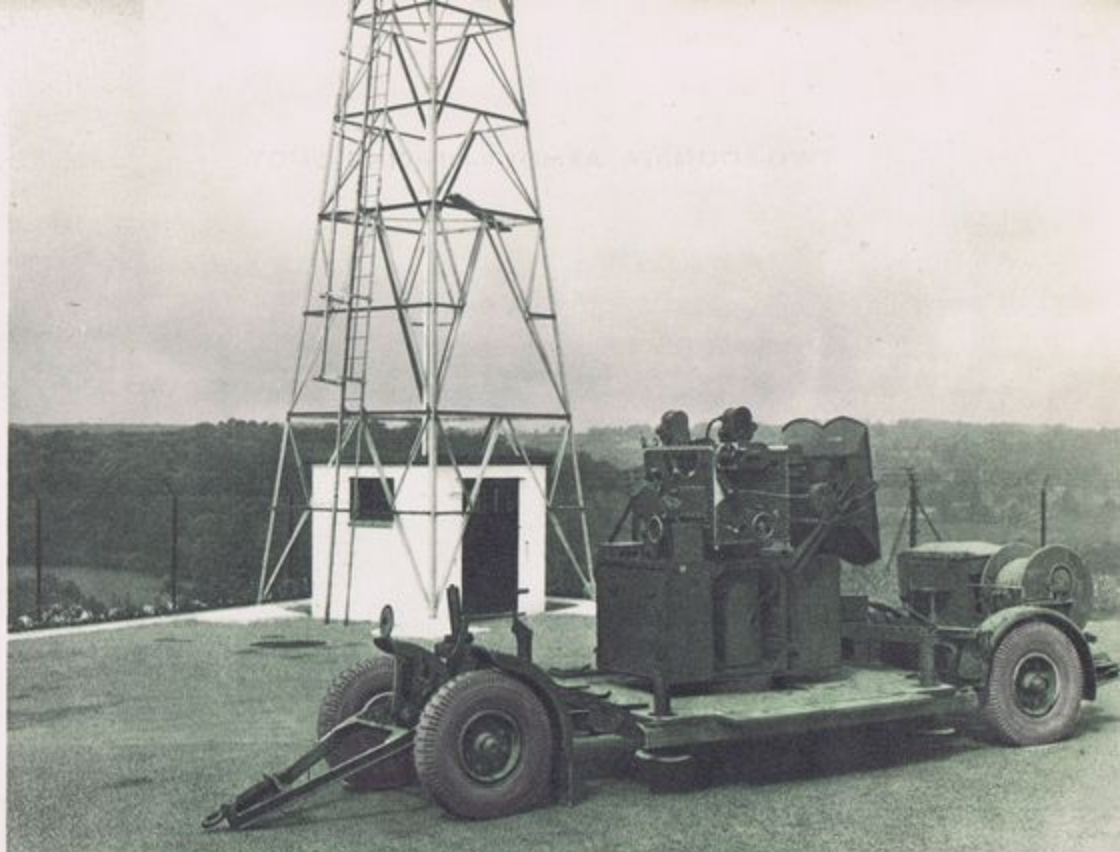
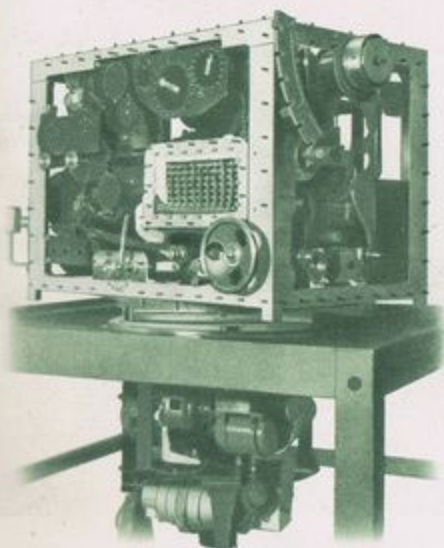


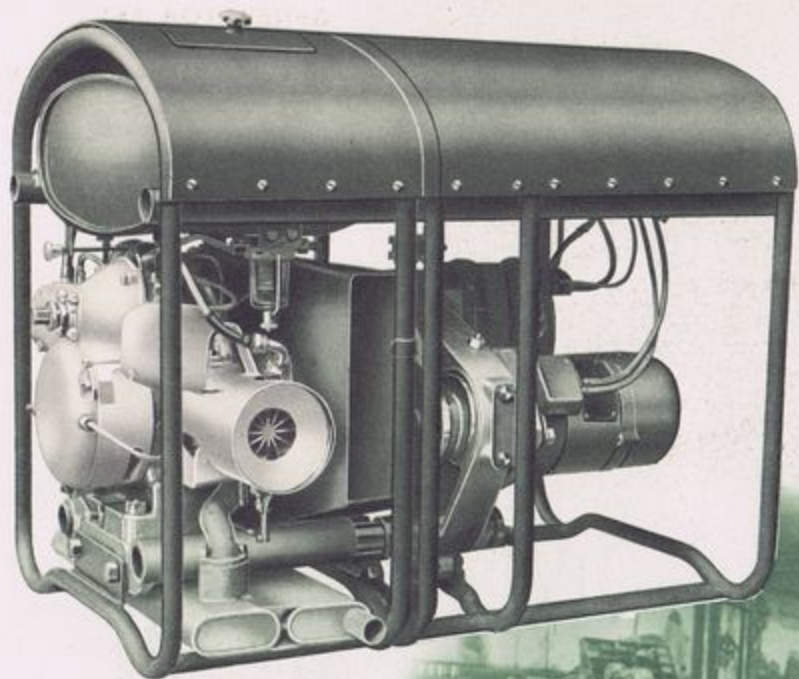
PUMP UNITS FOR OPERATING GUN TURRETS OF TANKS.



