Bridgwater Town Council
Blake Museum

Bridgwater Industry Past and Present (1971)

by Edmund Porter

Originally published as a duplicated typescript

EDMUND PORTER – a brief biography

Edmund Porter was born in Bridgwater on 4th January 1900 and died on 3rd January 1977. His father was a foreman at a brickyard owned by the Somerset Trading Co, and his mother was born in St Helier, Jersey. [1]

His worked as a brick maker, but soon joined the Royal Navy Division, aged 15 on 20th July 1915, after falsifying his age – the Sea Service record states he was born in 1897. After his training as a signalman, he was sent to HMS *Vivid*, but was later invalided out of the service. [2]

He married Evelyn M. Pear in 1920, and they appear to have had no children.[3]

He continued working in the brick yards, and rose to management roles. In 1934 he designed and patented a new tile, and the machinery involved in its manufacture. There was Continental protection to avoid use of the apparatus abroad.[4]

By 1939 he was a Works Manager and Engineer employed by the Somerset Trading Co. at Chilton Trinity brickyard. In that year, with his wife, he was living at Rynde Bridge House in North Petherton. [5]

In 1968 he was awarded an MBE for his work on The Bridgwater & District Employment Committee. [6] At the time of his death in 1977 he was living at 35 Manor Road Pawlett. [7]. He was buried at Pawlett Parish Church on 8th January, 1977. [8]

He was the author of *The Brick & Tile Industry Past and Present and Events leading to its mechanisation*, published by John Browne & Co in 1959. He also wrote *Bridgwater Industry Past and Present (1971)* and published it in typewritten and duplicated format, in what must have been a limited edition.

1] Public Record Office. 1911 Census
2] Public Record Office. Royal Naval Division Service Records 1914-1920 ASDM 339
3] Public Record Office. England and Wales Marriages
4] Edmund Porter, *Bridgwater Industries:Past & Present,* p 18
5] Public Record Office, 1939 Register
6] Supplement to the *London Gazette* 8 June 1968
7] Probate Office Register of Wills
8] *Burnham on Sea Gazette & Highbridge Express*, 18 January 1977

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BRIDGWATER INDUSTRIES PAST AND PRESENT

FOREWORD

The following pages have been written in an endeavour to highlight some of the things that have contributed to the development of Bridgwater as an industrial Borough.

Having been born and bred in the town with practically my life in the Brick and Tile industry, I feel readers will bear with me if I have devoted many pages in dealing wit the industry, but history will record what an important contribution to the life of the Borough and the surrounding area the industry has made.

Every endeavour has been made to ensure accuracy and I should like to thank those who have given me so much assistance when dealing with their respective undertakings, to Mr P. J. Squibbs, for the confirmation of dates of certain happenings, and mentioned in his most excellent *Bridgwater Diary,* to *Kelly's Directory,* and to the Department of Employment and Productivity.

The more early history of Bridgwater has been adequately dealt with in the excellent books of the Reverend A. H. Powell and Mr S. G. Jarman, I have therefore refrained from dealing with events that are obviously known to many.

Edmund Porter

Historical Background

Bridgwater lies at the western end of the central lowlands of the County of Somerset, about midway between the Quantock Hills in the south west and the Polden Hills in the north east. It is located on the River Parrett, Somerset's largest river, and the A38 road; at a point six miles from the mouth of the river as the crow flies, but about double that distance following the route of the river itself.

The town is roughly bisected by the river which, within a considerable total range, is navigable up to the old town bridge. No part of the town lying to the east of the river rises more than 25 feet above ordnance datum and is practically level. To the west and north the level rises to between 25 and 50 feet above ordnance datum.

Further west, the surface becomes pleasantly undulating. Some of the low-lying land was at one time subject to seasonal flooding but in recent years a great area of potential flood-land has been protected by an elaborate system of land drainage, eliminating the danger, particularly in the Hamp Ward area where at one time cottages were flooded to a height of three to four feet.

The Cromwellian times left Bridgwater and, indeed, many west of England towns, almost derelict. The noble castle had been demolished, the Priory and Hospice, with the many buildings attached thereto, had already gone; it therefore depended on the people alone by their own industry, combined with the help of the Guilds, to re-establish some of the lost prosperity.

Up to the period of the demolition of the Castle, which was constructed of stone from the Puriton, Langport, Ham Hill, Bath and even Wiltshire quarries, with seashore pebbles of the largest size gathered from the Somerset seashores, brickmaking in Bridgwater was unknown, although in some of the adjacent villages there were individual brickmakers who, with their families help, performed the whole operation of making and burning in clamps such crude bricks as they were able to produce.

After the siege of Bridgwater the reconstruction of the town was begun with the old stone from the Castle and other buildings, and cob was largely made use of, roofing being principally of thatch.

Reconstruction must have been very slow, the times were hard, money very scarce, and the sufferings of the people continued even to the end of the 17th Century, and the town was primarily associated with the discredit etched on it by the despicable Monmouth Rebellion and the infamous Judge Jeffries, and the immortal glory left by Admiral Blake. Virtually unnoticed however, the town has been historically linked with the production of clay bricks and tiles since the Roman occupation.

The Wool Staplers and Merchant Venturers had, however, been gradually advancing in the line of progress, Bridgwater then, as now, being the centre of a fine agricultural district. Consequently, the 18th century ushered in a condition of growing prosperity, owing to the increasing trade in wool, silk, leather, cloth and the industries of bell-founding and workings in wood and iron. It naturally followed then, as now, better standards of living and housing were desired.

The sailors of the period were of the Merchant Venturers type and, amongst other articles from the Continent, doubtless brought samples of building bricks and roofing tiles, then being largely produced in the Dutch lands. The townsmen of Bridgwater remembered that bricks had been made in villages adjoining, and found that clays in the vicinity could produce bricks and tiles of better quality and at lower prices than those brought from abroad.

GEOLOGICAL SURVEY AND CHANGES

The geological formation is such that many thousand acres of land in the area have good and bountiful supplies of clay resulting in many brick and tile works being established in the 19th Century.

The general geological formation of the area consists of the following: -

	(Alluvium
	(Burtle Beds
Pleistocene and Recent Triassic	(Valley Gravels
	(Keuper Marl
	(Keuper Sandstone,

Bridgwater lies in an area of alluvial deposits which form the Somerset levels, between the Quantocks and the Mendips, the second largest fenland in England. It is an area of unconsolidated beds, which are formations of the Quartenary era.

In the town itself, it is confined largely to the area east of the river but north of the town it fans out on both sides of the river. The deposits vary in depth, in quantity and in considerable variety and include a blue, highly plastic clay at lower levels, brown clay towards the surface, the alluvium thickness varying considerably. Borings have shown it to be twenty to thirty feet deep but in places it is believed to reach a maximum depth of 85 feet.

Normal clay deposits of a non-ferrous nature used in the manufacture of clay goods, exist in four strata, apart from the soil surface. The strata varies in extent of contraction from ⅞ inch to 1¼ inch in one foot in depths of 12 to 14 feet. It is apparent that the lower deposits, having a very close-pore field, have sunk to the lowest levels. The earth's surface, attracting the water, had dried out in the past, thus forming a capillary field of water from the lower strata.

Among the other quaternary deposits are the Burtle Beds and valley gravels. The Burtle beds are believed to be the relics of sand dunes formed when the sea covered what are now alluvial flats. They are found to the north and east of Bridgwater on low ridges above the alluvium and as a result have provided villages now known as Chedzoy, Middlezoy and Westonzoyland and near these villages some gravel pits were opened up and worked for a number of years. The gravels and grits being angular and are the remains of former river deposits.

Keuper sandstones occur in a few isolated places immediately to the west of the town. Keuper marl, originally deposited over almost the whole area, is now partially covered with alluvium. Its outcrops to the west of the river where the ground rises to 100 ft. above ordnance datum, extends for one mile either side of the town in varying depths. The deposits are probably the result of decomposed sandstones being washed or eroded to lower levels over the years. Keuper marl deposits are most in evidence to the south west of the town and, having a high iron oxide content, particularly in the Rhode Lane area, this deposit being used in later years to give clay products added strength and colour.

The recession of water from the surrounding land and the radical changes in the course of the river throughout the ages have no doubt contributed to the large deposits of alluvial clay to be found in the area. In the search for suitable clay in the past it has been possible to determine some of the changes that have occurred, during the last 10,000 years. It is unlikely that there was any change in the course of the river for about one mile either side of the old town bridge, for the base of the river is obviously of a marl or red clay. It is evident that from the southern side of the Polden Hills to the eastern side of the Parrett and the northwestern side of the town to Combwich, good deposits of clay of more recent formation are plentiful but on the southeastern side of the Borough, changes occurred much earlier.

Fossilised animal remains found at depths varying from two to six feet, indicated that the changes were much earlier than those to the north of the Borough. On the north side, in the Chilton Trinity area, the more recent deposits proved to be more suitable for the manufacture of roofing tiles. The changing formation of the strata found on excavation of these more recent deposits indicate that the river, at one time, had a course approximately a mile and a half to the west of its present course, and in excavating for clay in this area in 1937 human remains were found, two skeletons of men of huge stature of approximately 7ft. 4in. high in a kneeling position apparently on the bank of the river. Estimated to be inhabitants of over 4,000 years before and, whilst bones were mostly darkened, the teeth were wonderfully preserved, large, in perfect shape and colour. A formal inquest followed with burial of remains. The remains of an elk were also well preserved at a depth of 12 to 13 feet.

In addition to playing an important part in the general economy and in the years that followed, the acceptance that the clays to be found in the area were most suitable for bricks and roofing tiles, the industry had a serious influence upon land surface utilisation in view of the large demand it inevitably made.

Excavation of the raw material rendered much land, more or less derelict in the form of waterlogged, worked-out clay pits. Such areas within the Borough boundary cover some 55 acres, with about 250 acres of workings in the rural district.

Further excavations within the town would not improve either its pattern or appearance. This was,

however, largely a question of speedy and satisfactory reinstatement. Measures to heal the scars have taken the form of indiscriminate tipping or more organised refuse dumps, supervised by the local Councils. A more comprehensive method of reclaiming the land has been suggested.

If Mother Nature provided the material which was to serve a useful service, she also provided the means of making good the scars created by extraction of the material, for by permitting an inflow of tidal water from the river, deposits would be left which, with the use of modern machinery for spreading, many acres of land could be reclaimed. After settlement as playing fields and other areas of recreation, an example of this means of recovery is the Eastover Park and other lands in the vicinity where building of houses and the Somerset County Fire Station has already taken place although with the building of the latter, certain extra preparations were necessary when load bearing had to be considered. Concrete rafts may also be necessary where loading is to be spread.

The problem of load bearing factors will therefore have to have every consideration and a careful analysis of subsoil is necessary. Other means of recovery have also been considered in conjunction with the slime deposits, fly ash residue from Portishead power station, 30 miles distant, but haulage costs were prohibitive.

As far as can be ascertained, the first brickyard in the Bridgwater area was established in Northgate on the site now occupied by the present Police Court and owned by the Duke of Chandos. The bricks were wrought by hand, and burnt in clamps, evidently by oak firing.

Some of the early examples can be seen in Friarn Street, Dampiet Street, Castle Street and St. Mary Street. The Lions in West Quay is another fine building where the bricks were used and bears testimony to the lasting qualities of the materials, although a considerable amount of slime was used with the alluvial clay as being more accessable at the time, the addition of slime would have been frowned upon by manufacturers in later years.

The early 18th Century saw the advance of brick making and demand increased and the construction of Castle Street followed. The street, delightfully Georgian and of some architectual merit although reputably a speculative venture, the unity of the buildings however, not being impaired by informal detailing.

Brickmaking became so successful that further yards were established in Crowpill, off Saltlands Avenue, behind the Mump, before the latter was deposited, other works were also opened up at various points along the river where in later years shipping of the goods was possible as were imports of coal so necessary in later years for burning and power.

The excellence of productions made them so well-known that at the end of the 18th Century, exports were being made to Bristol, Cardiff, Swansea, all growing cities, and to various ports around the Irish coast.

The making of plain tiles by hand, ridge tiles or crease tiles as they were then called, and pan tiles being added to that of brick making, many years later the popular Bridgwater Double Roman tile was added to the growing list of products.

By the end of the 18th Century, Bridgwater had grown to a place of much importance, not only as a shipping port, but as a manufacturing centre, and the departing and arrival station for stage coaches to all parts.

With the commencement of the 19th Century, the growing shipping and export trade demanded larger and better accommodation, quays and docks were required, the canal era had commenced. The canal from Taunton was cut and linked to the port of Bridgwater by way of the basin at Somerset Bridge through which barges were passed when tides permitted. The basin was abandoned when the canal was extended and through the town to serve the docks which were opened in 1841.

THE BATH BRICK

A branch of the clay industry not relevant to the main theme, but one really important to its economic framework, was the manufacture of the Bath Brick or scouring brick, its cleaning properties being very high.

The slime deposits to be found on the banks of the river provided the industry with a material for the manufacture of the bricks which became known throughout the world, most works having been established on the banks of the river were in easy reach of the raw material and for despatching the finished product by barge and wagon to the docks and quays where ships were moored.

Manufacture commenced in the 1820's a patent for the brick being granted in 1823, John Browne also discovered a further use for the slime deposits and, in 1827, was granted Letters Patent for "A Certain Composition or Substance of Different Forms and Shapes when perfected and burnt would nearly resemble in colour the Stone called or known by the name of Bath Stone". Bath brick making became a flourishing branch of the industry.

It was believed that the slime deposits originated

from the sea but it has been established that diatoms conveyed by the fresh water from land adjacent to the higher reaches of the river were carried down and deposited at the mouth of the river, later to be brought in suspension with the high tides and deposited on the banks, mostly within two miles of the old town bridge.

Each diatom has life giving properties, not of the ovaraceous type but expands and sheds particles which, in turn, give life. In places where slime batches have been worked for Bath brick manufacture to a depth of approx. 3 ft. recovery was at the rate of approximately one tenth of an inch per normal tide.

The slime drawn free from the banks during the winter months when little other work was available, was stockpiled for manufacture in summer months when the material was passed through a crude vertical mixer, in most cases powered by a horse moving around in a 15 ft. diameter circle with eyes covered by a waistcoat hung over its ears and eyes.

The material on being extruded on the floor was then gathered by women, rolled into balls (known as obstricking) and conveyed to the makers tables in a primitive shed to be thrown into a mould, then deposited on a board for placing in open racks for drying in the sun, the women were assisted by their children in these operations whenever possible, particularly when schools closed for the month of August each year for decorating and boots and shoes were stored away until re-opening, many children could be seen before the First World War in bare feet.

Bath bricks were sold to a firm in Le Havre in 1860 for 40/- per thousand and were also exported to other parts of France, Germany, Spain, Canada and America. The low prices obtained for this product were influenced by the fact that the raw material, not attracting a tax or levy, as it would no doubt have done in later years, was easily won from the banks with cheap labour which was always available for manufacture.

The decline in demand for the Bath Brick was accelerated by the introduction of substitute cleaning materials which were presented in a more attractive way to the public, but it was an industry which could have been nurtured and improved upon, the deposits on the banks of the river having qualities which could have been explored although patents applied for as alternative uses were acquired by those who feared severe competition from the products which slime or Bath Brick powder would be the main constituents.

Bath Brick production was maintained for many years with an average annual output of approximately 24 million, but this branch of manufacture formed just another line of production for those already established as brick and tile manufacturers.

It was at one time believed that the slime deposit was used in the making of soap, a factory for which was reputed to have been in the Westonzoyland Road area and owned by the Duke of Chandos, but no definite information is available on this.

Not only bricks and tiles were exported, but Somerset grown timber was in demand for flooring, roofing and pit purposes. The coal industry of South Wales was growing by leaps and bounds, and with it brickmaking at Bridgwater, as Welsh Coal was now available and cheap for burning purposes instead of wood. The gaining skill of the brickworker and tile maker was also adding further to the reputation of Bridgwater clay goods. The brick of the early 19th Century is still worth inspection, and there are many fine examples in Bridgwater and elsewhere.

The railways opened up further markets and the Bridgwater manufacturers gave their attention to improvements in machinery and technique, also to the manufacture of large single lap tiles and on which, as the years passed, Bridgwater manufacturers became specialists, the design of the Double Roman tile in particular originating from the early Roman days when crudely made by kneading the clay by treading and forming the rough shape of the tile over the knee.

The great Hyde Park Exhibition of 1851 saw the Bridgwater manufacturers pre-eminent in the making of roofing tiles, and year by year continued to improve and patent various designs, thus meeting with the requirements of architects of the various periods.

It may with confidence be stated that the several types of roofing tiles made in Bridgwater at one time had a more widespread demand then those of any other town in the United Kingdom. Not only had Bridgwater become famous for its brick and tile industry, for many years it maintained its leading position as a general building trades town, with its large English and foreign timber trade, its wood working, its century old Blue Lias lime and cement industries.

LIME, CEMENT AND POTTERY

LIME AND CEMENT

It is interesting to know that Blue Lias limes of the district were used by the great engineer Brunel in many of his most important engineering works, whilst the Cornish viaducts are standing memorials to the high-class quality of such lime.

The development of cement and manufacture of cement will no doubt at some future time be

embodied in the history of Bridgwater. 150 years ago cement was almost an unknown product, now it is an industry in itself.

The suitability of stone from the Mendips was in the early 18th Century recognised by the senior John Browne, already a large manufacturer of bricks and roofing tiles, and the establishment of cement works at Dunball was soon to be followed by others and John Board built or supplied concrete blocks for the erection of figured Castle House in Queen Street to prove the suitability of concrete products for house building.

POTTERY

No doubt, clay goods were produced in the area long before it was specifically mentioned in historical records but, apart from bricks and tiles, pottery became a most important line of manufacture in Bridgwater, particularly after the closing of the glass factory which was established in about 1704, although the exact date is not known.

For this venture, another of the Duke of Chandos's enterprises, the huge conical stack was built in North Gate, measuring at the base 75 feet and rising in a taper to a height of 120 feet with a top diameter of approximately six feet. Within the cone three small kilns were constructed, which in later years were easily adapted for pottery manufacture.

Household glazed utensils were produced for which a great demand was created, particularly washing pans, pitchers, bacon salters, bed pans and other miscellaneous articles.

