

*Brushware.*—Production has fallen to a slight extent, the absence of youthful labour being partly the cause. Millet has been in short supply, but locally-produced substitutes have been used to eke out the supply position.

*Engineering Industry.*—The calls on the engineering industry have been very heavy and the production has been limited to some extent by man-power available. The shortage of skilled tradesmen such as fitters, turners, moulders, &c., has been apparent for some considerable time, and many process workers have been trained and used to carry out operations where the type of work involved made the use of process workers practicable.

The farming-out of work by the larger firms to smaller engineering establishments has been encouraged and has been carried out where possible, having regard to the type of machines and personnel available at the smaller places.

Where the production of a large number of components is required, such as hand grenades, mortar-bomb bodies, &c., the system of grouping of machines and staff under one roof has been found to be the best method, both from the point of view of costs and volume of production.

The main items being dealt with by the engineering industry are as follows:—

*Munitions*, such as hand grenades, mortar-bomb bodies, 2 in. trench mortars, M.G. carriers and spares, clinometers, fuse components, tool and gauge making:

*Agriculture.*—The manufacture of farming-implements and maintenance of same as required to maintain primary production:

*Dairy.*—The manufacture of dairy-factory equipment, milking-machines, &c.:

*General equipment* as required overseas by United Nations, such as concrete-mixers, hydraulic jacks of various types, water-valves (large quantities), air-line lubricators, &c.:

*Maintenance* of other industries, such as woollen-mills, freezing-works, clothing and footwear factories, gold-dredges, &c.:

*Shipping.*—Refitting and overhaul of both naval and merchant vessels:

*Motor-vehicles.*—Maintenance of motor-vehicles, especially as regard those used in primary production and by the Armed Forces:

*General stores* for Armed Forces, such as buckets, cooking-utensils, &c.

It is interesting to note the general advance made in various branches of the industry which has been brought about largely by war conditions and the necessity to produce goods that are not now available from overseas.

Precision engineering, such as the manufacture of dies for plastic moulding, rubber moulding, &c., the making of production gauges, and small tools has been undertaken on a scale not hitherto attempted. This has been assisted to a large extent by the provision of up-to-date tool-room equipment by the Government and placed at the disposal of approved firms.

There is now considerable capacity for the die-casting of both brass- and zinc-base metals. This capacity has been used for the most part for the manufacture of munitions, but will no doubt gradually become available for other purposes.

*Tinsmiths.*—The position as regards supply of material in this industry is completely controlled. The trade continues to produce to the full extent allowable under the present conditions of supply of material (mainly tinplate) and labour.

*Rubber.*—The period under review has been a time of considerable extension in the rubber industry. The major innovation was the commencement of manufacture on a large scale of reclaim rubber. The Christchurch factory came into full production during the course of the year, and the Auckland factory also increased output. Total production from the two reclaiming factories was in the neighbourhood of 700 tons, which was used mostly in the manufacture of battery boxes, B grade retreads, soles and heels, and general mechanical lines. A second unit entered on the manufacture of cycle tires and tubes, which had the effect of easing the supply and distribution problem. A Christchurch factory has now attained a production level of some four hundred pairs of gum boots per day.

*Boxes, Wooden.*—This industry has experienced a fairly difficult year with staff, timber, and transport problems. While the demand for some lines has decreased, others have improved. One large firm contacted stated that their output of butter-boxes and vegetable-crates is up, while biscuit-crates and cheese-crates have fallen away.

*Bricks.*—Two companies, who also make pipes, report shortages of coal and labour. There are millions of bricks on order, and they cannot keep up with the demand.

*Cartons and Cardboard Boxes.*—All firms manufacturing these lines advise considerable expansion of business during the past year. One firm reports that carton-production has increased 200 per cent. since 1939.

*Covers and Tents.*—The firms engaged in this particular industry are still working on defence contracts. The only comment that several of the canvas-manufacturers have made is regarding the lack of skilled canvas machinists for this industry, and most firms have as much work as they can handle with their present staffs. A considerable amount of overtime has been worked during the past year.

*Furniture.*—The furniture trade, like so many others, has been acutely affected during the last year by the shortage of labour and materials. With a gradual slackening off of Defence furniture orders, the labour position may ease up as far as household furniture is concerned.

*Glassware.*—Production has shown a marked increase. Considerable difficulty is experienced in maintaining a supply of raw materials, and labour shortage has been continuous.