No. 3 and No. 7 PREDICTORS

FOR ACCURATE CONTROL
OF ANTI-AIRCRAFT FIRE.





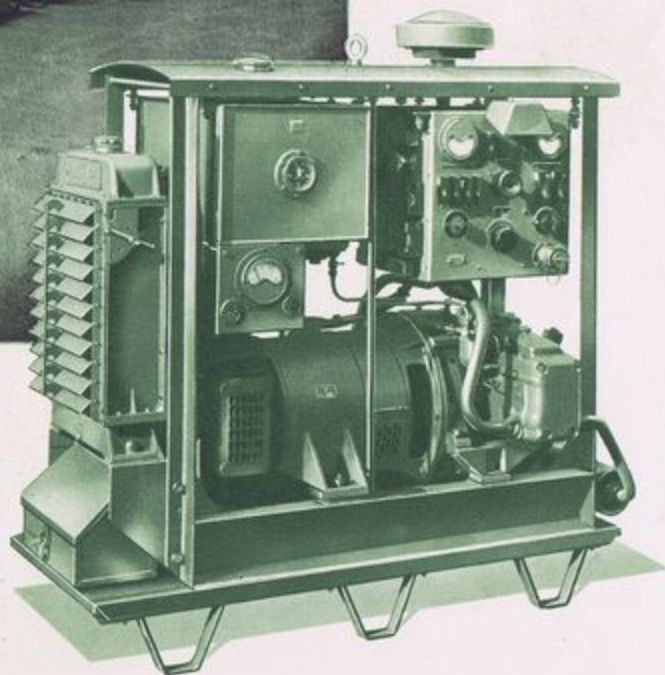
LIGHT TRANSPORTABLE GENERATOR SET

USED BY THE ROYAL
AIR FORCE FOR RADIO
LOCATION.