Glazed sanitary pipes also became an important item of manufacture until 1900 when the use of the type of ware was banned as clay used was of too high porosity and permeability, to reduce this to the required standard was not possible for to burn at temperatures to reduce porosity would mean burning to near vitrification when goods would not remain stable. This meant the end of sanitary goods made from plastic Bridgwater clay.

Flower pots were made in sizes from two inches to 10 inches and for which there was a great demand for many years, the making of garden vases in many artistic shapes became well known but became vulnerable to severe frosts as vitrification to reduce porosity was also not possible, lamination of the body following when frosts followed heavy rainfall and complete saturation.

There was ample evidence of the skill of the potter of the 19th Century, one example being worthy of mention was a clay model of Queen Victoria, mounted on horseback, the model being two feet high but, when exhibited, the attention of the potter/modeller was drawn to the fact that the Queen, depicted riding side-saddle, was on the wrong side of the horse, whereupon he replied that as the model was one of the Queen when she was young and unmarried, it was customary in those days for single ladies to ride on the opposite side to those married. Peculiarly enough, this was not disputed, whether right or wrong.

The demand for pottery and the like practically ceased in the 1930's with the growing use of enamel utensils and plastic flower pots and, in April 1942, the huge cone at the Pottery, a Bridgwater landmark for many years, was demolished, providing 1,500 tons of hardcore for the runways of airfields at Ilton and Westonzoyland, only the boundary wall of the base of the cone remains.

Below the cone was a circular tunnel in which it is believed prisoners were held from the Napoleonic war in the early 19th Century but no evidence could be found of this although a sealed chamber at the centre of the tunnel was expected to reveal when opened some evidence of this, but only pieces of dark green and black bottles produced many years before were found.

A smaller pottery was established in the 18th Century off Saltlands by J. B. Hammill.

FLUCTUATING EMPLOYMENT AND POVERTY

In 1840 the commercial manufacture of bricks and tiles had become a viable force in the town's economy and became the chief basic industry, practically all goods being hand made. Of a population of 10,500, at least 1,300 were employed in the industry being approximately 50% of the employable male population but employment in the winter months was uncertain because of the seasonal character of manufacture and the entire absence of artificial drying methods.

The number to be retained after the end of September of each year fell to about 50%, those not retained had to seek an existence for six months when the manufacture of goods could be opened up in the absence of frosts, and those retained were engaged in clay winning and storage, having to win a given number of "brickyard yards" (1 yard = 4 ft. x 3 ft. x 1 ft.) for a day's pay of 2/3d. but inclement weather often denied the workers a full week's work with the result that poverty in Bridgwater in the winter months was in abundance, many having an income for the week of 3/6d. by Parish Relief, others found casual employment and profitably resorted to "poaching" in rural areas.

If there was poverty among the working classes, there

was ample evidence of poverty of mind among the employers and this prevailed for well in to the 20th Century.

The poverty in Bridgwater in the l870's was such that child labour and its earnings were considered necessary to augment the family income and the Bye-Law on school leaving age, according to the election address 1879, had some objectors. The Bye-Law remained and in the leaving age was raised to 15.

> "Ladies and Gentlemen,
> Having been solicited by many ratepayers in the Borough, we have consented to allow ourselves to be nominated as Candidates in the forthcoming election and we beg to inform you that we have complied with the Statutory requirements and are therefore desirous of securing your support upon the principle involved and contained in the following statements, viz: -
>
> We are of opinion that all expenditure, in connection with the affairs of the School Board, should be conducted with the greatest amount of Economy, permitted by the Elementary Education Acts, both as regards Buildings and Working Expenses.
>
> We are also of opinion that a more charitable administration of the compulsory powers vested in the School Board might be exercised judiciously, and that the Board Schools should be conducted harmoniously with the Existing Voluntary Schools, believing as we do that these latter Schools provide an education equally sound, and afford material relief to the Ratepayers.
>
> The alteration of the Bye-Laws made by the present Board, compelling children to attend School until they are thirteen years of age, we consider unnecessary, and oppressive to the Working Classes, whose children at an earlier age might, by their earnings assist their parents, and if we are elected we shall feel it our duty to alter the Bye-Laws accordingly.
>
> We therefore ask for your support upon principles of economy, combined with efficiency and without reference to Politics.
>
> We are, Ladies and Gentlemen, Your obedient Servants,
> E. Downs, E. Harden,
> R. C. Else, H. J. Major
> Bridgwater, November 15th, 1879.
> A Bigwood, Printer, Bridgwater."

By the middle of the 19th Century, 16 brick and tile works had been established within two miles of the old town bridge and located on the river bank and a further seven were opened in the rural area, thus it can be seen how important the brick and tile industry was to the life of the Borough. There was, however, a state of unbalance and insecurity in the employment which was associated with the industry for many years.

Before the middle of the 19th Century, vagrancy and poverty resulted in the Workhouse being built in Northgate in 1838 to accommodate 388 persons, some of the temporary residents having to do their stint of road stone cracking before leaving.

The recorded history of Bridgwater in the years beyond 1840 is a little confusing for it has been stated that those years "were a period of peace and prosperity", but the recorded events of the second half of the century cannot substantiate this.

Trades other than the brick and tile industry provided employment for many but also with unattractive conditions and meagre wages, industries depended chiefly on the raw materials to be found in the area, these included wicker basket and furniture, English saw-milling, boat building, rope making, lime and cement manufacture.

BRIBERY AND CORRUPTION

The Borough of Bridgwater was associated with a period of political intrigue with considerable bribery and corruption, not to be wondered at if low wages with poor conditions attracted so many to accept the indiscreetly proffered bribes. These irregularities were brought to light in 1865, 1868 and 1869 and of an electorate of 600, approximately 200 had been bribed. M.P.'s were unseated and following the enquiry, the Borough was disfranchised.

TIMBER AND WICKER WORKING

Saw-milling of English timber, the demand for which gradually increased in the second half of the 19th Century, became a useful contribution to the town's economy although not employing a large number of men, including some who made long and irksome journeys to fell and transport timber to the mills, the work entailed starting at 5 to 6 a.m. and returning home at 9 to 10 p.m. for a weekly wage averaging 13/-

Saw mills were established in Colley Lane, St. John Street (entrance to Cranleigh Gardens), Church Street, New Road, East Quay, Kidsbury Road, the Docks and West Quay, the Tin Plate industry and coal mines being the main customers.

Timber imports increased as the demand for housing and commercial premises expanded and timber mills for the processing were established in East Quay (later transferred to West Quay) and Church Street, these mills being of course linked with the processing

of English timber.

Basket and wicker furniture making was dependent on the withy growing of Athelney and the surrounding area, skinned, bleached and dried to be supplied to at least eight establishments within the Borough and a few in the rural area. The largest works being in Mount Street, Friarn Street and smaller works in St. John Street, Devonshire Street and West Street. Many of the operatives attained a high standard of skill and the quality of their work became widely known throughout the country. This industry also declined as the result of cane and other substitute materials being introduced in varying designs and colours.

Shipping using the port meant that ropes were very much in demand, rope "walks" were built at the rear of Church Street (now part of the car park) and owned by Messrs. J. Waddon & Sons, and another in Chilton Street, owned by Messrs. Parsons & Sons, both having shops in Eastover to display their ropes and other shipping requirements.

Boat building was also much in evidence, two yards for the small craft in West Quay (behind the Lions) and in Chilton Street.

Ship building and repair work being extensively carried on at the yard and dry dock of Messrs. Carver & Son in East Quay. The number of barges owned by the various brick and tile manufacturers bringing a good deal of work in maintenance and repair. The decline in shipping to and from the port meant that barges were no longer required for bringing goods to the quays and docks from works along the river and road transport by horse and wagon was resorted to and in later years, road transport by steam and motor vehicles.

The work of loading and discharging of ships carried out by "hoblers" was obviously very intermittent with the regular neap tides and no unemployment benefit to fall back on, although the work was jealously guarded by the established gangs against encroachment by the temporary casual worker, particularly the seasonably employed brickyard worker.

It was in the later years of the 19th Century that Trade Unionism raised its head and was obviously the "illegitimate child" of the employers for the Dockers Union (now the T. & G.W.U.) began its recruitment and it moved to other industries, the brick and tile works became happy hunting grounds although progress was slow as there was fear of membership incurring the wrath of the employer and those who could read had knowledge of the fate of the Tolpuddle Martyrs in the years before, but many fell to consistent oration by a very active organiser, Harry Orbell, who became prominent in the strikes that followed in later years.

Trade unionism in the Borough grew in strength, particularly in the brick and tile industry in the last quarter of the 19th Century when the workers realised that by organising they would have the power to negotiate if not to strike and that the time had arrived when some endeavour should be made to secure better wages and conditions, to promote a higher standard of living.

The disinclination of employers to negotiate in 1886 resulted in a strike in which about 100 workers became involved and who declined to return to work for about eight weeks, having achieved little and brought only distress and suffering to their families.

Another strike occurred in 1890 resulting in over 600 men being out of work for several weeks, receiving little benefit from trade union funds and the return to work was obviously influenced by the distress that had become most apparent. It did, however, bring the workers to realise more than ever that strength in numbers could result in acquiring the power to negotiate and trade onion membership was greatly increased and the present day motto of "All for Each, and Each for All" became the symbol.

Discontent in the industry continued and encouraged by the increase in membership, demands were submitted to the employers in 1896, who declined to negotiate and a strike followed which involved, all workers in the industry.

The position became one of desperation after some weeks and disorder broke out in the town with rioting and overturning of wagons of tiles in Penel Orlieu and on the town bridge, those in charge of the wagons being drawn from the staffs and foremen from the various works, not regarded as strike breakers in the true sense of the word but who had been given to understand that the tiles were required for a hospital, the completion of which depended on the delivery of the tiles.

An Arbitrator was nominated in an endeavour to end the dispute, he was Mr. Richard Else, a one-time partner of the engineering firm of Messrs. Hennett, Spink & Else, whose works at one time stood on the site now occupied by Messrs. Wellworthy Ltd. Rioting continued and the Devonshire Regiment had to be called in to restore order but there was a hostile reception for the troops, public houses shut their doors against billeting as did many others and accommodation had to be found in the Town Hall.

Ben Tillett, one of the earliest Labour Leaders, was called from London to negotiate, together with Harry Orbell, the local organiser, but before negotiations

could commence, Ben Tillett insisted on the immediate withdrawal of the troops and after the Riot Act was read by the Mayor, Mr. H. W. Pollard, order was then restored and efforts then made to bring a settlement to the dispute.

The settlement brought an increase in the "day work" rates to 15/- per week for men and 3/- for boys under 16 years of age, concession in the reduction of number of working hours was also granted, Monday to Friday 6 a.m. to 6 p.m., Saturdays 6 a.m. to 2p.m. (no mid-day break). There were also prolonged discussions on piecework rates and minor concessions were obtained.

A luncheon was provided on peace being restored, to which all those who took part in the negotiations and other prominent people were invited, the Chairman of the Employers' Committee in his speech to the gathering stated that "The Prosperity of Bridgwater depended on the Brick and Tile Industry and the Prosperity of the Industry depended on Low Wages". Ben Tillett in his reply said that it had been obvious and because of that, Bridgwater must be a prosperous Borough.

Some workers in the 1890's sailed to Australia to work in brickyards, one making good and returning after a few years to gather more workers for his works. The works, which expanded as the years passed, became the main industry in Adelaide and now known as Hallett Industries Ltd.

Many of the founder's family were beneficiaries, the terraced houses being built for a member of the local Hallett family in Colley Lane and called Pathfinder Terrace, being the name of the ship which took one of an earlier generation to America and a fortune.

Towards the end of the 19th Century, mechanisation was considered and embarked upon on a moderate scale. The first extruding machine, whereby clay was forced through in a continuous ribbon, was reputed to have been made in Bridgwater in l875 by Messrs. Murch & Culverwell at their works which at that time stood on the site now occupied by the Bridgwater Motor Company in Eastover. It is evident that from trade records, however, the design of this machine was stimulated, by an early and primitive device for the extrusion of clay in South Wales in i860.

He considered that it was impossible to make satisfactory bricks with such a machine, but it appears to be the pioneer of later ones. An early extrusion machine was installed in a local works and continued in use until 1919. Extrusion was effected merely by a crude shaft and knives, propelling the clay forward and through an orifice of the desired tile design or in brick form.

The Germans, having acquired some knowledge of this machine, greatly improved upon the design and gave careful study to the technique, eventually becoming experts in this particular field, machines now having reached a very high standard, many of the improvements being incorporated in machines produced by British makers of clay working plant.

The degree of perfection that had been reached in extrusion machines by 1898 made roofing tiles by this process a reality and special plant was installed for this purpose at the Old Chilton Works primarily for interlocking tiles for which a great demand was created, calling for more plant to meet, in particular, the demands from the Colonies.

This interlocking tile, first to be produced in Bridgwater in 1898, had its origin in Switzerland, the home of many such products and where much progress had already been made.

Hand made tiles were the main products of most manufacturers in the area and continued to be until well into the 20th Century before the close of the industry in 1970, and even at the time of closing some of the conditions were as they were in 18?0, degrading, which created a drift from the industry of labour who, with the coming of new industries with great opportunities, had no difficulty in finding alternative work and a better standard of living, but many remained loyal to their employers having been in the industry practically all their lives and did not wish to change, particularly those in the higher age groups.

Employment, other than the brick and tile industry, was mainly centred in the 1850's to 1890's on the railway for the carriage and wagon shops of the Bristol and Exeter Railway employed over 300 with a further 100 in the wagon sheet department, the railway in due course becoming part of the Great Western Railway with Brunel as the Chief Engineer who called upon the works adjoining of Messrs. Hennett, Else and Spinks, Engineers, who supplied many requirements for railway extensions including parts for the Saltash Bridge near Devonport.

This firm engaged over 300 men on foundry work and general engineering but closed in the 1870's, many of the workers finding employment in the carriage works, for apart from the firm of Murch and Culverwell, there was little opportunity in engineering although the Bath Road works of Henry Millard & Sons, Founders and Engineers, opened up some years later as did Messrs. W. & F. Wills, also General Engineers and Founders, the latter at first being established in Polden Street and moving in 1896 to Salmon Parade, and then became known as Perseverance Works, a name justifiably applied for one of the founders, Mr. Frank Wills, became well

known as an Engineer of marked ability and his contribution to the work of the Borough as Alderman, being elected Mayor in 1907-8.

The reputation of the firm was world known in the field of brick and tile manufacture, becoming specialists in clay preparing plant, extrusion machines and equipment, with many customers in the Colonies, South Africa and Australia. At one time it could be said that 100 per cent of plant in the brick and tile works in the Bridgwater area had been made and installed by the firm of W. & F. Wills, the making of the prime movers, the steam engine, also being a product of high quality and with a remarkable record of reliability, precision being a feature in all work on which the firm had been engaged.

Two of the firm's products were the *Eroder* and *Pioneer*, boats used on slime clearance from the banks of the river, the former mostly engaged near the old town bridge to keep clear the standings for ships moored on the quay sides and the latter in the higher reaches of the river, both boats were equipped with high pressure water guns.

Another product worthy of mention was the 8 h.p. car produced prior to the First World War, the latter intervening to halt further development. A rat-trap cycle pedal was also designed by Frank Wills.

Extension of the works became necessary at the turn of the century when the machine shop capacity was doubled, this served a most useful and essential purpose when war came in 1914.

In 1915, the works began to make a useful contribution to the war effort mostly as sub-contractors to Messrs. Thorneycrofts in machining component parts of vehicle and marine engines, this work calling for abandonment of the general engineering work on which the firm had been engaged, the foundry, having been an important branch of the work also had to be disposed of to enable further extensions to be made to the machine shop.

There was a gradual build-up of the labour force and in 1916 extended working hours became necessary, 6 a.m. to 7.30 p.m., and a wonderful example shown by the founder who was at his machine from 7 a.m. to 7.30 p.m., and all employees regarded him in high esteem for his engineering ability and accepted the strong discipline imposed on all. It has been generally accepted that the latter, together with the sound knowledge he imparted, proved to be in later years of immense value to many who served under him.

The need for greater output from the works brought two shifts of 12 hours each in late 1916 and the labour force being increased to a little over 200 with approximately 60 per cent women, many proving quite proficient, good labour relations were a feature of the works.

Bridgwater was of great importance as a port in the second half of the 19th Century and ships entering the port for many years averaged 3,000 and ships leaving in cargo averaged 1,200. The Merchant Shipping Act of 1892 brought a drastic drop of vessels registered on the Port from 194 to only 64 and the Severn Tunnel opened in 1886 brought a further decline in shipping, for rail rates were such that freightage by sea to South Wales ports proved uneconomical.

Tides and the winding course of the river proved to be factors detrimental to the trade of the Port and in 1894 consideration was given to the cutting of a ship canal from a little north of the Docks to Combwich to enable larger ships to enter the Port but the costs of such a project were prohibitive and the proposal abandoned.

At that time another proposal to be put to Parliament was the cutting of a canal from Seaton in Devon to a point near Stolford, but this suggestion did not go beyond the discussion stage.

The Docks and other shipping facilities were acquired by the Great Western Railway Company and certain restrictions were imposed on ships entering the docks in an endeavour to channel more traffic through the Severn Tunnel, the traffic through the Bridgwater and Taunton canal practically ceased by the end of the 19th Century, two barges only being used to convey clay for approximately half-a-mile to a brick and tile works in Old Taunton Road, this ceasing in 1930.

Although traffic through the canal ceased, it was necessary to retain the canal as a feeder to the Docks of fresh water for periodical scouring and, in 1910, dredging on a big scale was undertaken when material was stacked on the tow paths at a height of three feet, allowed to dry and distributed later along the banks and free of the tow path.

For many years an ice-breaking boat was used in severe winter months to create a free passage for the canal traffic to and from Taunton, the boat having a semi-circular hull and fitted on the deck with a bar about three feet high, running full length of the boat by which, eight men standing on each side were able to rock the boat as it was drawn by two horses along the tow path.

On occasions when the railway company could not provide staff for rocking the boat, men from the brick and tile works volunteered to do so when their day's work depended on the barge transport and with loss

of many days there was a desperate need for work to enable some small income to be obtained but on many occasions, having rocked the boat to its destination, the frost had penetrated to such a depth that clay working, normally done by spade, demanded the use of pickaxes, even that became difficult and if the workers could not earn their 2/10 per day, and this was quite frequent, the employers were called upon to grant a few days in advance, the alternative being Parish Relief of 3/6 per week.

PROPOSED RIVER DAM

With so many ships entering the port in the second naif of the 19th Century, the need for relaxation and enjoyment was satisfied obviously in the public houses for there were 94 of these with a population in the Borough of approximately 10,000. There did not appear to be any restriction on hours of opening, beer being at one time 2d. per pint and cider 1d. per pint.

Many of the public houses indicated some link with the port and were obviously well patronised by crews of ships and the "hoblers" or dock and quayside workers, the latter being known as "The Bridge Committee" who gathered near the old town bridge, occupying the wood seats on both sides, some of these seats are still in existence and early photographs of the early years of the 20th Century show a number of men in session and discussing matters in the language generally associated with sailors and the like.

Some concern was expressed in the 1890's in the proposals to dam the river at a point from what is now known as Blake Gardens, then the property of Richard Else whose house stood within the gardens, both gardens and house being purchased by the Borough Council in 1898 for £2,000, the house demolished later, the Carnegie Library erected on the site and opened in 1906.

The proposal for the dam may have been influenced by the fact that pollution by sewage disposal was increasing, this was appreciated in later years with the increase of population and the river became an integral part of the Borough's sewage disposal system, but other arrangements will undoubtedly be made for more hygienic methods.

The proposal for the dam met with strong opposition for brick and tile works upstream were served by barges and relied on this form of transport to and from the docks and quays, the S.V. *Edith* having to lower its mast to pass under the bridge, also carried coal to the gas works in Old Taunton Road.

With the passing of the Brick and Tile industry, barge transport has also ceased and slime is no longer required for the manufacture of Bath brick, also with the closing of the Gas Works, shipped coal is no longer necessary so there would be no objections on these grounds now as at the time of the proposal.

Although included in the proposed scheme mention was made that the harnessing of the river would provide a source of power for electricity generation, this would no doubt be considered today as a little primitive and in the light of recent development of Nuclear Energy but there may now be other advantages to be obtained from the harnessing of the river at a point north of the point suggested years ago for as traffic on the river beyond the telescopic bridge has ceased, a barrier at this point may be more advantageous as this would provide fresh water at a high level and apart from bringing joy to the many boating enthusiasts, the general amenities of the town would be greatly enhanced and eliminating the present danger of flooding of the quays.

The barrier would incorporate a weir at a predetermined height with sluices to release water at intervals or as necessary to clear sewage and the lower reaches of the river of loose deposits of slime which collect in the absence of heavy rainfall when fresh water flows in quantity from the lands near the upper reaches of the river, whether such a scheme will ever be considered by the local authority remains to be seen but the many advantages may outweigh the disadvantages, the bridge for the proposed west bound road may be the point at which the barrier can form the main structure.

The scheme as outlined is put forward in the light of the fact that the industrial life of the Borough has radically changed and can no longer be regarded as a port of any significance with the loss of Highbridge (a part of the port) the closing of the docks and no quayside shipping, leaving Dunball Wharf as the only landing place, also brick and tile manufacture having ceased, an industry which depended so much on the port, there must be a reappraisal of the position for the untidy quays are no longer required and with a fresh water river these would become the healthy promenades of the future together with the extension of Binford Place through Blake Gardens and the general tidying up of Salmon Parade.

The early years of the 20th Century brought further decline in the trade of the port and the Chamber of Commerce at the first meeting in 1911, and continually after, drew the attention of the Borough Council to the need of improving conditions and facilities at the Docks although the policy of the Great Western Railway was not to increase seaborne trade but to divert as much as possible through the Severn Tunnel, the powers of the Local Council were therefore rather restricted and much of the dock equipment installed in the early 1900's was still

operating in a dilapidated condition until the closing of the docks.

Lack of dock facilities influenced some brick and tile manufacturers to provide their own wharves, particularly below the docks and it was from one of these that some millions of interlocking tiles were despatched to Australia and New Zealand, the demand increasing in 1903-4, making it necessary to increase plant capacity by 100% the work of making and installing being carried out by local engineers, W. & F. Wills.

This expansion in the manufacture of machine made tiles resulted in the growth of trade from the port of Bridgwater not only to Australia and New Zealand, but also to Ireland, France, South Wales and the Channel Islands, at the works every avenue was explored in an endeavour to improve upon technique and mechanisation with the result that when war came in 1914, the works were regarded as the most efficient in local clay working and tile manufacture, being well set for prompt opening at the close of hostilities.

The war brought closure of some works in the industry, others were greatly reduced in numbers employed by call to the forces, horses used for transport were also taken.

One works at Dunball served as a shell depot and employed about 500 in the handling and storing of the various types of shells, other factories also made some contribution to the war effort, collar factories on bandoliers, the roller-skating rink (now the Blake Hall) was equipped for flax working, another roller-skating rink beyond the Gas Works in Old Taunton Road was converted to light engineering, the Blake Hall rink was opened by Messrs. Bouchier Bros. Furnishers, in 1911 and followed the erection of the rink built by Messrs. Courtney's in 1910) a rink was also built in the Arcade in Eastover by Bouchier Bros., in 1911.

The mule camp at North Petherton provided war time employment for a large number of men, many being required to shepherd the weekly arrivals and despatches of mules to and from the station.

Great things were expected prior to the 1914 war from the finding of coal near the old Race Course in Bath Road, beyond the S. & D. railway (now removed) but the working of the small seam would not have been an economical proposition and the project was abandoned.

UNEMPLOYMENT AFTER THE 1914-18 WAR

The Salt Works beyond and near Puriton Hill worked for many years and bars could be purchased measuring 14" x 9" x 4" for about 4d, each the main purchasers being those engaged in agriculture, the purchase of the undertaking in later years by The Salt Union brought closure of the works, the drying chambers remaining for many years.

Changes and fluctuations plagued most industries in the years following the 1914-18 war, due to the precarious state of the country's economy. This had, in particular, some influence on the brick and tile industry for a few years building was practically at a standstill, other industries also were suffering with the result that unemployment rapidly built up with many returning from the forces to the promised "Utopia" and the promised "land fit for heroes" only to find disillusionment with a soul-destroying wait on the "dole".

Prior to the war, registered unemployment was an unknown factor although there were many suffering the hardships and deprivations associated with unemployment, the work of administering or dealing with those who had contributed to the insurance scheme was carried on as a part-time business by E. P. Ennis, a Billposter in North Street, the exchange being transferred to the office of W. H. Boys, Auctioneer and Estate Agent at the Old Police Station at the top of High Street in 1917, and then to Cornhill, the premises now a Turf Accountant's office, in 1918.
It was assumed that Admiral Blake was indicating the way to the Employment Exchange with his outstretched arm.

The Cornhill became a little overcrowded with unemployed and a girl's school was acquired in King Square in 1920 by the Ministry of Labour to accommodate the increasing staff that became necessary to deal with the growing number of unemployed, few would have been entitled to benefit before the introduction of the Compulsory Unemployment Scheme of 1918.

In 1923 there were approximately 600 unemployed increasing to 2,100 by 1933, but there were signs of better times to come for the building of the works of British Cellophane called for much labour with the result that unemployment dropped to 981 in 1937, and with the opening of 1938 the future for many was assured.

The building of Quantock road in the early 1920's brought some relief to many for a few years and the Borough Council Housing programme gave a fillip to the brick and tile industry, but before the coming of British Cellophane, the poverty of industries was most apparent.

In the brick and tile industry progress in mechanisation was considered unnecessary as there was plenty of labour available to undertake the most

unattractive work at low wages, the only progress that was made in the 1920's in roofing tile manufacture was in the production of the interlocking tiles at the old Chilton Works, but other works were content with the production of the hand-made tiles under primitive conditions with tile makers for example working under the light of a jam tin provided with a cover through which a short piece of pipe was passed to carry a paraffin wick, many of these crude lamps were in use until 1930.

TRADE UNIONISM AND GENERAL STRIKE 1926

The Dockers Union (now the T. & General Workers Union) had pressed for better conditions prior to the war under Sidney J. Plummer aided by Ernest Bevin (the Dockers Lawyer) from Bristol, whose speeches were full of venom and many of his followers expected him to tear every employer from his seat, but Bevin in a speech in the Bridgwater Town Hall in March 1914 said, "We must organise and acquire strength, not to use the strike as a weapon but to have the power to negotiate at all times, although we must be careful not to create a colossus that we shall be unable to control." Could Sir Ernest, as he became, also this country's Foreign Secretary, visualise what could happen and has in 1968-69?

Local Organiser, Sid. J. Plummer, had little support from his members or Party at the General Election of 1918, polling 5,771.

Politics appeared to be secondary in the main discussions that ensued at meetings of the Bridgwater Trades Council in the early days of the 1920's, the main theme being on improvement in working conditions, Labour May Day rally with banners carried not being supported by all trade unionists.

Some delegates to the Trades Council became prominent master builders in the Borough and made great contributions to the Towns Council's housing programme, as well as other building schemes. The Trades and Labour Council had its headquarters at the Dockers Hall in Friarn Street and moved to Unity House in 1923, eliminating the word Labour from its title, the Amalgamated Society of Engineers became one of the unions which combined in July 1919 to form the Amalgamated Engineering Union but its members endeavoured to refrain from becoming closely linked with the local Labour Party and declined to accept the offer of free accommodation at Unity House for Branch Meetings, holding the view that a Trade Union card did not mean allegiance to any particular party, and when it became known that the political levy to the Labour Party was not compulsory many of the 56 members of the local branch contracted out.

Heavy levies were imposed to assist those who were unfortunately unemployed during the recession of the '20's but the General Strike of 1926 brought a large drain on the funds of all unions and extra contributions from those in work were most acceptable but in April all members of the local branch of the A.E.U. were called out but on the first day, the strike, which had been on for some weeks and involved many thousands, was settled and on the following day workers returned, mostly all being engaged at one works, W. & F. Wills Ltd., and regretting that they had been involved as good industrial relations had been enjoyed for many years. The call from the Union to withdraw labour was not readily accepted for the recession in the industry had reduced the number employed to a minimum and most had been working on short time for some months.

Sid. J. Plummer moved to Bristol and was succeeded by J. M. Boltz in 1921, but pressure on the employers in the brick and tile industry for better wages and conditions had to be viewed in the light of changing circumstances with trade fluctuating and the long queue on the Employment Exchange, the latter being regarded by the employers as a deterrent to strike action. The local organiser, in spite of the continued agitation by his members, could therefore claim little success and the "hardy annuals" of wage negotiations brought little comfort to the workers whose basic wage in 1923 was 47/- per week with insecure employment.

DECLINE IN CLAY TILE DEMAND – 1920's

Workers had dread of mechanisation which they thought was the prelude to unemployment and it was difficult to convince them that the industry must make progress if it was to survive and to meet the growing menace of substitute materials also the ever-increasing importation of French Tiles which had already made some impact on the roofing tile markets, Taunton Borough Council being one of the first to specify French tiles to the exclusion of Bridgwater products, the prices of the latter being too high and other Local Authorities were effecting economies in housing in the same way, bringing further decline in demand for Bridgwater tiles.

The Bridgwater councils remained loyal to the industry and continued to specify Bridgwater bricks and tiles in all their housing schemes although effecting a great saving in specifying machine made tiles in later years for 100% of roofing until the introduction of blocks of flats in West Street and in traditional building, the 42 families accommodated in one block would require dwellings calling for 42,000 tiles. Thus it can be seen that, with this country moving towards becoming a nation of "skyscrapers"

there is little demand for roofing tiles, clay or concrete.

In 1928 the decline in demand for clay roofing tiles was aggravated by the London County Council specifying French tiles for all housing schemes to the exclusion of Bridgwater hand-made Roman tiles. This brought a serious loss to the industry for all manufacturers looked upon the L.C.C. for a large amount of business and stocks began to accumulate in 1929, unemployment increasing as the result.

The manufacture of French tiles was, by modern methods, employing new technique as against the old and primitive methods of the local manufacturers who failed to make progress and were quite content to carry on in dilapidated works.

The French manufacturers were more fortunate for reparations forced upon Germany after the 1914 war stripped that country of all tile making plants, many sent to the Colonies but a considerable amount to France to make good the ravages of war, these plants incorporated all the modern technique known to the industry, mass production was such that the requirements of that country could be met and a large export trade became possible for tiles could be delivered to sites in England with a saving of approximately 30% on English prices.

In 1929 the London County Council received a deputation of manufacturers from Bridgwater who were desperately needing a return of the business, pointing out that the importation of French tiles was aggravating the employment position in the town and they wished to make every endeavour to secure a return of trade to alleviate or halt the rise in unemployment. Members of the L.C.C. stated that they believed Bridgwater clay to be suitable for the manufacture of large unit and interlocking tiles, but owing to the magnitude of undertakings they had to resort to placing orders with the Marseilles and Courtrai works in France and Belgium because the Bridgwater manufacturers were not in a position to supply the tiles or compete in price.

The real problem could be found in the dilapidated state of the industry, for manufacturing processes were virtually unchanged since 1900, except in the production of machine made interlocking tiles and the L.C.C. showed great interest in this product and called for consideration of plant extension to enable some of the Council's requirements to be met, particularly as prices would be favourable, and many thousands of these tiles had already been used on many of the Council's schemes and had given complete satisfaction.

Some members of the deputation on hearing the views of the L.C.C. on interlocking tiles made in Bridgwater expressed the opinion that clay in the area was only suitable for hand-made tiles but at the close of the meeting the deputation was told to go back and put their house in order and until they did they would naver be able to satisfy the Council on price of quantities or to compete with imported tiles.

An urgent reappraisal was necessary if the full benefit from the interlocking tile production could not be obtained without a new plant and lay-out and all manufacturers were invited to participate in the erection of one large plant incorporating many of the types of tiles of common manufacture, including the Double Roman. The proposal was not favourably received and the Somerset Trading Company decided to proceed with a new works after Directors visited Germany where methods of production had become the best in the world.

In 1927 tests were made on land at points between the old Somerset and Dorset railway bridge in Bristol Road and Dunball to establish whether the clay was suitable for roofing tile manufacture, and the erection of what became the Chilton Tile Factory, on the site now occupied by the factory of Crypton Equipment. It would have then been possible to provide a rail siding to serve the tile factory which was most desirable. The land, whilst appearing superficially suitable, was found to be inadequate on analysis for at two points and at a depth of approximately six feet, traces of the one time course of the river were found. Consideration was given to the erection of the factory near the railway and for clay to be conveyed from existing workings at Chilton Trinity by overhead wire rope-way, but costs proved prohibitive and the project abandoned, the factory being erected on a site where suitable and abundant supply of clay was available. The factory commenced production in 1930.

Much concern was expressed by all other manufacturers on the decision, intimating to their employees that the factory would bring further unemployment as tiles would be produced in such quantities and at low prices that the hand-made tiles would fall from grace.

The Somerset Trading Co. already had some experience with Continental plant, having installed this in 1927 by which costs of production were reduced by 30% on certain articles but the Company, being a member of a price fixing association could not pass the benefit on to the consumer and compelled therefore to align prices with those content to muddle along as in the past.

The reduction in costs of production did however enable capital to be set aside for further developments and provided the nucleus for the erection of the Chilton Tile Factory in 1929. The new works

incorporated the latest cutting and handling devices which followed the mechanical excavation of clay. Electricity was introduced and drying of goods was economically carried out by waste heat. After an eventful start of teething troubles and adverse criticism from reactionaries, the works settled down to a buoyant period of mass production with an average of 5 million tiles per annum and 2½ million bricks. It so happened that a week after the return of the deputation of manufacturers from London in 1927, the annual review of wages was due and in an endeavour to make some effort to reduce costs of production, the employers side put forward their demand for a reduction in the basic rate of pay from 47/- per week to 46/-, the workers' side having in mind the long queue of unemployed were prepared to concede 6d. but not 1/- and were prepared to strike if the employers insisted in their demands but at the meeting- the Director representative of the Somerset Trading Co. had second thoughts on the matter and considered that such a meagre saving would not yield more than £2 per week in the average works and other ways of reducing production costs should be explored, he proposed wages, therefore, be stabilized for at least 12 months and the employers reluctantly accepted the proposition.

THE CHILTON TILE FACTORY

The Chilton Tile Factory, when completed, had cost £85,000 with an extension in 1933 costing a further £35?000 and when in full operation employed 100 men and boys throughout the year with conditions far beyond what could be expected in the industry and whilst there was good and continuous employment until the outbreak of the 1939-45 war, other works in the area had the usual suspension of workers for the winter months.
The mechanical excavation of clay was regarded by other manufacturers as revolutionary and considered it impossible to win clay in any other way than by the old and primitive method by hand and spade, but this method had been necessary for providing employment for the more skilled hand tile makers until the making season opened up.

In a few years however, mechanical excavation by all manufacturers was generally accepted and eventually proved necessary for their survival as the year passed when new and attractive industries came to Bridgwater. It was recognised that at least one progressive undertaking had shown an example to others in taking the lead and providing plans together with all assistance in the adoption of methods which had proved so successful and within 8 years all manufacturers had excavators in operation.

The Local Manufacturer's Association remained critical however of the progress of the new works as it became obvious that serious competition which had been envisaged was becoming apparent and it was considered that selling prices of interlocking tiles made under the new process should be adjusted to sell at the same price per square (10 ft. x 10 ft.) as the hand-made tiles, such a proposal was treated with the contempt it deserved and it was an endeavour to hold back progress to the speed of those working under primitive conditions with no initiative. It was not realised that, of the 18 manufacturers contributing a total of £890 to the funds of the Local Association in levies according to sales, the Chilton Tile Factory and other works of the Company contributed an annual average no less than £530. In refusing to align selling prices of machine-made tiles it was agreed to do so with goods of common manufacture, but the agreement on prices eventually became like one of the Commandments, "Thou shalt not ..... but if you do, there is no reason why you should not."