**DIESEL-ENGINEED 5.6 K.V.A.
GENERATOR SET**

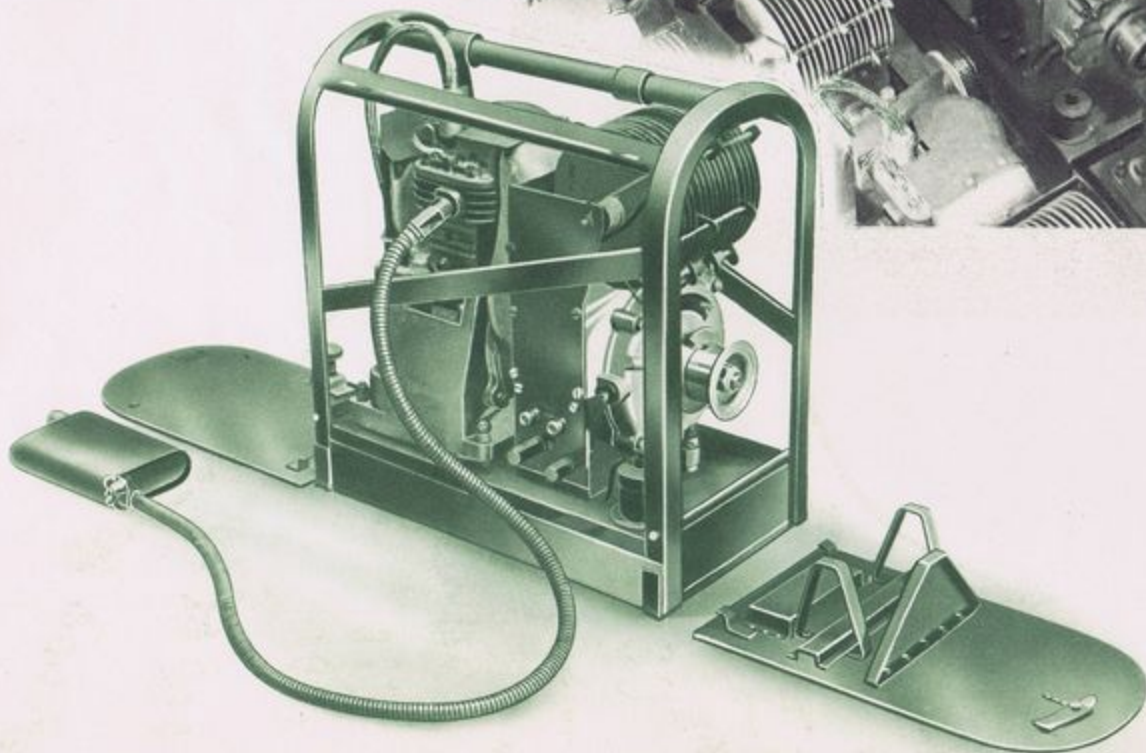
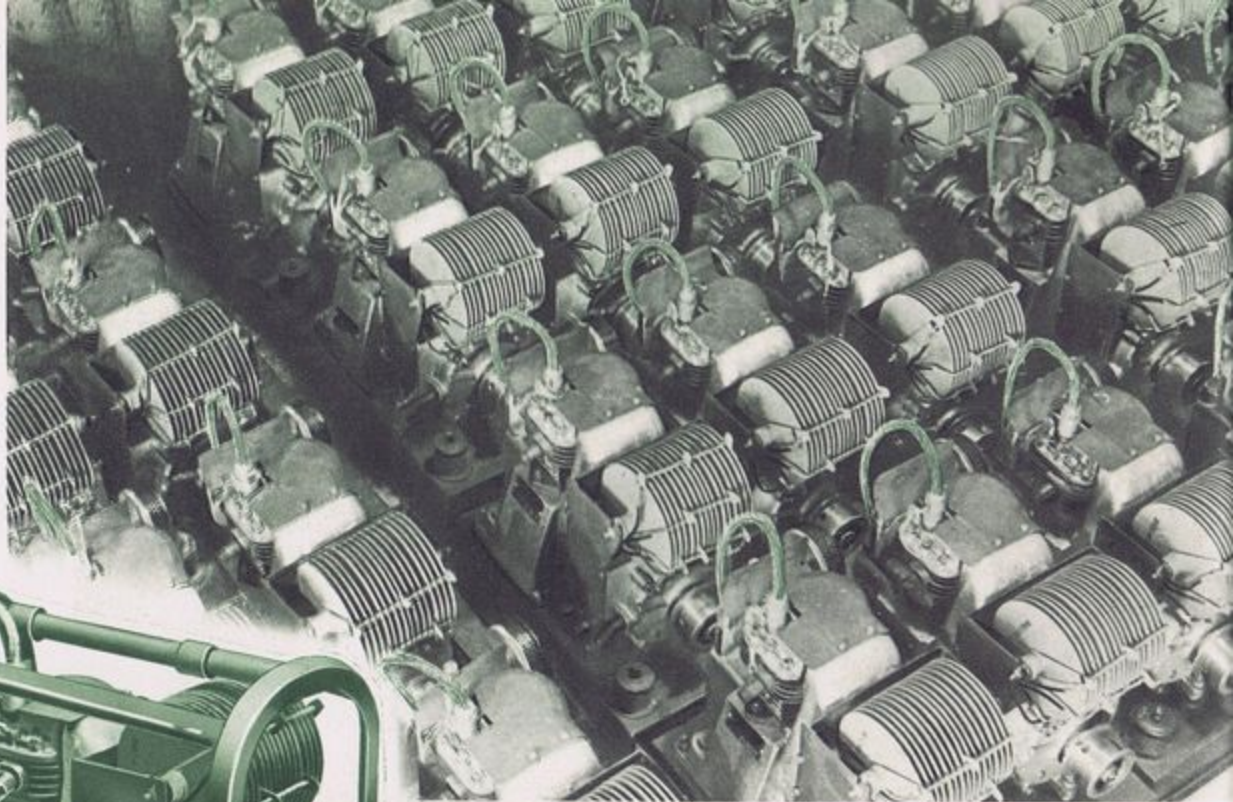
FOR MOBILE WIRELESS TRANSMIT-
TING AND RECEIVING STATIONS.