Bridgwater was always regarded as the Brick town but manufacture was a necessary evil, and contributed only a small proportion of the Industry's total output, only one works being fully equipped for their manufacture and lack of enthusiasm for brickmaking was due to the low tonnage value compared with the bulk ratio of roofing tiles but a number of bricks were necessary to protect tiles in kiln from damage by over-burning or becoming misshaped. It is evident therefore that the Bridgwater clay industry became predominantly a tile producing one, it was recognised also that Bridgwater bricks (perforated) were limited in their use and were vulnerable in house building below damp course having a high degree of permeability and porosity, associated with alluvial Bridgwater clay goods.

In the opening of a new works it is necessary to build up good industrial relations but this became most difficult for with the need to fix new rates and wages, the hereditary mistrust of the employer associated with the industry was always to the fore with many proposals by the employer treated with suspicion with old and obsolete agreements dragged across the table, totally irrelevant as in no way did any operation in the works compare with that to which old agreement catered for, straight talking became necessary before progress was made.

Eventually all employees understood what was necessary and from all sides there came an expression of a desire to co-operate but the real meaning of the word had to be understood, for it meant fitting into the given scheme of the organisation, sinking private likes and dislikes if the works had to operate as a co-ordinated whole, there had to be submission to discipline, many people seem to think that to submit to discipline there is a loss of personality, that may be so but there will arise in its place an individuality

which is real and un-assumed and it is not what people think they are that really matters but what they are.

The old time-keeping associated with brick and tile works could not be tolerated and as the plant was required to operate as a conveyor belt, every operative must be at his work on time for the rate of production being at the speed of 25 tiles per minute per machine, losses of production could be serious and it was generally accepted by all in time that it was important for machines to start strictly on time to obtain the output required for economical working.

As in all works, a few militant operatives endeavoured to expound their views from time to time but were generally amenable to common sense, but it was not those who were voluble that were troublesome but those who prepared the ammunition and loaded the gun for the noisy ones to fire.

The Trade Union organiser had a very difficult time during the negotiations on wages and conditions. "Gentleman Jim Boltz" as he became known did not appear to exercise the power required by his members in dealing with the employers but he was a man with strong religious principles, near to his church, one of the founders and officer of the 2nd Company Wesleyan Boys' Brigade, but was not of the 'soap-box" type of orator which became so common in Trade Unionism in later years.

James Musgrave Boltz ran the gauntlet of his members by his sober attitude in dealing with matters brought to his notice at branch meetings and this was due to the fact that on dealing with many he had found them fictitious and said so, but to the members it appeared that he was not strong enough to deal with the employers and it became obvious that his career was nearing its end. In 1938 he received a petition signed by the men at Chilton Tile Factory calling for his removal as being unable to cope with the employers. He accepted the Mayoralty of Bridgwater in 1938, but through illness was compelled to resign within the year and passed away soon after.

LABOUR AND LOCAL POLITICS

He had been unsuccessful on a few occasions in Borough Council elections but eventually won one of the earliest seats for Labour. In 1924 he contested the Parliamentary Election for Labour, polling 1,966, a little better than the previous candidate who, in 1922, polled 1,598. In 1929 he increased the Labour poll to 6,423 and in a straight fight with the Conservative in 1931, he polled 2,332.

It is worthy of mention that in two Parliamentary elections between the wars without a Labour candidate, the seat was lost by the Conservatives, in 1923 to the Liberal when the Labour Candidate, A. Henderson, withdrew a few days before the election, Liberal majority 1,431 and to the Independents in 1938, majority 2,332.

It was estimated that in each election, over 3,000 Labour supporters voted against the Conservatives, others must have refrained from voting but it must now be taken for granted, with the continuing decline of the Liberal Party, future elections v/ill be straight fights in the Constituency of Conservatives and Labour.

Further industrialisation, coupled with the Council's Planned Expansion programme will, according to the advance in the past 20 years, tip the scales in favour of Labour.

To revert to the passing of J.M. Boltz in 1938, his post was taken over temporarily by another prominent Trade Union Organiser, Walter J. Farthing who, a few months later, introduced George Nathaniel Hayball who continued in office until 1961, having acquired much knowledge of the trials and tribulations of the brick and tile industry, and like his predecessor, had on many occasions to take a stand on what was right and the unjustifiable demands of his members.

George Hayball, in due course, also won a seat on the Local Council, moving up to the Aldermanic Bench some years later and although losing his seat at an election, accepted the Mayoralty in 1953, becoming one of the few Mayors to do so without being an elected member of the Council, his active participation in the work of many organisations in the Borough became well known and appreciated.

His colleague in Trade Union circles, W. J. Farthing, also was rejected on a few occasions when seeking a Borough Council seat but he also persisted and won another seat for the Labour Party, moving up to the Aldermanic Bench in due course and was elected Mayor in 1939.

In 1945 he contested the Election for Labour in Frome and deposed the Hon. Mavis Tate who had held the seat for some years for the Conservatives, was defeated in 1950 and returned to Bridgwater to resume his work on the Council and as an Organiser for his Union for the years that followed brought many new industries to the Town with a variety of craft unions. From then it became obvious that the Labour Party was growing from strength to strength but industry remained free of locally inspired strikes, joint consultations in various undertakings were commenced with a vast improvement in industrial relations.

NEW FACTORIES

Bridgwater had entered an era of industrial prosperity which was more than could have been envisaged 40 years before, when there was poverty of industry and many hardships.

The coming of British Cellophane to Bridgwater in 1938 heralded the light of a new dawn of industrial prosperity and in due course provided the much desired employment for many, not only in the town but in the whole catchment area and indeed from farther afield, employment that brought with it many opportunities.

Linked with the factory was the Bonded Fibre factory which also created a field of opportunities for many, but the training of men for such undertakings must have been no easy task for it has been recognised in the past that west country workers were not always amenable to employment in works with high mechanisation or where training or skill was necessary but it has now been established that having accepted the new conditions, they have proved to be most reliable and efficient.

Many have, incidentally, paid tribute to those who had moved from the brick and tile industries who have been retrained to fit into new surroundings with varying degrees of skills.

It was at the time of the opening of British Cellophane that the clouds of war began to appear and the decision to erect the Royal Ordnance Factory at Puriton but it was thought in Bridgwater that it would be more advantageous in view of the unemployment position and lack of industries to have a works that would be permanently established than one that may be of short duration if war came, although the needs were fully appreciated.
If the factory provided employment it was considered that it would only be temporary and the closing at the end of hostilities would be the means to creating a queue at the employment exchange reminiscent of the days after the first war when unemployment became most serious and continued for many years.

The fears of this happening were however eventually dispelled for it transpired that the factory was destined for post war operation and for many years has made a most useful contribution to the labour force in the area.

The building of the factory provided much employment as it did when opened for production, particularly for those in the brick and tile industry who were compelled to seek other work on the closing of some undertakings.

It was good to know however that at the end of hostilities the factory was to continue to operate and to provide employment for many, this was important until other industries could get under way to absorb any lay-offs, but in the transitional stage from war to peace the run down in the labour strength of the undertakings engaged in the production of war materials became necessary and the factory was no exception.

This was not entirely unwelcome for many men were able to return to their pre-war jobs with the result that the brick and tile industry saw the return of tile makers who were badly needed for there was to be an unprecedented demand for roofing tiles as housing schemes were proceeding rapidly.

It was during this period that the factory began to make an important contribution to the housing programme in the production of what became one of the most popular types of prefabricated houses the "Airey House" being mainly of concrete component parts.

This type of house soon found popularity with local authorities and were specified for many areas and it was considered most encouraging that it was possible to engage in such a product in a factory of such a complex nature, although the difficulties on commencing on such a product could not have been so great as the initial opening at a time when there had to be general mobilisation of all resources in an endeavour to secure the successful prosecution of the war and when personnel had to be trained for some exacting work, in which many local workers became most proficient as they did in other industries for which training was necessary.

Accidents in explosive factories, such have occurred at the R.O.F. resulting in tragic loss of life as they did, were not uncommon during the war but could not be mentioned and little can now be said except that it can be only hoped that the factory can be maintained with complete freedom from accidents.

With the closing of most brick and tile works at the outbreak of war, a number were used for storage of war material, including Chilton Tile Factory but a large section was converted for the manufacture of soups, custard powder and jellies, parts of the works being easily convertible for such purposes, the steam power unit and generating plant also being required. The production in four years exceeded 3½ million pounds in value.

Crypton Equipment came to Bridgwater during the war and were accommodated in premises in George Street previously occupied by the Bridgwater Motor Company and at one time coaching and livery stables of Aplin's George Hotel, but the decision to remain after the war called for new premises and these were built in Bristol Road on the site that in 1929 was

intended for the Chilton Tile Factory, another engineering firm moved into the premises of the Bridgwater Manufacturing Company in Monmouth Street.

WARNING OF CLAY TILE COMPETITION

In spite of the departure of many men from the brick and tile industry, some works operated with a small number of workers, for , some tiles were needed for repairs after bomb damage and manufacturers met from time to time as the Bridgwater Brick and Tile Association to discuss ways and means for keeping the industry alive for reopening after the war.

Mention was made at one of the meetings of the possible danger to the clay tile industry of the concrete tiles that had come upon the market a few years before the outbreak of war and there had been signs that production and sales were increasing with some effect on clay tile sales, the view was expressed that at the end of the war there would be an unprecedented demand for roofing tiles for making good bomb damage and housing, tiles that could be mass-produced and supplied at low prices.

It would mean that the concrete tile would place the clay tile manufacturers in a serious position as being non-competitive, for whilst a certain amount of business will be forthcoming immediately after the war for urgent repairs, in a few years concrete tile manufacture would overtake that of the clay tile.

It was proposed that some immediate action be taken to see if production methods could be improved and, as the London County Council had said some years earlier, "... the manufacturers put their houses in order."

The suggestion that concrete tiles would be a serious challenge to the traditional clay tile was considered unthinkable and that it could never happen. Of the 15 members present at that meeting in 1940, 14 have since passed away leaving only one to see the prediction come true and the closing of most works in the area, it having also been predicted in 1954, following a change of circumstances in 1960 it was anticipated that Chilton Tile Factory would close within five years, and the closing of the industry in 1970.

The case against the suggested rise of concrete competition was that National Roofing returns in 1939 were 93% clay tiles, 3% concrete and 4% other materials. In 1953, the returns indicated 89% concrete tiles, 4% clay and 7% other materials and tile works were fighting for survival, many went down, with others remaining in business not to make a profit but to reduce losses.

In 1920 the need for improvement in methods of production in what had been and still was a degrading industry, retaining primitive methods with poor conditions of employment became quite apparent to a young and enthusiastic management of the Somerset Trading Co., known later as John Browne & Co., new technique was studied to be introduced where and when possible.

German methods had particular consideration for that Country having been stripped of its plants after 1918 under reparations told the Allies that it would be necessary to have replacements for normal tile production to be resumed and the sum of 36 million pounds was provided for this, the new plants incorporating the most modern methods in every branch of manufacture, this therefore made a large contribution to Germany's economic recovery.

Germany supplied new plants to France and the Netherlands and in a few years mass-produced tiles were flowing into England at prices 30% per square lower than those being supplied in this country, the only way to meet such competition was to adopt the same methods as on the Continent.

In the face of unwarranted criticism from all manufacturers and other reactionaries, Chilton Tile Factory was erected and opened in 1930, being considered the most up-to-date brick and tile works in Europe, in due course to be visited by many people from abroad.

The tragic passing in 1934 of one who was responsible for such a revolution in clay working technique was a loss not only to the industry but to the community, but much progress had been made and had to be maintained.

If an industry is to be economically sound and remain progressive it must be constantly aware of new technique and ideas, to scientific research, trade relations and publicity, and Chilton Tile Factory could not be any exception to the rule for although the factory was planned and laid out for one established type of tile and bricks, consideration had always to be given to alternatives in the event of the main line of production falling in demand further, the trade always looked for alternatives.

When alternatives are being considered for a specialised undertaking such as at Chilton, every attention must be directed to providing something that would not incur "re-tooling" or need a break up of the layout or operation of the works, sensing the fall in demand of the original interlocking tile for which the plant was designed, a new tile was designed and patented by Edmund Porter in 1934, the automatic apparatus for making the tile also being patented by him with Continental protection to avoid use of the apparatus abroad.

Production was stepped up quickly to meet an increasing demand and many of the Local Council's housing schemes were supplied under the name of "Homestead", the production stepping up to 2½ million a year.

It met with the requirements of the factory, being the same size, number per square, making rates and other points consistent with the other interlocking tile, but with a reduction in weight and increase in sales value.

Failure to observe the main requirements of the works in in spite of the many warnings, that the policy for changing to a line of production totally unsuitable for the works would bring disaster, a new line was introduced needing heavy expenditure for extra plant and equipment but the product had low tonnage output compared with the normal products and 50% value with costs of production 100% higher than selling prices obtained with the result the production continued for three years with losses mounting weekly and it became necessary to call in the Official Receiver, the responsibility rested entirely on those who did not heed the warning of 1961, but shareholders must also share the blame if no action was demanded following the receipt of unsatisfactory balance sheets, the Company having had a long history of being a profitable undertaking.

The factory was such that a further life of 25 years could be expected, but smaller undertakings have now been accommodated in the works but if the whole area within the building can be utilised, then it will be another useful contribution to the industrial life of the district.

Local buildings of the past are evidence of a prosperous clay industry, once producing a comprehensive range of clay goods, components of traditional construction from foundation to chimney. Apart from the modest use of sand-faced perforated bricks, the modern Bridgwater clay industry is reflected mainly on the roofs of buildings.

It is ironical that a clay industry concerned with materials for pitched roofs was to be faced with an architectural trend towards flat roofs, particularly in an area with an established brick and tile tradition, it is therefore unfortunate that a more vigorous and imaginative regional architectural leaning did not exist.

In spite of the fact that the roof is receding from sight as an architectural surface, it remains the most functional element in the design of a building. On those grounds, the pitched roof is of longer life and more maintenance free (cost for cost) than the equivalent flat roof. Although the clay tile output fell to only a fraction of National Roofing in the last years of the industry, it was not from lack of initiative by Bridgwater manufacturers who have in the past provided architects with a wide choice of tile designs.

The Broomhall tile used on the Library in 1905 was an early indication of a conscious effort by the manufacturers to produce a tile with a distinctive resultant effect; an over and under type closely following an old form of stone tiling.

In tracing the development of the Bridgwater clay industry, it is apparent that a multitude of manufactured goods were produced and in numerous designs, which reflected the architectural trends and the contemporary age in which they were made. Some original designs remain to the present day, whereas others have become victims in an era of technical and scientific advance.

Bricks and tiles, a basic ingredient of indigenous English construction, now remain in limited demand. Bridgwater bricks remained virtually unchanged because of their limited potential and required only for certain purposes in manufacture of roofing tiles, the perforated brick generally associated with the area having low drying and burning costs, plant for perforated bricks being unsuitable for solid bricks, only a few of the latter were produced. Most manufactured clay articles were produced in accordance with their respective British Standard Specifications for size, shape, porosity and strength.

NEW TILE DESIGNS

It was always essential that co-operation between the clay manufacturers, architects and the Building Industry be maintained so that a free exchange of ideas would be encouraged. It was the manufacturer's job to keep the architect informed of changing technique and new products through technical publications and direct contacts.

An interesting aspect of stimulating common interests was the production of the County full interlocking tile in response to a request from the Architect's Department of the Somerset County Council for a clay tile to be used at low roof pitches, the requirements were met by studying German designs and plant, importing machines and equipment for manufacture, specifications followed for most of the schools in Somerset and other Counties and as a result the tile was named County, the demand calling for extension of plant in a short time. This was another example of the progressive policy of John Browne & Co., which had been pursued for many years.

The introduction of the County tile into the range of roofing tiles was one of the most progressive steps taken since the end of the Second War and was taken

after a long technical investigation into the principles of water shedding and protection against infiltration by snow or moisture and the product was acclaimed by the trade as the greatest advance in roofing tiles for many years.

The design embodied a series of vertical and parallel grooves into which fitted upstanding bars provided with drainage outlets to free any moisture that did collect. Other details were such that the use at low pitches would present no problems and would effect great savings in the use of timber in roof construction.

The technique applied to manufacture and the type of machines used was extended to other types of products, particularly with the well-established Double Roman tile traditionally made by hand because of its tapered rolls.

The new process of pressing overcame this difficulty and the method enabled other improvements to be incorporated in the design. The demand for tiles made by this process built up tremendously in a very short time.

The production of development did, however, bring a steadying effect on those engaged on hand tile making, they realised that the new method meant the decline in demand for the hand-made tile with the result that some discipline was restored and greater care was taken by those who thought that it was impossible for their services as hand tile makers to be dispensed with.

The production by the new method incorporated one of the most advanced techniques known to the industry, electrical automatic trimming, the tile leaving the machine in perfect shape and clean condition, production by two men and two boys being the equivalent to ten hand tile makers.

Choice of roofing tiles is a critical one and careful consideration is essential so that the aesthetic effect is completely sympathetic in scale and character with the whole design; with the locality and with climatic conditions.

If an industry is to be prosperous and remain economically sound it must be constantly aware of new techniques and ideas, to scientific research, trade relations and publicity. Manufacturers of bricks and tiles began with the excavated material, a profound knowledge of its physical and chemical properties being essential.

It was established that Bridgwater clay was of a superior quality, easily malleable and plastic in nature, whilst the hygroscopic water content varied in quantity and impurities the application of manufacturing water from the Town's mains called for analysis from time to time for temporary hardness, the main constituent of this being calcium sulphates and chloride which would have detrimental effect on the finished goods in disturbance of engobe and promoting efflorescence.

Burnt clay goods made from Bridgwater clay were only marginal in their degree of porosity but were highly permeable. This was not necessarily a defect, for tiles that are able to breathe are capable of withstanding the severest climatic changes, for example, a sharp frost following rain and fog, a relatively non-porous tile would tend to flake or laminate under such conditions.

Manufactured goods from local clay are liable to chemical attack and efflorescence would occur if soluble salts within the material and those present in the manufacturing water were not disposed of during manufacture when goods were not sufficiently dried or burnt at the correct rate.

Artificial tests were constantly carried out by some manufacturers but results were not always conclusive. In particular, tiles that were affected by unusual weather conditions in 1959 were tested by the Building Research Station and other laboratories but no logical conclusions were reached, continuous weathering in natural conditions over many years gave a true indication of the outstanding and durable qualities of Bridgwater clay.

On January 16th 1959, however, a belt of Arctic weather estimated to have been approximately 60 miles wide, swept from the Continent across England and Wales bringing 16 degrees of frost in two hours from 4 p.m. to 6 p.m. Rain which had continued through the previous night and until 3 p.m. ceased, leaving roofs completely saturated with the result that many tiles became frost laden within a few hours, tiles of many types were affected, many that had weathered the climatic conditions for over 50 years also broke down in this unprecedented freak attack which also brought damage on the Continent.

It was estimated that the freak conditions brought damage to approximately 5 million tiles in various parts of the country including many that were made in the Midlands and in the Home Counties, some of the failures of tiles made in the latter counties being most serious for some of the manufacturers.

A fundamental problem common to so many undertakings after the 1939-55 war was the shortage of skilled personnel which was always 20% below the optimum total, many declined to return to the brick and tile industry, only the cull of those from other industries accepting employment, the new and exciting opportunities offered by other industries were more attractive than the old ones with a record

of insecurity and poor conditions.

To restore tile making to its pre-war level, particularly in hand tile making, many trainees were engaged but the number that proved proficient did not exceed ten per cent of those who entered as trainees. The quality of production also suffered and for which most manufacturers were to blame for discipline declined as employees were aware of other opportunities readily available in the area, the employers tolerating what would not be endured in previous years.

If an industry is to remain prosperous the training of skilled craftsmen is essential, particularly in the less glamorous trades, and whilst hand tile making was not demanding a high degree of skill, a proficient maker was worthy of his hire, poor makers could bring endless trouble to their employer.

Most industries that have come to Bridgwater require a very high percentage of skilled personnel and the prosperity of many undertakings will rest entirely on the technical colleges for a constant flow of operatives in making good normal losses of labour and to permit of expansion if and when considered necessary. The local technical college is at present far short of the requirements which will enable Bridgwater to remain industrially prosperous for it is within the technical colleges that the foundations of future prosperity of the Borough are laid.

The new College planned for the near future will be a great asset to the Borough and the decision not to proceed with the second phase extension of the existing College in Broadway is a wise one but it is an admission of the error of 1953 when the advice of the Local Governors against the present site was ignored.

The College when completed with the second phase would entail demolition of a number of good houses in Cranleigh Gardens, lack of car parking facilities for staff and students, excessive noise from traffic on Broadway, access only from Barclay Street and all traffic from the College having to emerge into busy St. John Street, the application for additional exit into the less busy Cranleigh Gardens being refused by the Local Authority.

The present building when completed was not an architectural masterpiece and its use on the closing of the College is a matter for conjecture but it is hoped that the new building- when completed will be one that the Borough may be justly proud of and the sum of money to be expended on the project demands that a prominent site be found.

If a technical college is necessary to provide the skilled craftsmen of the future to meet the demands of an expanding industrial area, attention must also be given to the building up and the maintenance of good industrial relations and whilst the latter have already been given every attention in some undertakings, there must be opportunities not to be ignored in others.

LOCAL INDUSTRIES COMMITTEE

It is very encouraging to know that there is a good deal of enthusiasm for the courses already being held for those really interested in furthering good relations and promoting joint consultations, these are matters which should have every consideration for trade union members who consider that sound and reasonable thinking can make a great contribution not only to their own future but to the successful operation of the undertaking that employs them, bearing in mind that the fallibility of a shop steward can wreck good relations which had been established.

This was a subject that called for consideration by the brick and tile manufacturers towards the end of the last war when it was suggested that a Joint Industries Committee be formed locally as a step towards better relations being established, the suggestion being received with mixed feelings but eventually accepted, after which a better understanding was reached between employer and employee.

The proposition that works committees should also be formed to enable discussions on problems incidental to the various works, not wages, but this proposition was received with a certain amount of alarm with one expressing the feeling that it would seem like hoisting the Red Flag to invite workers to participate in discussions on the running of works but it was necessary to remind the individual that a Red Burgee, the signal flown by a ship in distress, would be more appropriate for the undertaking which he controlled.

Throughout the country, during the War, works committees were formed in Ordnance Factories where there was lack of communication between worker and those responsible for administration, the real employer being the tax-payer, but the remarkable increase in the contribution to the war effort which had seriously lagged, was proof of the real benefit that can be derived by making known to the operatives what is required and securing their co-operation.

When a firm is not doing well this becomes apparent to the well-thinking employee, conditions of his employment deteriorate and he acquires a sense of insecurity, particularly prior to the last war when there were not the employment opportunities as in recent years. An incident worth recording of the thoughts passing through the mind of an employee of

one local firm when a boiler inspector called and having completed his examination, being a stranger to the district, asked the quickest way to the Workhouse and the employee promptly replied, "... put all your b..... money in shares in this Company!" Obviously a most discerning employee.

The opening of the 20th Century brought little improvement in the industrial life of the Borough v/hich was still dependant on the brick and tile industry and the general trade of the port, although the latter had declined somewhat but there was marked increase in rail-borne traffic as the result of the more economical rates offered by the railways and many goods trains leaving Bridgwater were mainly made up of wagons of bricks and tiles.

Shipping continued to hold its own and the Steam Tug *Bonita* with three ships in tow was still a familiar sight, some being dropped at the docks and others at the quays to stand two abreast on many occasions, constant deliveries to the docks being that of coal and linseed, the latter to the Oil Cake Mills of Messrs. Croad and Brown (Robinsons), which closed after the first world war, and coal to the dockside yard of Messrs. Sully & Co.

Foreign imports of timber were fairly regular with greater demands as building in the Borough of dwelling houses increased, many avenues being built within the 14 years prior to the war and with the desire by many to acquire a better standard of dwelling as many as 200 older type houses were usually available for letting.

The population, having increased by 1901 to approximately15,000 inhabitants, had little to enthuse over but remained happy in accordance with their restricted means, many having to rely on the credit drapers and tailors with their weekly calls for even the smallest business, as did the insurance collectors for the small contributions from those who, from the meagre and insecure wage packets, considered it expedient to provide something in the hour of need.

Grain imports ceased at the end of the last century when the flour mills of Browne & Spillers in Chilton Street closed and prior to that a small mill owned by John Browne and situated in Hamp Yard also closed.

The latter mill was water-powered by a stream running through the property of John Browne, then residing at Elmwood House (now school premises), and parallel with the coach road (now Elmwood Avenue) to the house and Brownes pit excavated before the cutting of the canal to the docks when the stream on which the flour mill depended had to be carried below the canal, the mill comprised of two stones of 5 ft. diameter, 8 ins. wide and carried on a 6 inch wood shaft, the building was demolished and stones destroyed in 1933.

Elmwood House was, until 1922, outside the Borough as was Sunnybank, the home of members of the Spiller family, nieces of John Browne, the two ladies being actively associated with education within the Borough. The house, demolished in 1950, was served with a well-maintained footpath and a favourite public walk across Furlongs, all the area now forming a part of the housing estate.

As an industrialist, John Browne considered that some endeavour should be made to house some employees near their work and built terraces near Hamp Works, Brownes Buildings, Hamp Crescent, before the Taunton Road bridge was constructed, terraces also at Downend, Dunwear and Pawlett, a brick and tile works at one time at the latter place where many man from the town were employed having to make the journey on foot.

RELIGION

As a town relying on the port and the small variety of industries it was remarkable how religion played an important part in the life of the community for there were in the early years of the century 14 places of worship and most of them well attended. There was seating for at least 3,500 of all denominations and the question may now be posed, has the march of industrialisation in the second half of the century brought a tremendous drift from religion for the number of those attending for worship in 1970 of a population approaching 26,500 cannot be more than two per cent compared with the 20 per cent of the 1900's when the population averaged 15,000.

It may be that towards the end of the century one communal hall will be provided to cater for all denominations if they can be united in divine worship in a desire to halt the drift from true Christianity.

If information could be made available as to the number attending places of worship on Sundays and the average age of those who attend regularly, it would reveal to what extent religion is regarded as a part of life in this permissive society.

POLITICAL

The increase in industrialisation of the Borough has had considerable influence on the political trends, particularly in the years 1940-70, a constituency that was considered safe for the Conservative party since 1900 when E. J. Stanley (Con.) was returned unopposed but in 1906 there was a shock result when the Liberal H. G. Montgomery defeated the Conservative R. A. Sanders by 17 votes, but "Monty" incurred the wrath of some of his supporters a few years later who journeyed to Westminster to express their dissatisfaction but his reaction was that he

requested them to find another candidate for the next election.

Greville Montgomery was then appointed to a. Government post to visit South Africa to assist in improving the clay industry in that Country, although he had no direct interest in the past with Bridgwater manufacturers, but on returning to England he organised the Building Exhibitions at the Agricultural Hall in Islington, London, in 1919 and solicited the support of some of the local manufacturers who responded by providing exhibits. The exhibitions were held every two years and moved to Olympia in 1925, local manufacturers were well represented on all occasions until 1959.

H. Greville Montgomery edited and published the *British Clayworker*, the official organ of the industry and was succeeded by his son, Bernard, who was also responsible for the Building Exhibitions in later years and met many troubles at the Exhibitions by "closed shop" practices of the Trade Unions, practices that influenced many firms in ceasing to exhibit.

In 1910 the seat was defended for Liberalism by a young solicitor, Harold Coldstream Hicks, under the flag of Free Trade, the seat was won by R. A. Sanders, Conservative, by 1,679 under the flag of Tariff Reform and later in the year the seat was held by the Conservatives by a reduced majority of 1,381. The average total poll for the two elections being 9,190.

Then, as now, the Conservatives relied on the support from the rural areas, Burnham and Minehead, but many prominent people supported Liberalism in the Borough.
The first election contested by Labour was in 1918 when support was expected from the men returning from the forces in a straight fight with the Conservatives the latter holding the seat by 6,816, but in 1922 when Liberalism again entered the political arena, Labour slumped from 5,771 to 1,593 voted polled, with the Liberals moving into second place to the Conservatives who held the seat by 119.

At the election 12 months later, the Labour candidate withdrew just before the polling day and in the straight fight the Liberals won the seat from the Conservatives by 1,431 and the question may be asked what would have been the result had Mr. A. Henderson, the Labour candidate not withdrawn, for at the Liberal eve of the poll meeting in the Town Hall, many Liberals left the building in sheer disgust at the conduct at the meeting, many declaring that they would refrain from voting and others would have voted Labour if it was possible, the successful candidate being W. E. Morse, a Swindon business man, the election was one of two not contested by Labour from 1918 to 1970, the other being in 1938 when the seat was won by an Independent, Vernon Bartlett, who had the full support of the Liberal Party.

The constituency is one that has really been recognised as a Conservative stronghold since 1885 when it became a County Division, only on four occasions has the seat been lost, to the Liberal Party in 1906 and 1923, to an Independent Candidate in 1938 and 1945, after the latter the Conservatives had a continuous run of successes until 1970 but with Labour being the main opposition, with the Liberal Party holding third place. Some indication of political trends can be gathered by the following polling figures.

Elections 1918-38 (inc.)

	Conservatives	Labour	Liberal	Independent
Elections contested by the various parties	8	6	5	1
Total votes polled	125,086	28,981	54,272	19,540
Averages	15,635	4,830	10,854	

Elections 1945-70 (inc.)

	Conservatives	Labour	Liberal	Independent
Elections contested by the various parties	8	8	4	1
Total votes polled	177,970	120,369	30,939	17,937
Averages	22,246	15,046	7,735	

The impact of industrialisation since 1945 on the political position in the constituency can be assessed on the above figures.

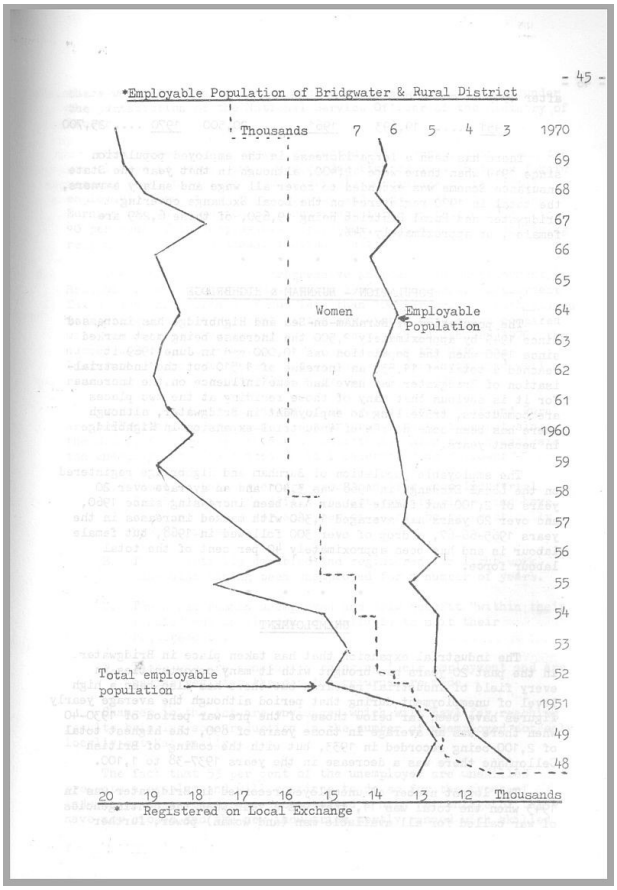
Whilst industrialisation meant an increase in the population of the Borough, many have elected to take up residence in the Rural Area where there has been considerable development in recent years in housing, many workers from other towns also travel daily to their employment in Bridgwater.

Population of Bridgwater Borough

1921	1931	1941	1951	1961	1967	1970
15,962	17,139	17,580	22,221	26,300	26,580	27,120 (est)

It will be seen that the population of Bridgwater increased slowly in the first 20 years of the century, from 15,168 in 1901 to 15,962, an increase of 794 and increasing to 17,580 by 1941, evacuees probably contributing to the increase in 1940.

There was a marked increase however in the years 1941 to 1970 from 17,580 to 27,120 (estimated) an increase of 9,590, a true indication of the progress of industrialisation.



The Bridgwater Rural District Council with an area of 85,000 acres of nearly 133 square miles also had a marked increase in population after 1949 as shown below: -

1931 – 19,693 1961 – 20,500 1970 – 25,700

There has been a large increase in the employed population since 1949 when there were 12,400, although in that year the State Insurance Scheme was extended to cover all wage and salary earners, the total in 1970 registered on the Local Exchange covering Bridgwater and Rural District being 19,650, of these 6,289 are females, or approximately 34%

POPULATION - BURNHAM & HIGHBRIDGE

The population of Burnham-on-Sea and Highbridge has increased since 1949 by approximately 2,500 the increase being most marked since 1960 when the population was 10,000 and in June 1969 it reached a total of 11,530 an increase of 1,510 but the industrialisation of Bridgwater may have had some influence on the increase for it is obvious that many of those residing at the two places are commuters, travelling to employment in Bridgwater, although there has been some degree of industrial expansion in Highbridge in recent years.

The employable population of Burnham and Highbridge registered on the Local Exchange in 1968 was 3,401 and an average over 20 years of 2,100 but female labour has been increasing since 1960, and over 20 years has averaged 1,360 with marked increases in the years 1965-66-67, a drop of over 300 followed in 1968, but female labour is and has been approximately 40 per cent of the total labour force.

UNEMPLOYMENT

The industrial expansion that has taken place in Bridgwater in the past 20 years has brought with it many opportunities in every field of industrial research but there has also been a high level of unemployment during that period although the average yearly figures have been far below those of the pre-war period of 1930-40 when there was an average in those years of 890, the highest total of 2,100 being recorded in 1933, but with the coming of British Cellophane there was a decrease in the years 1937-38 to 1,100.

The lowest number of unemployed recorded in Bridgwater was in 1943 when the total was 11, that was a year when the contingencies of war called for all available man (and woman) power, further, there was direction of labour and changes of employment came under the jurisdiction of the National Service Officer of the Ministry of Labour.

Many women found, or were directed, into employment during the war elected to remain and the recorded figures show that the female working population forms a considerable percentage of the total employable population of the Borough and Rural District, as does Burnham-on-Sea where female labour registered on that exchange is 40 per cent of the employable population, seasonal employment being responsible for some annual fluctuations.

The years 1960-70 saw progressive increases in unemployment in Bridgwater and Burnham-on-Sea and in 1966-67 the Select Employment Tax brought an increase of not less than 100 per cent in both places with Bridgwater 3.8 per cent of the employable population compared with the National Average of 1.5 per cent, and in January 1970, the number was still increasing with a forecast by the National Institute of Economic Research that the National Unemployed will rise from 611,000 to over 700,000 by the end of 1970.

With the industrialisation of an area as Bridgwater and Rural Area, fluctuations are bound to occur from time to time but since the S.E.T. figures have remained consistently high but on analysis the unemployed can be placed in four categories as follows: -

A. Those in the higher age groups and for whom Industrial Rehabilitation is difficult, not easy to place,

and have been unemployed for a number of years, being practically unemployable.

B. Those partially disabled and registered for light work, many also having been unemployed for a number of years.

C. Those who remain unemployed and draw benefit "within their rights" and until work is available to suit their requirements.

D. Those who are constantly changing their employment and are on the register the day the returns are made.

Changes in the Act are envisaged which will have far reaching results bringing some reduction in the number of unemployed not only locally but Nationally.

The fact that 53 per cent of the unemployed are unskilled presents a problem and will continue to do 30 for the types of industries that would have accommodated a high percentage of these have now closed and the new industries mostly manned with skilled and semi-skilled labour will offer few opportunities for the untrainable or unskilled.

If there is to be Planned Expansion as suggested by the Borough Council, due consideration must be given to this problem for as most industries into which the unskilled workers could be accommodated have closed, it leaves only the opportunities that can be offered from time to time by Civil Engineering and Constructional Engineers on projects such as Hinkley Point Power Station where the eventual run-down will bring a number of unemployed.

Another section of unemployed which also presents a problem are those classified as Clerical with a large number at both Bridgwater and Burnham and there appears to be some difficulty in placing those who are in this category, it may be that many will remain unemployed until retirement age.

Over-industrialisation of an area must be avoided and every endeavour must be made to see that the established industries are fully manned to permit of extensions if necessary and if skilled labour falls short of the requirements of the various undertakings, then the question as to whether a works can be economically operated would in due course have to be considered.