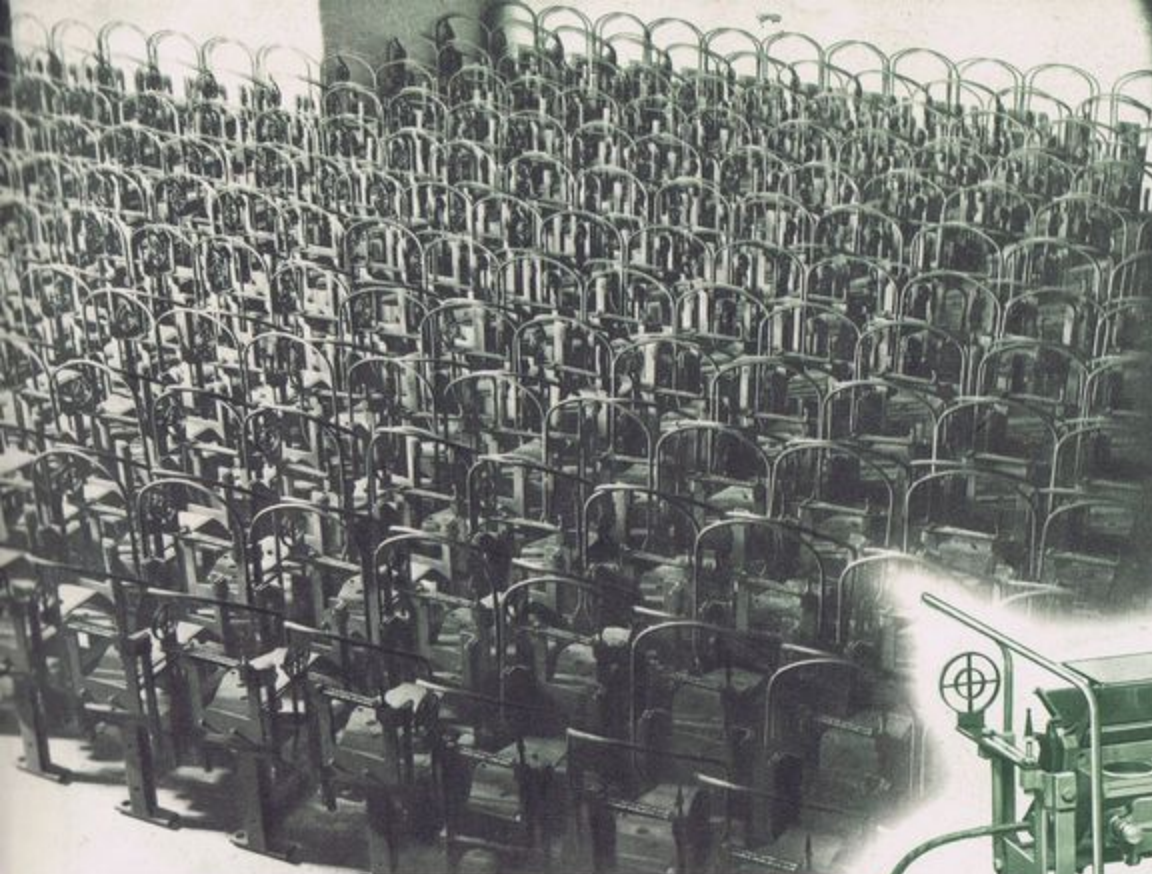


80-WATT CHARGING SET

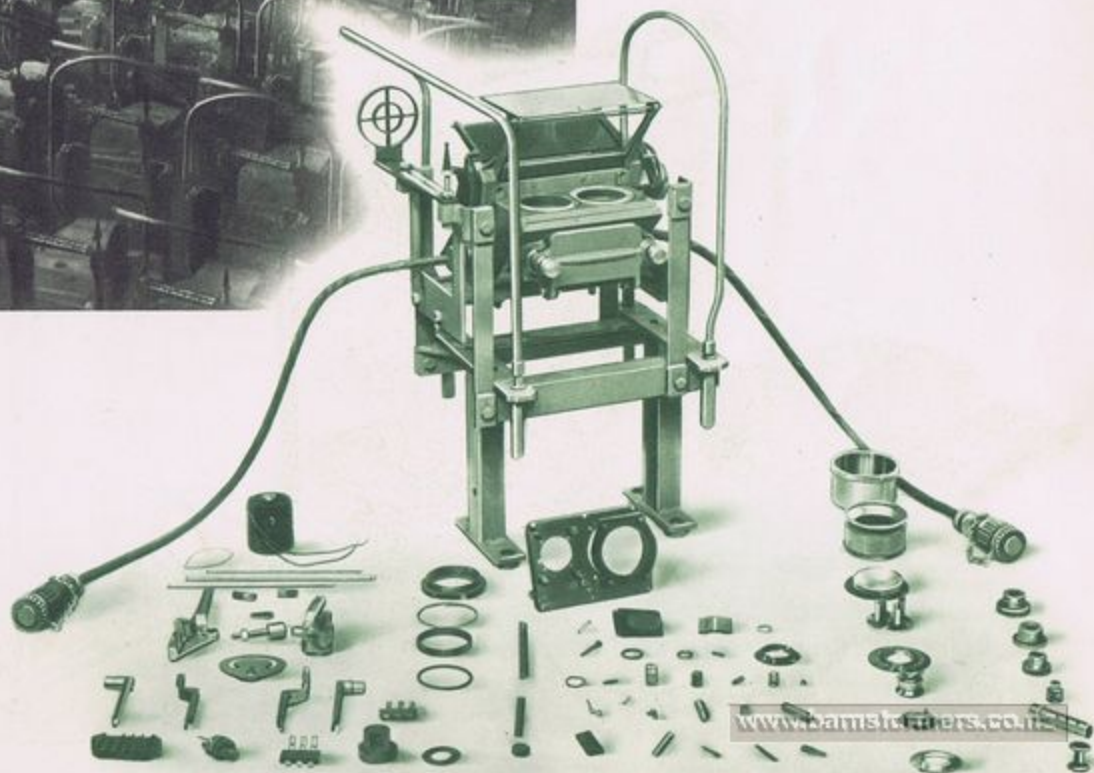
FITTED WITH 35 c.c. SIDE-VALVE ENGINE

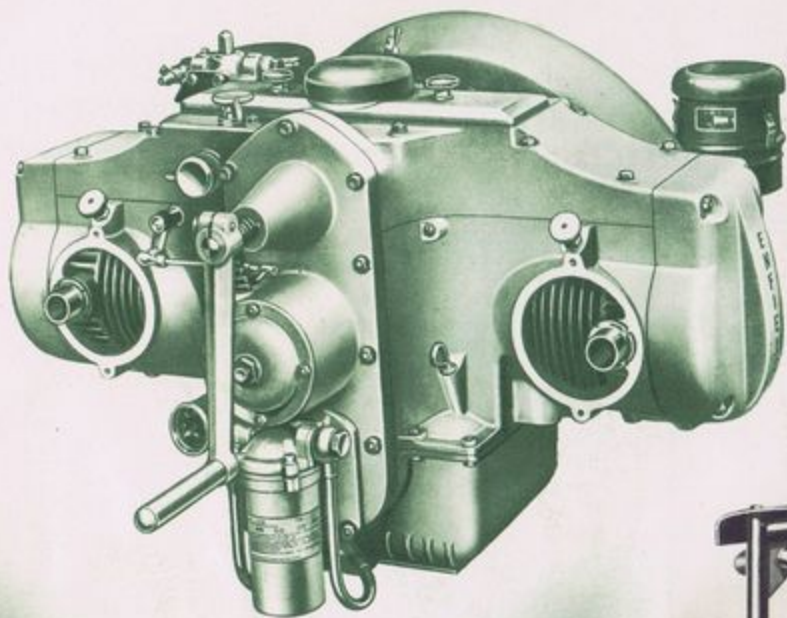
FOR DROPPING BY PARACHUTE TO