There has already been one example when a works opened after being advised on the labour position by the Ministry but failed to obtain the labour necessary for an economical operation. Closure followed a few years later.

With industrialisation demanding, but falling short of labour requirements, there will be a constant drift of workers from one industry to another, the right of a worker to change his job is not denied and must not be, many are aware of this and there will always be some who are "looking over the hedge" to see if the grass is greener in the next field than the one they are in.

It would be most interesting if it could be revealed how many change their jobs more than four times a year in the hope that something will eventually arise that will give them some assurance for the future, but the most remarkable aspect as shown by those who seek employment is that there has been a complete departure from what was deemed necessary some years ago when at Joint Industrial Council meetings the case for the workers was the dire need to reduce the number of hours per week to enable workers to have some relaxation and so the average working week dropped from 48 hours to 40 hours, and even lower, but within 20 years few are working less than 50 hours per week.

When a reduction in hours had been obtained this was followed by an application for increase in wages, then a further application for another reduction in hours, without any alterations in rates of pay, an assurance always being given that production would not suffer.

Many applicants for employment decline to accept jobs that do not carry plenty of overtime or work on weekends, the plea that had always been made that the worker, must have more hours of leisure falls a little flat, particularly in putting the case for the workers at was stated that no man should be expected to work more than 40 hours per week .and remain fit.

In the past, Industries in Bridgwater have worked mainly on a piece-work basis for production, the more that is made the greater the earnings. Today many industries introduce "incentive bonus" schemes to boost production but when negotiations on wages generally occur the purpose is for the worker to place a high value on his labour and to sell it at the highest possible figure with the obvious assurance that the employers will receive the greatest effort in return but incentive bonuses can mean that the employee must be falling short of the promised full effort and is open to receive further encouragement.

This, however, should not be discouraged, although the introduction 'of incentive scheme's by the various undertakings in the area which will have some bearing on the total earnings can lead to competition for labour and create a vicious spiral in wages apart for the inclination for many workers to seek employment in the most favourable undertakings a reason obviously why there are so many changes of employment in the area recorded, and temporary unemployment.

The imposition of the "Select Employment Tax in 1966-7 brought a marked increase in unemployment from 2.2% to 3.5% the figures remaining consistently high and the purpose of the Tax to divert a large number of employees in service industries to production has not achieved the desired result for it is doubtful if more than one per cent moved into production.

To be set against the Tax are the extra benefits to be paid to those who are made unemployed, particularly those who are seasonally employed in catering industries, hotels and boarding houses for as long as the Tax can be added as a charge on the bill of the visitor, the drop in revenue makes it imperative to discharge the employee for at least six months during which period he will receive benefit until the season opens up to enable a return to employment.

The Tax paid by the shopkeeper or stores is not paid from the profits of the undertaking or business, but is added to the price of the commodities, paid for by the customer, the employer being the medium through which the tax is paid.

The unemployment position in the Bridgwater area in 1970, whilst not entirely satisfactory, does not call for designation as a "distressed area" as it would have in the 1930's with over 10 per cent unemployed, it is therefore unlikely that any consideration would be given for an Industrial Development Certificate for a factory over 5,000 square feet or Distribution of Industry within the Finance Act as has been necessary in some parts of the country, particularly in the South-West where there have been high pockets of unemployment.

Care must be exercised in the allocation of industries, preference being given to areas with labour available and domiciled in the district for the policy of taking the factory to the worker has been proved to be more successful than to "lift" families and endeavour to settle them near an established works, the closure of many mines in South Wales called for factories to be provided in certain areas rather than attempt to transfer families to places when employment was available.

The proposals to open a factory or works within 12 miles of Bridgwater in 1958-59 had to be viewed in the light of the possible impact it would have on the industries in the Borough that were already in need of labour, the proposal did not call for further consideration, particularly as the proposed factory would have needed between 8,000 - 10,000 skilled and semi-skilled workers within four years.

The industrialisation of the Borough as it is today demands that every consideration must be given to technical training and the local College, as with other Colleges throughout the Country, must realise the important part it must play in the future, endeavouring to train, and of course to re-train those that are necessary to the expansion of our skilled labour force so essential to increase productivity so vital to the Country's Economy.

TECHNICAL TRAINING

It is unnecessary to be constantly reminded of the desperate need to increase the skilled labour force in the area and elsewhere but to enable this to be done there must be a true analysis of the labour strength in the area and indeed throughout the Country, this of course being the main purposes of the Select Employment Act and the Pay Roll Tax.

It may, however, have the effect of answering some of the criticism that has in the past been levelled against some sections of industry for employing too many people when many manufacturing companies were desperately short of labour and some manufacturing industries have had to face tremendous competition from some service industries where it is possible to pay very high salaries.

The labour position in Bridgwater is common to other areas in the Country with many vacancies for skilled labour filed on the Exchanges and until these vacancies have been filled, many undertakings will have idle or under-productive plant.

Not only will it be the function of colleges to provide training for skill, which must be the basis for a career, but also to provide the facilities for training for executive positions in industry, a comprehensive training for those with ambition and initiative.

It is considered that at the present time approximately 80 per cent of those in executive positions in this country are from Varsities and have high degrees in science and technology, but there are many opportunities for men from the factory floor to be elevated to high or executive positions and Board Room seats, although not all Board Room seats are comfortable.

There is ample evidence in Bridgwater to say that good jobs are going not always to the backward but well-connected Public Schoolboy, but to the anonymous but bright Grammar Schoolboy. Many boys with two 'A' levels are turned down for those who have good personality and possibly aptitude.

Many industrial undertakings in the area are obviously looking for the bright young men who are prepared to be trained and to accept responsibilities, but it will be a little alarming as the result of our very necessary advanced technical training we are in danger of creating a nation of managers and supervisors with no-one to do the work, it may be a

matter for conjecture also whether a line can be drawn between a man trained in management and the one trained for management.

What must be borne in mind however is the need to train boys who will be happy and contented to operate and do the tool-setting of new machines that must be installed in the factories of the future, and there will always be many good craftsmen who are quite happy to remain on the shop floor and be directed rather than to seek promotion and to direct.

Many trade unions have widened the scope of their membership to embrace all engaged in the various industries, particularly those who have been re-trained after being made redundant as the result of the Select Employment Act, many would be regarded as diluted labour at one time.

Whilst there has been a significant increase in the proportion of middle-class managers, mainly at the expense of the upper end of the scale, the percentage of men with a working class background has remained virtually unchanged, the remedy therefore lies not altogether with industry but in the schools and technical colleges, the latter must not be called upon however to administer corrective training prior to technical training as the result of the shortcomings of the educational system of the country which have been so evident in recent years and coupled with the absence of parental control.

Whilst the school leaving age was raised in 1947 to 15, there is ample evidence that a high percentage of those who left Elementary Schools in Bridgwater at the age of 13 a little over 50 years ago had a higher standard of education than many who have left school at the age of 15 in recent years.

This appears to be most apparent with those entering industry and the products of the costly Educational System of recent years are revealed in the police courts, but lack of parental control is a contributory factor to juvenile delinquency, many juveniles entering industry in the past 25 years have shown a marked absence of discipline and there must be considerable apprehension in the minds of many as to what the future holds even with Comprehensive Education.

Other products of the educational system of the past 25. years are the disreputable type of individuals that frequent the roadsides in summer months with thumbs waving to motorists, some leaving doubt in the minds of the passing motorists as to whether they are animal, human or otherwise, particularly at the close of "pop festivals".

The question may therefore be asked as to what age does parental control cease or does lack of discipline or responsibility start in schools.

It would be unfair however to expect the teaching profession to be fully responsible for imposing discipline in the short time at their disposal for doing so as compared with that of the parents who must accept it as their duty, and if they fail in this duty then they must accept the responsibility for failures in later life.

Juvenile courts and student demonstrations highlight the type of products of a costly educational system and it must be considered whether the allocation of huge sums of money to certain branches of education is justified if there cannot be any assurance that as the result a great contribution to the welfare of the country could be made.

It is evident that Bridgwater, with such a variety of industries, is making a useful contribution to the National Economy and it is very encouraging that there has been very little industrial unrest in the area apart from a few minor differences in some under-takings which were amicably settled without major disruption, and at Hinkley Point there appeared to be a series of inter-union disputes generally associated with such projects with temporary imported labour.

TRADES DISPUTES ACT 1906

In. the early years of the century, however, after the Trade Disputes Act of 1906, many matters were brought to the attention of the Bridgwater Chamber of Commerce at the first meeting of the Chamber in 1911 arising out of the railway and other strikes during the previous year, and the following resolution was passed: -

> "That in view of the intimidation and violence which has been openly carried on during the recent railway and other strikes, and of the serious interference not only with the supply of food and other necessaries of life to the people, but also with the Home and Foreign Trade of the Kingdom, the Council of the Chamber hereby calls upon the Government to appoint a Special Commission to enquire into the working of the Trades Disputes Act 1906, which in the opinion of this Council has, by authorising peaceful picketing and relieving Trades Unions from responsibility of their acts, made possible much intimidation, violence and interference."

Copies of this resolution were sent to the Prime Minister, Home Secretary and the County Members of Parliament.

It is doubtful if any comfort would be obtained from such a resolution in 1969 when the Government would be powerless to intervene without raising the ire of the T.U.C.

There was, however, some attempt made a few years later to improve industrial relations when a letter was received by the Chamber of Commerce on June 26th 1913, from Ben Tillet, General Secretary of the Dock, Wharf, Riverside and General Workers Union with reference to the establishment of a Conciliation Board for Bridgwater, to which the reply was favourable.

It was decided to convene a meeting at an early date of Employers to discuss the question further and approving of the suggestion that Sir George Askwith K.C.B., K.C., be asked to preside over the joint conference, which was fully representative of Employers and Employees.

As the result of the Conference, Rules for the working of the Board were prepared and eventually accepted by both sides, the formation of the Board of Conciliation attracted widespread attention, and was referred to in a leading article of the *Times*, with the result that copies of the Rules were sent in response to enquiries to several other towns, such as Liverpool, Limerick, Pool, Chard, etc.

Many workers however, with the inherited distrust of the employers did not meet up to the moral obligations of the Board of Conciliation and the Employers had no alternative a few years later but to withdraw their support and the Board ceased to exist, only the efforts of Ernest Bevin bringing a certain amount of peace in the next few years.

If Ernest Bevin, when in Bridgwater, and at the time when he was on the threshold of his career, had a premonition that trade unionism could acquire uncontrollable power, had he lived in the 1960's he would see ample evidence of what he feared had happened.

STRIKES

Industrial unrest in recent years has dispelled the thought and the hope that it may be possible for both sides of industry to walk side by side and solemnly together along the path of peace and understanding but the traditional gap between the two sides still exists with the thought uppermost in the minds of the workers is the need to resist exploitation and to continue what was at one time generally regarded as the battle between the have's and the have nots.

How difficult it is to believe that there has been some improvement in the National Economy in the light of the past industrial record, unrest and strikes, and it is only when this Country finds industrial peace can it expect to find a place high in the world of economics, it is only reasonable to imagine what could be achieved in recent years with freedom from strikes.

An endeavour to halt the upsurge in industrial unrest and restore the Country to sanity was the White Paper "In Place of Strife" which, after much discussion, was submitted to the trades unions and totally rejected as being most unacceptable in all its phases, and the Government was compelled to concede defeat to the unions in its endeavour to restore and maintain industrial peace.

In 1968, industrial strikes totalled 2,216 and in 1969 there were 3,313 with a loss of over 7 million working days and the Economic Survey of 1968 reveals also the lower output obtained in this Country as compared with other European Countries, the per main out-put expressed in units were as follows: -

Europe as a whole	9,700 units
Germany	11,665 "
Great Britain	7,600 "

Thus can be seen the disparity in output per man and the effort that has lifted Germany from a country devastated in war to a place high in the world of economics, the rise of Germany must not therefore, be regarded as a miracle but a just reward for its endeavours.

Whilst Bridgwater has not been troubled with much industrial unrest, although very much a manfacturing area, much good could come by the establishment of a Conciliation Board with representatives from the workers of the various firms and the employers centred around the Local Chamber of Commerce, the Department of Employment and Productivity could also be represented, such a Board could make some contribution to the maintenance of industrial peace and the prevention of strikes.

There would obviously have to be many preliminaries to the formation of such a Board and would of course require the full co-operation of the trades unions, they to deal with wage negotiations with each undertaking but failing to get settlement the matter to be submitted to the Board for an opinion and not a ruling.

The Board, if constituted, would cover the area which is dealt with by the Local Exchange, i.e. Bridgwater and Rural District and Burnham-on-Sea.

Many industries have been established in Bridgwater since 1935 and during that period most of the traditional industries, those that depended and were founded on the raw materials in the area, have now ceased to exist, in particular the clay tile industry on which the Borough depended for so many years but failed to keep in step in the march of progress and the competition of substitute materials.

Tradition dies hard but cold realities have to be faced and history will in time record that clay bricks and tiles were made and constituted the basic industry of

Bridgwater although to any that it was a Brick Town would be an overstatement, bricks being secondary to the manufacture of tiles.

THE PORT

Bridgwater was generally acknowledged as an important port, serving the South-West by linked canals but the trade of the Port has dropped to a minimum with only a few wharves remaining at Dunball capable of handling the restricted imports and where satisfactory facilities are provided for handling. Handling facilities were, however, so poor at these wharves in 1912 that Scandinavian Shippers refused to send cargoes of timber and it was very difficult to obtain any improvement from the Railway Company.

As an instance of the G.W. Railway's attitude to the river traffic of the port, it may be mentioned that s.s. *Hiram* which measured 180' 10", was not allowed to enter the Dock until her stern plates had been removed to bring her within the prescribed length, whereas boats up to 200 feet in length had been docked safely in former years. The stern plates of the s.s. *Hiram* were shortened and made good after leaving the docks, the result of this Regulation was that two steamers in the Baltic Trade, measuring 180' 6" and 183' 3" respectively, could not continue to be chartered for the port.

The maximum permissible length of ships entering the docks was reduced to 180 feet.

The many restrictions imposed on the port and the refusal to increase or improve handling facilities accelerated the decline, the riverside wharves beyond the docks were also removed and the type of dredger used in the docks for nearly a century recently passed into "retirement" is typical of much of the plant that users of the dock had to tolerate.

Some indication as to how the port declined following the opening of the Severn Tunnel and the introduction of the Merchant Shipping Act of 1894 when the ships registered on the port dropped to 64, is contained in the figures for shipping in 1893 when 2,373 vessels entered the port with a tonnage of 149,282. In 1913 vessels arriving dropped to 1,558 with a tonnage of 104,512.

Twenty years later (1933) a total of 817 vessels entered the port of a total tonnage of 74,664 and in 1953 there was a further drop to 527 with a total tonnage of 52,766, but in the years that followed, shipping increased with the importing of Petroleum, Sand and Gravel. At one time imports of coal averaged 90,000 tons per annum and in 1967 there were no imports of coal. In the 1930's exports averaged 5,000 tons per annum but in 1968 there were no exports.

Coastal imports have continued to increase in recent years particularly in Petroleum and sand discharged at Dunball where practically all shipping has been handled and dealt with by road transport, the rail link having been removed, shipping to the Dock has been negligible, the closure by British Railways has now been decided on.

The number of vessels entering the port has practically trebled since 1953 as the result of Petroleum imports and in 1969 totalled 1,482 with a tonnage of 579,397, of this Petroleum constituted 86% and sand 8%, the remainder being grain, meal, milk and potatoes.

Foreign imports of 69,724 decreased by 10,600 tons on the previous year of 1967 the decrease being mainly in timber, fertilizers and meal.

With the closing of the docks an area of many acres lies derelict, also the land from which the rail track has been removed which served the docks via the telescopic bridge and further consideration should now be given to a proposition in 1933 to extend West Quay to join a road on the land, previously occupied by the rail track, to the dock area, particularly if an industry could be established there or should the area become a municipal car park.

The filling of the dock should present no problem with modern earth removal plant in depositing the Mump in the hole from whence it was laboriously taken in 1840-41 and by so doing a further piece of valuable land would be made available possibly for light industry which would be an asset, providing some employment for those residing in the area, and serious consideration must be given by the Planning Authorities to the siting of light industries near housing estates to eliminate the need for many workers to travel through the busy streets of the Borough to their employment at works located in the congested area off the Bristol and Bath Roads on to which all workers now must travel.

Surely a factory such as Messrs. Leffman"s in Halesleigh Road cannot be said to be badly sited or objectionable, and if visual amenities have to be given consideration, then it must be wondered why the Council's housing on the approach to the Borough in Westonzoyland Road met with approval for inappropriate is the newly erected sign "Welcome to Historic Bridgwater" and visitors may have other thoughts for whilst the Council in the past provided a good type of housing development, it is a matter for regret that such a design at the approach to the Borough was accepted.

The difficulties in utilising building land in the most

economical way are appreciated but at all times the load bearing factor must be considered, hence the inadvisability in building of houses to the eastern end of the town above one storey but with no limits to height and loading at the western side of the river.

It is possible that the new motorway to the west will encourage some Bristol industries desirous of expanding or seeking new sites, to favourably consider Bridgwater as being most suitable, being only 40 minutes run from Bristol, this will of course depend on the availability of labour and housing accommodation.

There will also be some competition for industry from Weston-super-Mare where attractive conditions can be offered, where unemployment is exceedingly high and is likely to increase.

A large industrial undertaking in any town with 2,000 to 3,000 or over can experience a recession in trade when unemployment can be most serious but with a number of smaller industries any lay-offs in labour in an undertaking could be more easily absorbed.

The new town map, in course of preparation, will it is hoped plan for distribution of small light industries on the outskirts of the town and near housing estates for in other areas such distribution has proved most successful with many operatives being able to take their meals at home, so much preferred and less expensive, these are points that must have every consideration when Planned Expansion is to be discussed by the Borough Council.

It is difficult to say if there will be any further industrialisation in the area but brief details of firms already established are given in the following pages.

HINKLEY POINT NUCLEAR POWER STATIONS
Central Electricity Generating Board

In 1962 the Board made application to the Minister of Power for consent to construct a second Nuclear Power Station at Hinkley Point. Many factors, amongst them being the possibility of increasing the output of the second station by about 30% over the figure originally intended and a decision by the Minister to defer approval to the capital expenditure involved (approximately £94 million), dictated that work on site did not commence until the 1st September, 1967.

Due to the excellent coverage afforded by the Television Authorities and the Press, most people in the area are now aware that work did in fact commence on that date and preliminary site works proceeded satisfactorily. The construction of a second station on a site invariably calls for comparisons.

The Hinkley 'A' station which was completed in 1966 belongs to the first phase of Britain's Nuclear Power programme based on a gas cooled graphite moderator and magnox clad natural uranium fuel. The latter has properties which require steam conditions lower than those in contemporary fossil fired plants. The 'B' station is still; based on the gas cooled graphite moderated principle, but the fuel comprises enriched uranium in ceramic form and stainless steel clad.

This enables steam conditions to be the same as those employed in current coal/oil fired projects.

Another objective of the A.G.R. concept as with all ½Nuclear Power Stations is to have plant with the highest degree of integrity from the safety point of view. In addition it will operate with very high availability at low cost.

In addition to the fuel the principal difference from the 'A' station is the use of a reinforced concrete pressure vessel.

The main generating plant consists of two 660,000 k.w. turbo-alternators, but there is also a 70,000 k.w. gas turbine plant to be used for emergency purposes and also to provide power to the national grid system at times of peak demand.

The 'B' station will therefore have a sent out capacity of 1,320,000 k.w. over 2½ times as large as the 'A' station, but the plant producing the power is housed in an area considerably smaller than that of the 'A' station.

Provisions for both intake and discharge of cooling water for the 'B1 station was made during the construction of the 'A' station whilst arrangements for the overhead transmission of the electricity to be produced was similarly made.

Arrangements had to be made for heavy loads to the 'B' station to be transported by sea on the Board's specially designed "roll-on roll-off" ships. Reception facilities for these vessels had to be provided at Combwich by extending the existing wharf.

The responsibility for the construction of this station was with the Central Electricity Generating Board, Midlands Project, Group, whose headquarters are at Birmingham. The Board placed a turnkey contract with one of the three Nuclear Consortia in this country, The Nuclear Power Group Ltd., Knutsford, Cheshire, who were responsible for the design and construction of the main station. The Nuclear Power Groups Ltd., have previously designed and constructed Nuclear Power Stations for the C.E.G.B. at Berkeley, Bradwell and Dungeness 'A' and were engaged on the construction of Oldbury. They also designed and supervised the erection of the Latina Nuclear Station in Italy.

The plants incorporate the most advanced methods in heat production for power purposes applied to the process of electricity generation and distribution but technological progress is such that it is possible both 'A' and '8' stations will be obsolete in ten to fifteen years.

It is obvious that coal requirements for power plants have been reduced to a minimum and many mines have now been closed, the national coal production being only about 30% of pre-war totals but the industry has been one of fluctuating fortunes with conditions that have been intolerable and degrading with employment having to be accepted by families in the mining areas for generation after generation as there were no alternatives.

The time has long passed when men should be called upon to accept employment in such conditions in order to earn a living wage, to be exposed to the risk of contracting the scourge of the mining industry, Silicosis, many of those who have served their lifetime in the mines and who now feel indisposed to change must be happy in the knowledge that many opportunities are available for their sons far removed from mining and the hardships associated with it, let science provide the unquestionable answer to coal and hasten the day when all mines will be closed and alternative attractive employment be found for those who would normally have become miners.

ELLISTON, EVANS & JACKSON LTD.

At the turn of the Century there were two established undertakings in the Borough engaged in general engineering, brass and iron founding, W. F. Wills Ltd., and H. J. Millard & Son, the former disposing of the foundry in 1916 and the latter continuing to supply the brick and tile industry with castings and general requirements of the various works, the agricultural requirements were also met.

In 1924 the business was taken over by Bale, Sons & Co., and in 1938 with the clouds of war gathering, the firm of Elliston, Evans and Jackson Ltd., who were well-established in London, wisely decided to move the manufacturing side of the business to Bridgwater and acquired the premises.

Remarkable progress has been made through the years up to the present day, and it is a tribute to those whose efforts in the early years did so much to lay the foundations of the business as it is today.

Many must be aware that the growth of the business to its present size has not only been due to the foresight of the Founders but to the joint efforts of all Employees, past and present. Their loyalty, keen co-operation and hard work have enabled the Company to achieve the position it holds in industry today, there being no doubt that good industrial relations have been built up and still prevail.

The early history of the Company, particularly since 1913, shows that rapid progress had been made in the field of Electrical Engineering, and success followed when, with much trepidation, the . three founder members decided to leave the comparative security of a large organisation and branch out on their own.

Although possessed of little capital other than their personal skill, they believed that they could provide an electrical engineering service and products, which industry required, thus the partnership of Elliston, Evans and Jackson came into being.

The going was not easy, and a long uphill struggle ensued, with E. R. Elliston doing all the technical design and estimating, together with designs and patents for new equipment. C. M. Evans was responsible for the administration, and the commercial side, whilst C. F. Jackson looked after the workshop and the small labour force which grew from three to four in the first weeks, to no less than twenty at the end of the year.

During this period, and the following two years, the Directors worked a 24-hour rota to give a day and night service, primarily for the benefit of the printing industry.

The outset of the 1914-18 war and the shortage of capital, aggravated by the imposition of the excess profits tax, were but a few of the many problems which had to be faced but, by the dint of excessive work, long hours and personal sacrifice, the Directors managed to make considerable progress so justifying the setting up of the partnership.

In 1915 it was desirable for the partnership to be incorporated into a Limited Company.

The partners had a justifiable faith in themselves, and such was their spirit that they were willing to tackle most work within the Electrical and Allied field, and the E. H. Elliston new ideas and developments were of special interest, especially in the control equipment on printing press drives, and electrical lifts and elevators. In the early twenties the electrical equipment for the first mono-rail Hare system was designed and manufactured by the Company for the Southend Greyhound Stadium. During this period also, teams of electricians were hard at work in Cinemas up and down the Country, wiring them for the latest invention - sound films.

This was shortly followed by the after war slump period and the number employed in engineering in Bridgwater did not exceed 70 for a few years with many on short time, working no more than 32 hours a week, others having joined the already long queue of

unemployed. There was now little work, and little money circulation. To keep the Company in existence, the Directors, Staff, and employees alike agreed to take lower salaries and wages, to use the engineers expression "they all lived on the smell of oily rag". This shortage of work was so acute that one Director, realising the possible future of the electric brake, retired to his home for a couple of weeks. In the peace and quiet of the countryside, the designs of the forerunners of the Company's now standard designs of electric brakes were born.

By the 1930's, the accent was on the manufacture of special items of electrical equipment which included electric lifts, control gear and electric brakes.

The dispersal measure decided on prior to the outbreak of the second world war proved to be a wise one for it provided the best safe-guard for uninterrupted production and additional facilities for the manufacture of electro-mechanical brakes and lift equipment. Thus it was that a suitable site was located at Bridgwater on which the present factory was built, the site included an old-established engineering works which boasted a foundry amongst its few assets, this being an essential feature to the Company's requirements. The ferrous and the non-ferrous castings produced over the following years provided an invaluable source of supply to a number of other Companies who moved from London to Bridgwater during the early days of the war.

Shortly after, war was declared with the immediate problems of call-up, material shortages, black-outs and petrol rationing just to name a few. Long hours and seven days a week were the order of the day, interposed with nights of fire watching and other duties, every few nights.

During the 1939-45 war, works capacity was stretched to the maximum on essential government work for the war effort, this being on special equipment of the Company's own design and other items suitable to the available production facilities. It was early in these years that R. M. Elliston, son of one of the founders, joined the business as Works Manager at Bridgwater where considerable further development was to take place in the following years, proving no doubt how wise the move to the South West had been.

Following the efforts of the war years, production, returned to the normal requirements bringing with it a number of interesting jobs of a specialised nature. Notable amongst these was the design and construction of the Electric lift with a six-hundred foot travel erected in the first television mast at Sutton Coldfield.

The passing of E. R. Elliston in 1955 came as a severe blow but fortunately his son, K. M. Elliston, was ready to take his place as Managing Director, when another founder of the Company, G. M. Evans, passed away in 1953 it seemed that the last link with the past had been severed, but not quite, for a family business such as this cannot be built up, and maintained, without the devotion of a loyal team. There are a number of employees who have put in over 35 years of service in various departments.

The last few years have been substantially devoted to a rationalisation of electric brakes and their manufacture to meet the ever increasing demands of present day industry. This has necessitated a programme of continued expansion at the Bridgwater works of well over 60,000 square feet, the staff of some 20 at the time of the move from London has grown to over 130. 'This seems to have been fully justified by the standing which the Company today enjoys in the field of electric brakes, and lift manufacture, both in this country and abroad, where the latter is a continually expanding market.

It is the aim of the Company to maintain the business on the same family basis with continued expansion, at the same time keeping abreast with the ever-increasing technological developments of the 20th Century.

From a modest undertaking in 1933, when practically only local requirements had to be satisfied, national requirements in a specialised field of electrical and mechanical engineering are now catered for thus justifying the claim that the Company is one of the most prominent in the particular line of manufacture, the continued expansion being evidence of the success achieved.

Stock control is most necessary in such a business and is most efficiently dealt with. The need for a constant flow of skilled operatives emphasises the need for further extension of training facilities in the Borough and an analysis of the Labour force of the area will reveal what an important contribution electrical and mechanical engineering in the Borough must be making to both local and National Economy.

HENRY W. POLLARD & SONS

The firm of Henry W. Pollard & Sons was established in 1860 by William Weaver Pollard with an office in Eastover and a yard in Church Street. He was joined by his son, Henry William, and as the business grew, the yard was moved to its present position in Monmouth Street where there was more room for expansion and enough to stable the nine horses that were used to provide the necessary transport at that time.

Mr. H. W. Pollard took his son Herbert into

partnership in 1906 and at a time when the business was expanding rapidly with many large contracts having been completed, the most notable being the George Williams Memorial Hall (the Y.M.C.A.) in Eastover-Salmon Parade in 1887 at a cost of £2,490. The building was one of the most prominent in the town and of excellent architecture, its demolition in 1968 was followed by new headquarters of the Y.M.C.A.. being built off Albert Street. Other notable contracts carried out by the firm included the reconstruction of Tone Vale Hospital, the Lifeboat House and the Knightstone Pavilion at Weston-super-Mare, the Odeon Cinema (now the Classic), the Girls' Grammar School and many other prominent buildings in the Borough. When some of these contracts were in progress the Firm's workshops and timber storage were completely destroyed by fire, and when a disastrous fire occurred in 1892 at the Oil-Cake Mills of Messrs. Croad and Brown at the Docks, it was with remarkable speed that the Firm rebuilt the mill to enable production to be resumed.

Mr. H. W. Pollard was a most prominant citizen and his record of being elected Mayor on six occasions still holds, but the most eventful year of Mayoralty must have been in 1896 which saw rioting and disorder at the time of the Brickyard strike which called for the reading of the Riot Act by him from the Town Hall.

Mr. Herbert Pollard also became interested in local affairs and was elected to the Borough Council, but apparently found it necessary to devote more time to the business which was constantly expanding. It therefore demanded every attention and in due course his son Cyril joined the firm in 1924 and in 1950 the latter's son, Hugh, also joined the firm, thus creating a wonderful record and the firm must be considered as one of the most outstanding building contractors in the area.

Some of the more recent contracts include Blake School, the Sorting Office in Friarn Street, Westgate House, reconstruction of Lloyds Bank and major site works at Street and Taunton for the C. E. G. B., these in addition to the usual minor site works.

Many private dwellings have been built by the firm, some of the earliest being Loxleigh Avenue and Tautnton Road.

CRYPTON TRIANGLE LTD

The seed from which Crypton grew was planted nearly 70 years ago at Taunton.

In the late 1890's, two brothers named Newton, one of them a Somerset cricketer, started a factory for making direct current motors and generators and they, in fact, installed electric lighting in Taunton, one of the first towns in the country to adopt electricity for this purpose.

Around 1920, Newtons of Taunton were acquired by Rotax Limited and subsequently by Joseph Lucas Limited as a result of the Lucas-C.A.V. - Rotax amalgamation in 1926. This provided the opportunity for the development and production, for the first time in Britain, of battery charging and electrical testing equipment for the automobile industry.

In 1935, Lancashire Dynamo and Crypto Limited, who manufactured a patented type of automobile battery charger, took over the garage equipment interests from Rotax and a new company was formed to specialise in automobile testing and servicing equipment.

The new company was Crypton Equipment Limited and the name derived from the "Crypt" of Crypto and the "ton" of Newton. Operations began in the Willesden factory of L.D.G. but so rapid was expansion, that a new factory was built nearby. Progress continued up to the outbreak of war when a quick turnover was made to the production of specialised equipment for the Admiralty and Ministry of Supply.

At the height of the 1940 "blitz" the Crypton works were totally destroyed and a new home had to be sought. This was found in a derelict bus garage in Bridgwater and in a very short time production was established and soon outstripped previous records.

When the war ended, the important decision to stay in the West Country was taken. The present factory was built, and was in operation by 1947.

There followed a period of rapid development in the range of automobile servicing equipment, an outstanding example of which was the Crypton "Motormaster" which, for the first time, introduced "Area Testing", a new method of testing engines which completely overcame previous complications and cut testing times by many hours.

"Motormaster" has been approved by practically every car manufacturer and is in successful use throughout the world. 1960 marked the 25th anniversary of Grypton and was also notable, as the year of enrolment under the Metal Industries Group banner.

It was also the year in which another great stride forward was made in engine testing technique - the introduction to the country of oscilloscope engine testing equipment.

This new equipment, apart from saving even more time, enables any competent garage mechanic to make tests never previously possible. He can "look

inside" the engine while it is running and see just what is happening, while it happens.

Continuous development of oscilloscope testing has brought it to the stage where it can be used by even the smallest garage and Crypton engine testing and tuning service is becoming available to , ever-growing number of motorists, both at home and abroad.

In 1967 Crypton became a member of the Thorn Group who have about 50 major factories and employ over 60,000 people.

The following year, Crypton Equipment Limited was merged with Triangle Products Limited and a new company, Crypton-Triangle Limited was formed.

The range of products now made by the present company, in addition to those already mentioned, includes battery chargers, electrical testers, dynamometers, brake testers, arc and spot welders and steam cleaners.

BRITISH CELLOPHANE LTD

Bridgwater must be proud of the fact that it is the "Home of British Cellophane" a product now known all over the world and the decision in 1935 to build the factory in Bridgwater was the light that heralded the dawn of a new prosperity for the Borough, for the post 1914-18 war years were a period of high unemployment and poverty of industries, the most important being the Brick and Tile manufacture in which employment was insecure and fluctuating.

In May 1935 building operations were started and provided work for many on the factory construction and absorbed a large number for production when this commenced in 1937 and it was in April of that year that the first casting machine was started by the then Mayor of Bridgwater, Alderman F J. Reed. It was a momentous occasion, and signalled the start of a new industrial era for the West Country.

Personnel from London and Coventry converged on Bridgwater - a wet and rainy Bridgwater it is true, but first impressions are always lasting impressions, and everyone looked forward to more pleasant conditions in which to work.

Slowly but surely the factory and its people settled down to a routine. Temporary buildings gave way to well-built offices, gardens were laid out, and the Sports and Social Club was formed. But in 1938 the clouds of war began to appear and the BCL Air Raid Precautions Unit was formed, its headquarters being the fifteenth-century Sydenham Manor, in the grounds of which the factory had been built, the Works Fire Brigade also was formed at the same time.

At the outbreak of war in 1939. the Company geared itself to cope with problems unthought of in 1935, the A.R.P. Unit was extended to incorporate Gas De-contamination and Bomb Disposal Sections, the latter often went into action in and around Bridgwater during the countrywide blitz.

A factory Home Guard was formed in 1940 following the fall of France and the factory grounds were turned into allotments.

Production of film was seriously curtailed by Government orders of various kinds. A large proportion went overseas and many of the purely decorative uses for "Cellophane" were discontinued.

Many skilled people were transferred to work on bomb-damaged cities and towns; most of those remaining helped in the construction of prefabricated bridges for the Armed Forces, thus it can be seen what a large contribution the Company made to the War Effort, victory in 1945 heralded the resumption of the development plan delayed by the War, and slowly, the ordinary things began to matter again.

A Works Council, so necessary in such a large undertaking, had been formed in 1943 and had, by its co-operation, created good industrial relations between employer and worker. The shadow of war was, in 1946, slowly dispersing and many employees had returned from the forces to enable a return to normal production.

1947 opened with sub-zero temperatures, snow and ice. To add to the difficulties, a fuel cut was in force and this led to a drastic curtailment of production. It was not until two or three months later that the position eased and things returned to normal.

The B.C.L. stand, which was so prominant at the British Industries Fair of that year, was displayed in Bridgwater and attracted over 1,000 members of the public.

1951 saw the start of a new factory for another member of the group, Bonded Fibre Ltd., which later was to provide employment for many hundreds and a further contribution to the industrial prosperity of the Borough.

Another company was formed in 1952 known as T.C.F. of Canada Ltd., – B.C.L.s first overseas project to involve construction of a complete plant to manufacture film and many employees were sent from Bridgwater to assist in the construction of the plant at Cornwall, Ontario, some transferred permanently to the staff of the new Company

In July of 1954 the Company suffered the loss of Dr. J. E. Brandenberger. His death removed from the scene a man whose foresight, skill and perseverance

had led to the establishment of a world wide industry, a revolution in packing and influenced the buying and selling habits of millions of people.

It was in France during the early years of this century that which led to large-scale production of transparent cellulose film was started. Dr. J. E. Brandenberger, a Swiss Chemist, attempted to apply viscose to textiles in order to give them a shiny finish and it became apparent to him that the process had possibilities in its own right, and for the next few years he worked on a machine to produce a continuous web of film. He patented his first machine in 1908 but the film was not entirely satisfactory. It was considered however that the film might have possibilities as a packaging material and in 1912 he made a machine which was able to produce a film that was both thin and flexible. He chose the word "Cellophane" as a trade mark for his new material, and a company, La Cellophane S.A., was formed to develop his world patents.