CHARGE BATTERIES IN THE FIELD.





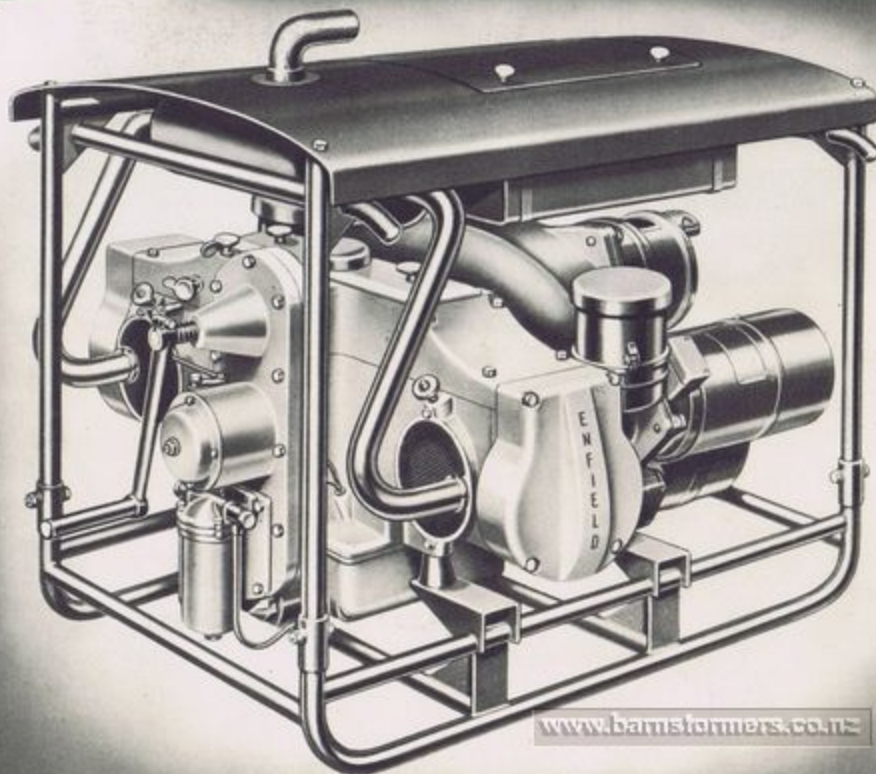
**GYROSCOPIC SIGHTS WITH
ANTI-VIBRATION MOUNTINGS**
FOR OERLIKON AND OTHER GUNS.

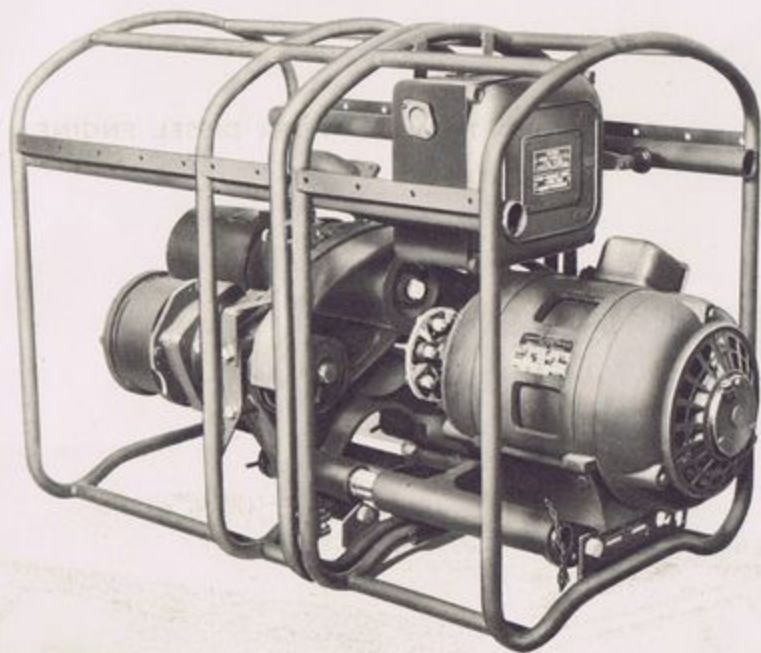




AIR-COOLED TWIN CYLINDER DIESEL ENGINE.

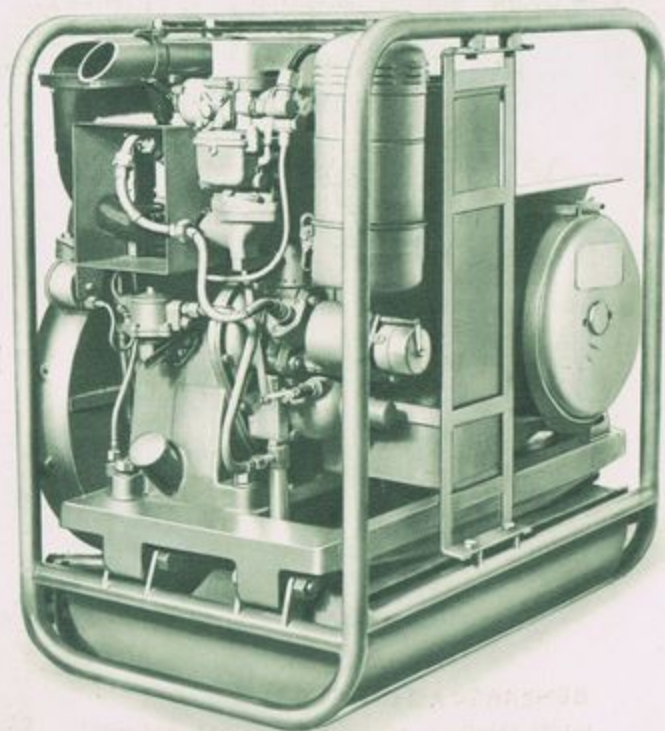
GENERATOR TEST SET
WITH ENFIELD AIR-COOLED DIESEL ENGINE.

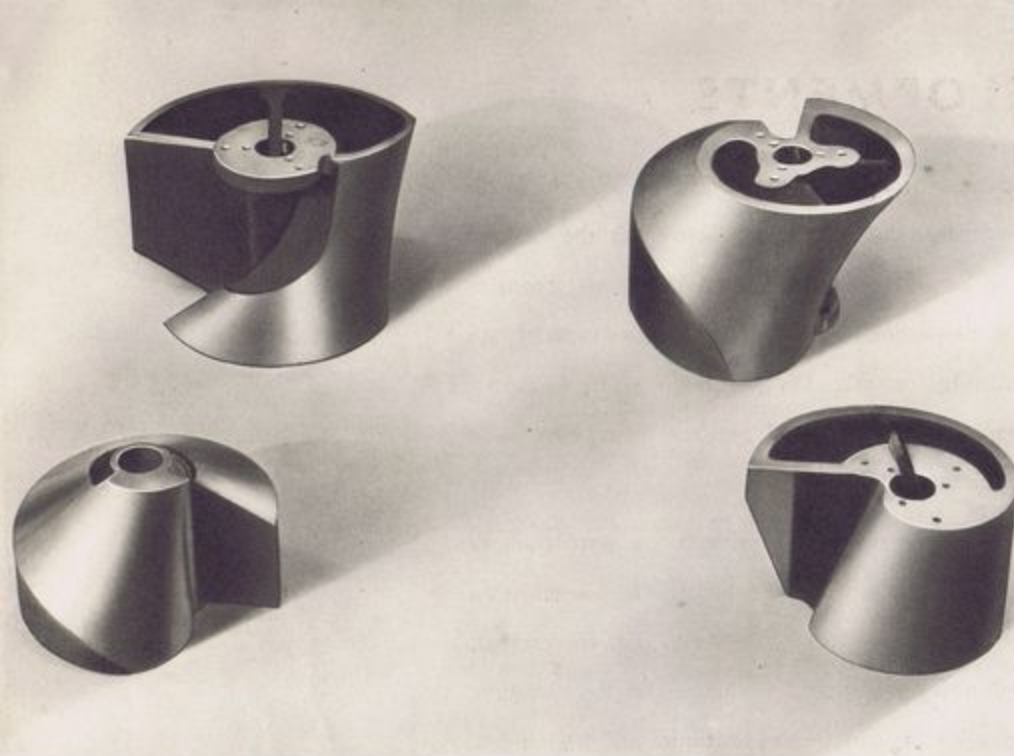




1,500-WATT GENERATOR SET.

ELECTRIC-ELECTRIC GENERATOR SET
WITH 7 H.P. MOTOR.





Examples of
PRECISION MACHINING
FOR
FIRE CONTROL
INSTRUMENTS

SPECIAL STRAIGHT-LINE CAMS.



VARIOUS TYPES OF SPECIALISED GEARS.

POST-WAR DEVELOPMENTS

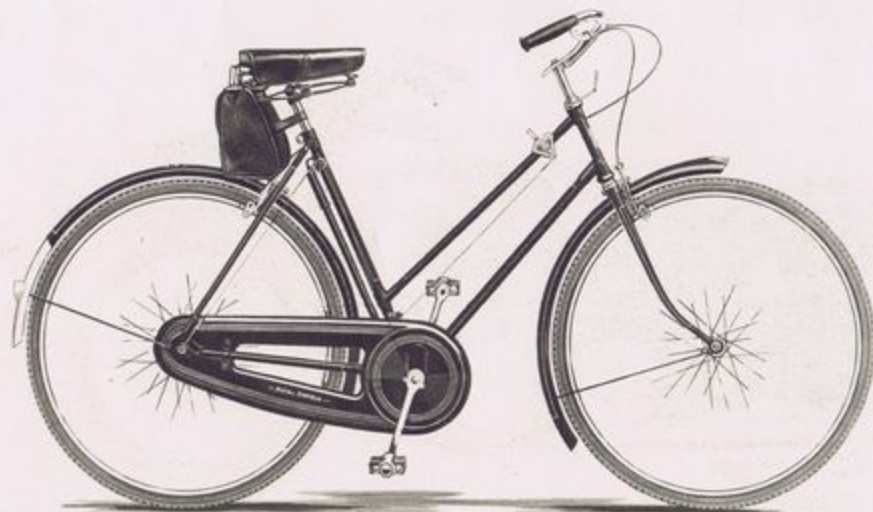
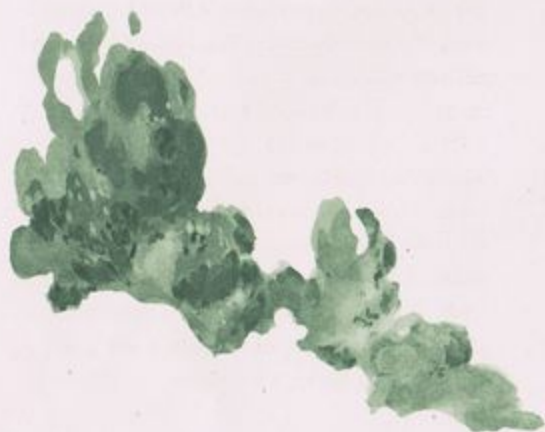


THE dramatic suddenness with which hostilities terminated left the Enfield Cycle Company, in common with most other manufacturers, faced with the difficult problem of how best to return to peacetime production. As has been shown in the foregoing pages, a considerable proportion of the firm's productive capacity was by 1945 devoted to the manufacture of Fire Control Instruments. On the other hand, the Company was fortunate in that its two principal pre-war lines—Bicycles and Motor Cycles—were made without a break throughout the entire period of the war.

The enormous increase in production during the war had necessitated the installation of additional plant and the experience gained in the manufacture of Predictors, Oil Motors, etc., had shown that extreme accuracy can be associated with quantity production. For the present, really large scale peacetime production is difficult owing to the need to change over from wartime products, the demand for which continued well after the cessation of hostilities and has not yet entirely ceased.

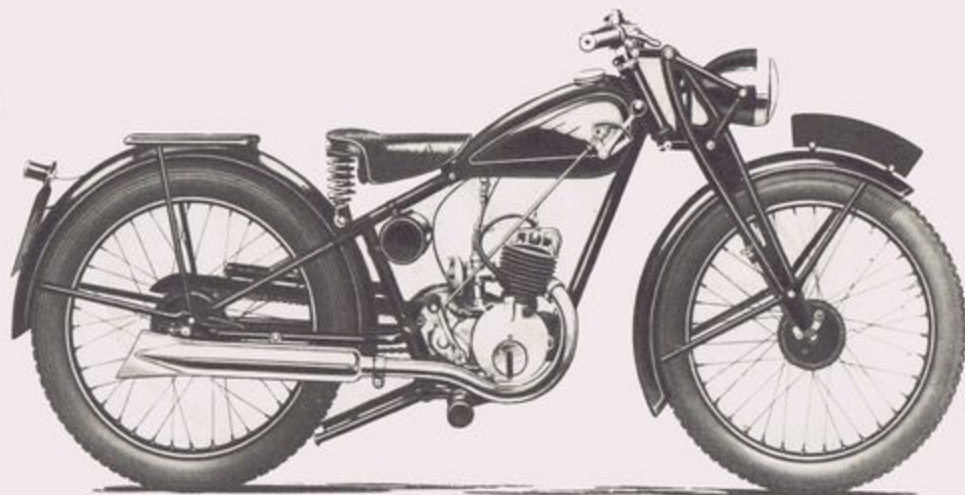
The Company emerges from the war with an increase in productive capacity which, coupled with six years' experience in the manufacture of Fire Control Instruments of the highest precision, will ensure that ROYAL ENFIELD Bicycles, Motor Cycles and Lawn Mowers will soon be available in large quantities and of the highest standard of excellence.

BICYCLES

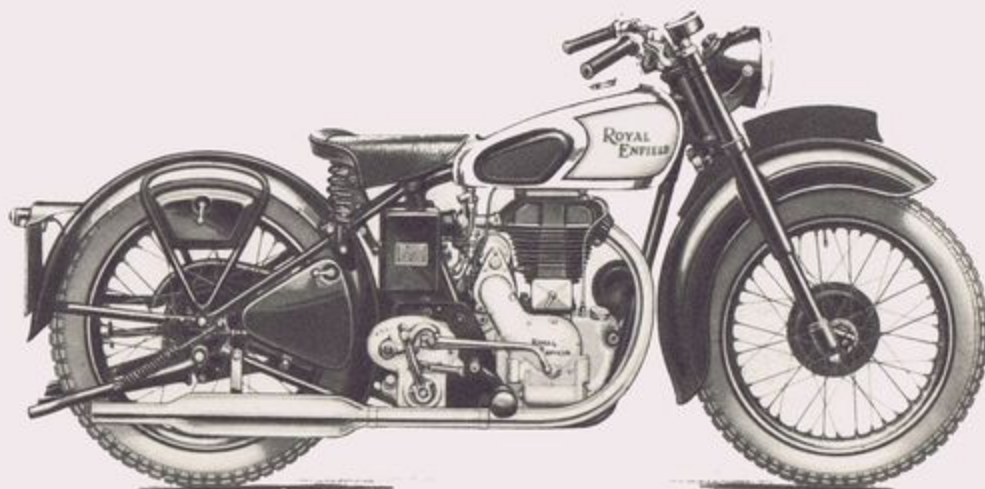


Throughout the war years the production of ROYAL ENFIELD Bicycles continued, though the supplies available to the general public were sadly curtailed. Wartime restrictions prevented them from being finished in the manner associated with the Enfield name but nevertheless the small number of civilian Bicycles which was made did much to enhance the Enfield reputation, since it was an inviolable rule that the quality of the essential parts of the machines must not suffer and the finish must be as good as regulations permitted. Post-war ROYAL ENFIELD Bicycles are of the finest possible quality and their finish has already returned to pre-war standards.

MOTOR CYCLES



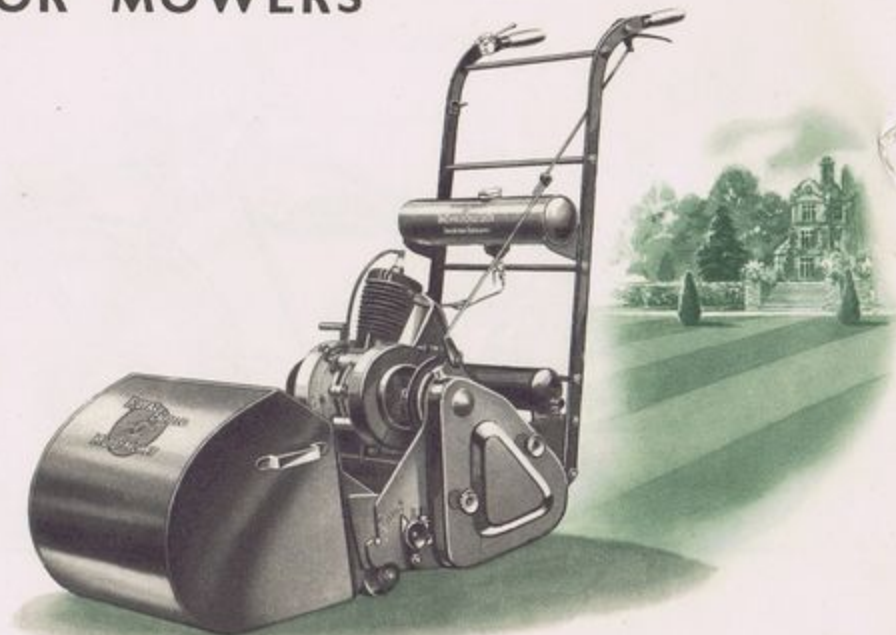
For the present, the production of ROYAL ENFIELD Motor Cycles is confined to improved editions of the machines which were so successful during the war in the hands of the Fighting Services. These consist of a 125 c.c. two-stroke and a 350 c.c. o.h.v. machine. The latter includes an entirely new hydraulically damped telescopic fork, which was developed during the war in the intervals of attending to more urgent matters, and the use of a light alloy connecting rod which has rendered the engine unit one of the smoothest ever offered by any manufacturer. There is also a similar machine with a 500 c.c. o.h.v. engine.



MOTOR MOWERS

At the time of the collapse of France and the evacuation from Dunkirk the whole of the plant required for the manufacture of ROYAL ENFIELD Motor Mowers was dismantled and stored outside the factory in order to provide space for manufacturing articles of National importance.

During the early months of 1946 the plant has been re-established at the Redditch Works and production of Motor Mowers will commence as soon as practicable. Future ROYAL ENFIELD Motor Mowers, while of the same basic design as their predecessors, will incorporate many improvements as a result of experience in the manufacture of two-stroke engines for the Airborne Forces and for Lightweight Generator Sets.



THE Enfield Cycle Company present with pride this Record of Achievement during the second World War. This firm is no mushroom growth developed by the forcing ground of National extremity. It served the public for nearly fifty years before the war and will continue to do so now that peace has been restored. During the years of need, the whole of the manufacturing and technical resources were placed, without reserve, at the disposal of the Government. Now these same resources, strengthened and enhanced by more than five years of war, are available to meet peacetime requirements. The name "ROYAL ENFIELD" before the war was synonymous with quality. Post-war ROYAL ENFIELD products will be even better than their predecessors.

Royal Enfield
PRODUCTIONS

THE ENFIELD CYCLE CO. LTD.
HEAD OFFICE & WORKS, REDDITCH

www.bamstottmowers.co.uk

Printed in England by Bamstott, Derby.