The first uses of "Cellophane" were restricted to the packaging of luxury items; the cost was high, and only limited types of film were produced.

Progress of the new industry was impeded by the outbreak of the 1914-18 war but production was maintained through contracts for the manufacture of respirator eyepieces, the non-moistureproof film being the most suitable material for the purpose. Expansion followed the Armistice and several factories were established in a number of countries (with the right to use the trade mark "Cellophane"). Rights were acquired by a company in North America for manufacture of the film in Buffalo.

Meanwhile, Courtaulds Ltd., had been developing a viscose film and, in 1931, began to produce and market their material under the trade mark "Viscacelle". On combining with another company having a sales organisation in this country, it was decided to set up a company, to be known as British Cellophane Ltd., to manufacture film under the trade mark of "Cellophane",

In 1957, it was announced that B.C.L. were to build a second factory to meet the growing demand for "Cellophane" both at home and abroad.

This was to be the most up-to-date transparent film-producing plant in the world and the site chosen was at Sandscale, Park Road, Barrow-in-Furness, Lancashire, and some of the technical staff required were transferred from Bridgwater but the majority of skilled and semi-skilled employees were recruited locally. The demand for "Cellophane" continued to grow and within a year the first stage of expansion of Barrow was announced.

The success of a Company depends a great deal on the happiness of its employees and the Company has always fostered recreational and social activities for its employees and provided facilities for many sports.

Broadly speaking, industry needs two main groups of workers – those who make and those who sell. Neither can achieve anything worth while without the other.

Without the products of a factory, the right products, and at the right time – salesmen would not be able to start their job.

Without the salesmen to get orders, develop markets and promote new types of products as they become available, expansion of a business would not be possible or even necessary.

This brief history of the Company, that has meant so much for the Borough, has confirmed that the concessions granted to the Company, and the provision of the Durleigh Reservoir were fully justified.

SEALED MOTOR CONSTRUCTION CO. LTD.

In 1940, during the height of the London Blitz, the Defence Ministry asked Electro Dynamic Construction Co. Ltd., situated at St. Mary Cray, Kent, to move away from the area in order to ensure continuity of supplies of the vital equipment they made.

Bridgwater was chosen, mainly because of its good communications, and what appeared to be an adequate labour situation. With the assistance of the Admiralty, a new factory was built on the Bristol Road about one and a half miles from the town.

In 1945, the Directors of E.D.C.C. founded a wholly owned subsidiary called Sealed Motor Construction Co., to manufacture motors designed to operate under water and drive submersable pumps. Progress of the firm was somewhat slow owing to the technical difficulties of producing such a product but in 1955 a chance remark brought the attention of the Company to the possibility of producing pumps for driving water round central heating systems.

For the technically minded, it may be of interest to elaborate somewhat on the principle of the circulating pump. It is now generally accepted as an essential part of a central heating system and must be both durable and reliable. The Rad pump met these requirements and has built up a reputation that created a large demand not only in this country, but overseas as well. Thus it can be seen what a big contribution Sealed Motor Construction made, not only to the prosperity of Bridgwater, but to the National Economy also.

In the early days, small bore central heating was unknown. The! vast majority of heating systems were gravity systems in which the water circulated because of the difference in temperature between the flow and return of the boiler. Owing to the small pressures produced by this difference in temperature, it was necessary to have large pipes which made the heating systems expensive and unsightly. By the use of a small pump, however, it was possible to make the pipes very much smaller, thereby cutting costs and making the installations more acceptable to the householder.

A pump was designed which was, in fact, the first British-designed glandless circulating pump on the market„ It was called the "Hotflow" and had the feature that the motor was entirely enclosed and separated from the water being pumped by a thin disc of high electrical resistivity material.

This separation of the water being pumped from the electric motor was done by a form of glands which did not have a permanent small leak. With a mechanical seal there is always the possibility of leaking plus the necessity of increased power for starting. The glandless circulator, as it is known, revolutionized central heating. For the first time it was possible to install the pump in the kitchen or lounge without the ever-present danger of leaks. By now the boom in central heating in this country had started in earnest and the number of systems installed in new and existing dwellings was increasing very rapidly.

In the years in which S.M.C. have been making glandless circulators, a lot of problems have been overcome and in 1970 more than half the pumps installed in central heating systems throughout the country are made in Bridgwater, At the moment, the company is split into two main divisions - the domestic division, where the circulators are made and the industrial pump division, where a variety of other pumps are made. As well as larger circulating pumps for industrial use, pumps for the chemical and process industries are manufactured and the division is growing rapidly.

A large research company known as Sealed Motor Research undertakes the research work and has contributed in no small measure to the success of the group.

In the last ten years the turnover of the Company has increased fifty times; recently the company offered a proportion of its shares to the public. The response was very gratifying, as the offer was heavily over-subscribed. The future in Bridgwater is indeed bright and many believe that, as far as S.M.C. is concerned, the sky is the limit.

The recent extension of the factory is ample evidence of the continuing success of the company and its products, an extension also indicates to the 600 employees that the future for them is full of promise with security of employment, this together with the amenities offered to them can only result in the maintenance of the good industrial relations that now exist. It is also obvious that both male and female labour seek good and attractive conditions of employment and there is no doubt that Sealed Motor Construction Co. Ltd., satisfy these requirements.

VAN HEUSEN'S CO. LTD.

In the 1880s a considerable business existed in the West Country in the manufacture of Separate Collars and allied textiles, a considerable proportion of this business being centred on Taunton at the undertaking known as The Somerset Manufacturing Co., of whom there were two Partners. These Partners eventually separated, and as a result, in 1897, there was erected what was in those days a commodious Factory in Bailey Street, Bridgwater, which was financed by Mr. H. J. Van Trump one of the Principals of The Somerset Manufacturing Company, and a well known Taunton Industrialist. Mr. Van Trump subsequently took into partnership Mr. W. H. J. Masding and The Tone Vale Manufacturing Co. Ltd., was born.

Before the inception of the Company considerable sums of money were expended in Bridgwater on outworkers to support the new business which was being established, and local records speak of the sum of £7,000.

The erection of the Factory came at a time when there was much unemployment and distress in the Bridgwater area owing to its dependence on the Tile Industry which provided employment for male labour only. It would be appreciated that with the creation of approximately 800 new jobs the Proprietors felt certain benefaction, and in 1911 all employees of the Company assembled in the Town Hall to see a presentation made to the then Principals, Messrs. H. J. Van Trump and W. H. J. Masding.

In spite of the extremely competitive conditions which existed the Company prospered, and at the height of its prosperity became the largest manufacturer of Separate Stiff Collars.

In 1912 there was considerable unrest in the local textile industry both at Taunton and Bridgwater owing to poor wage rates and long working hours. At Bridgwater some 1,000 females withdrew their labour, and there were lively Parades and Meetings held throughout the Town. In 1913 a Conciliation Board was formed and was able to resolve the difficulties and to ameliorate to some extent the bad

conditions which then existed.

Among some of the items of interest which have been noted of the Firm's and its Members' activities, the following are on record: -

In 1906 a severe earthquake shock was felt at the Factory which fortunately caused little damage.

In 1914 Mr. Harry Van Trump, a member of the Firm, had a narrow4 escape from drowning at Minehead where his 'plane plunged into the sea.

World War I saw Khaki Blouses being made for the Womens' Services.

1927-28 were years of depression, many members of the Male Staff were obliged to seek other work and became Bus Conductors, Labourers and anything that offered employment, eventually as business improved all returned to their former employment.

During World War II the Company manufactured Parachutes and Parachute Flares. Part of the Factory was given over to the Bridgwater Manufacturing Co. Ltd., (now defunct) another local textile concern.

In 1952 Mr. Stanley H. P. Masding, son of the original founder, became Chairman of The Shirt, Collar and Tie Manufacturers' Federation.

In 1953 the Company became a wholly owned subsidiary of The British Van Heusen Company, and from thereon its future became more assured.

Its prime products, the manufacture of Stiff Collars and Nurses' Productions gradually fell into decline, and by 1949 a complete withdrawal had ben made from this market. Nowadays the Factory is fully employed in the production of "VAN HEUSEN" shirts.

It is a coincidence that 1969 saw not only the passing of the Separate Collar as a manufacturing responsib-ility but also the decease of Mr. Stanley H. P. Masding who for many years had directed Tone Vale's activities and who had become a well known personality in Bridgwater.

At one time women employed in the Shirt/Collar Industry represented approximately 35% of the female employed population of the area but the increase in industrialisation has brought with it a great demand for female labour in the Shoe and Undergarment Industries, although light engineering has also called for many women operatives. Thus, the Shirt and Collar industry has now lost pride of place as being the largest employers of female operatives averaging now only approximately 5.8% of the employable female working population. Much of the numerical decline is accounted for by vast improvements in labour-saving technology, and although the present labour force is only 220, the improvement in productivity would astonish the original founders.

S. LEFFMAN LTD

S. Leffman Limited was founded by Mr. S. Leffman, the present Chairman, in 1932. Since the Foundation Garment Industry is a comparatively young one, this means that the Company is old established; one which has progressed steadily and increased in size during the past quarter of a century.

When S. Leffman Ltd., sold their first Foundation Garments they were made in London, but with the advent of the War, with the foresight which has kept the Company successful, the factory was moved to Bridgwater. Here in 1939, while the good work was carried on, life began anew. Buildings were enlarged, and new ones built, canteens created and gardens laid out. Since then, new factories have been established in both Somerton and Barnstaple. In the Fashion Centre of London there are attractive offices and Show Rooms where the Sales Department meet Buyers from Home and Abroad and where the garments produced in the three production centres are sold.

Whilst specialising in brassieres, girdles and other foundation garments are made as well. A large number of these garments are sold in shops and stores throughout the Country under the well-known name of Partos; while at the same time, garments are produced for sale by special customers, especially St. Michael, the brand name of Marks & Spencer.

Every year an important part is played in the National interest by exporting merchandise to many parts of the World such as Europe, America and Africa,
It has always been the policy of the Company to maintain a high standard of quality with efficient production and by pursuing this policy, both Partos and other products have become firm favourites with the general public.

Finding accommodation in a builder's yard and workshop in 1939, the years that followed were a period of planned expansion and progress. Not only were the extensions made to the original buildini but an entirely new factory was built and linked to the original; the factory incorporates some of the most advanced technique known to the industry and installed in a building that makes working conditions most acceptable to all operatives.

It is obvious that time and motion study has played a very important part in administration. Stock control is, and must be, of paramount importance too, for the

detailed requirements of the factor; are numerous for many component parts are needed in both a variety of colour and material in the make up of the finished articles, the lay design section is of great importance in reducing waste to a fine limit of the various materials.

High mechanisation, obviously a result of the time and motion study necessary in such an undertaking, calls for every consideration in maintenance, for lack of this would bring repair, so disastrous to production on the transporter system, and annoying where incentive payments are involved.

Welfare has received every consideration by the management and the canteen facilities and accommodation must be considered as contributory factors in making conditions of employment most attractive, and with the good industrial relations that have been built up, there is no reason why the factory cannot remain as one of the most attractive and progressive in the Borough.

The siting of the factory of this kind bears testimony to the fact that it is possible to have well-designed premises in an area, primarily residential, without destroying visual amenities. It is hoped that when Planned Expansion is in due course considered, the factory can be regarded as a fine example.

As with other industries in the Borough, Training is absolutely necessary and this is being well catered for and whilst the number of females in the Borough being employed has increased considerably in recent years, there are vacancies for many more, particularly in making good normal losses.

HERB-ROYAL LTD.,
and GAZELLE PLASTICS LTD

Since 1940 many new industries have come to Bridgwater bringing with them many opportunities in every field of industrial research, increasing the employable population by over 50 per cent.

Whilst many of the firms have an interesting record of progress and achievement, the story behind the success and expansion from a meagre start is most fascinating and great credit is due to Mr. Hans Lederman, the founder and Managing Director who, by his initiative and foresight has brought Herb-Royal Ltd., and later Gazelle Ltd., to a position where their products have become known in many parts of the world, he having pioneered many new products and ideas in catering for domestic pets.

The Company was originally known as Organic Herbal Products and started its activities in 1949 in the back room of a lock-up shop off Cornhill and at one time part of the produce market, employing one man on part-time.

Better accommodation soon became necessary and premises were rented behind what was at one time The British Legion Club and prior to that the Alexandra Hotel, using the skittle alley and the billiard room.

Further accommodation became necessary and this was secured in Penel Orlieu and Market Street but the demand continued to increase and a move to Colley Lane to new and extensive premises followed in 1963 and more recently part of the old wagon repair shop of British Railways was taken over, to which were transferred all the Herb-Royal activities, which is primarily the pet food trade, a large building also being used as a finished goods store.

The main building and the extensions to date cover an area of over 23,000 sq. ft. and a further extension is planned of another 5,000 sq. ft., a lease also having been acquired for 99 years of a further two acres of ground in Tone Drive.

1963 saw the start of a new venture which has brought much success for following the experiencing of difficulties in obtaining a certain type of plastic packaging, the Company entered the field of plastics and were successful in securing a large contract from the United States for this specialised packing and from then on great progress was made entailing extra buildings and equipment, the latter being some of the most advanced in technique known to the industry.

The Company is probably the largest independent thermoforming company in the United Kingdom, Gazelle Plastics Ltd. entering the rapidly growing sector of the economy accidentally but to such an extent that they are now also the only independent concern making their own PVC and polystyrene sheet and film, as that is needed. That facility has given them an important advantage, in that every thermoforming they produce is, literally, tailor-made in every sense of the word. For something like 80 per cent of the Company's output only the raw materials are purchased as are film and sheet materials that cannot be made on their own equipment or are so specialised that they can be obtained more cheaply elsewhere.

Because Gazelle do all their own blending, mixing, colouring and stabilising, and make nothing for stock, they have everything under control, from the preparation of the copolymers and the design and production of the tools, to the forming and printing of the finished packages (or package components) which are delivered by their own vans right to their customers' premises. It is evident that the Company has an adequate background of technical expertise as evidenced by the contents of a book just completed, by the Managing Director, Mr. Lederman, on the subject of plastics choice for food packaging.

The Company's interests in plastics stems from the demands by overseas agents for "rings" of budgerigar seed produced by Herb-Royal, making dry animal foods and food additives to be packaged more attractively and preferably in blister packs.

Contact with the largest maker of thermoforming equipment was made and the Company eventually became one of the first to install an automatic machine, the machine producing sufficient to meet the requirements for blisters in a few hours and, to make the project pay, outside customers had to be found.

A further move followed the information that had been received that a PVC machine had been built in Franconia which in spite of its small size, worked with remarkable efficiency. In fact, it was found that it gave so much flexibility to its owner that a battery of these machines had been established and a flourishing thermoforming business also.

After experiencing some difficulty, one of these machines was acquired and brought to England, later a further 5 machines were purchased and are now working round the clock seven days a week.

The making of film on the premises means a saving on imported film to the value of not less than £100,000 a year. Their need for foreign supplies, however, has led them to take a keen interest in any opportunity that can be found to redress the balance by exporting finished goods

That work, too, is aided by the fact that their materials are made as they are needed so that special colours, for example, can be produced ready for thermoforming in two hours and because of that they have just landed an order from abroad for three million polystyrene cups, and there is apparently, more business to follow.

Gazelle produce mouldings for the food, chemical, pharmaceutical, veterinary, hardware and other trades. With a weekly capacity of many millions of items, they have a plastic turnover approaching 1,000 tons a year, of which 85 per cent is pvc of their own manufacture. Their extruders, incidentally, produce webs of any width up to 28 in. and of any thickness from 0.050 in. to 0.0025 in. These extruders can be switched from one colour to another in less than 30 minutes, or from one material to another in 15 minutes.

The flexibility of the Gazelle operation is such that they can compete, it is claimed, under almost any circumstances, not only in the United Kingdom but also in the Continental markets.

With so much in the news in recent years of industrial strikes and unrest it is gratifying to know that the Company, although employing well over 100 people, have not had a stoppage of any kind in their 18 years of operation. That too, supports the total reliability upon which their present and, they hope, their future prosperity is founded.

With expansion envisaged, and the thoughts of Planned Expansion, may wise counsels prevail to enable an established industry like this, with such a record of good industrial relations, to be given , every opportunity to obtain the necessary labour to provide the staffing of new premises in the interests of economy and the encouragement to still expand, creating a further contribution to local and the National Economy.

Let those concerned with Planned Expansion give priority to housing which will attract many workers to the area to satisfy present requirements and to avoid further industrialisation which can only create instability of the labour force, which can be associated with vicious spirals in wages and rising costs.

WELLWORTHY LIMITED

The history of Wellworthy is in many ways remarkable. From barest beginning just before the First World War, the Company has grown rapidly to its present dominant position in the engineering industry. In just fifty years, the Company has built up sales which today total some £10m.

The foundations of this almost uninterrupted success story are many, but the salient factors are undoubtedly the adaptability of the Company and its insistence on a high quality product. Such progress in many fields of engineering meant that the existing centres of Wellworthy production could not accommodate new factories, not because of the shortage of space, but because of shortage of labour.

Another factory at Lymington, Ringwood or Salisbury would have necessitated importation of labour from other areas. The ideal solution was to find an existing factory in a convenient location where a trained labour force already existed. Just such a factory, previously owned by Wilmot Breeden, was purchased at Bridgwater in 1961. Transport facilities were such that the Bridgwater factory was in fairly easy access from other Wellworthy centres and, above all, there was a labour force, in part skilled and in part accustomed to engineering products and capable of accepting training, much of which Wellworthy could expect to absorb when production began. The factory itself contained 300,000 square feet and there was room for additional expansion.

Some difficulties in acclimatising the labour force at

Bridgwater was experienced at the start, but since then it has grown to be the primary Wellworthy factory in terms of turnover, producing piston and piston castings, in addition, the toolroom at the Bridgwater factory makes a valuable contribution towards the special purpose machine tools which Wellworthy have produced for many years.

The purchase of the Bridgwater factory had temporarily eased the capacity problem, but it proved to be a short interval before the rapid increase in sales and demand again forced attention on the issue of finding additional factory capacity.

The site of the Bridgwater factory had many changes of ownership in the past 100 years, the foundry and engineering works of Messrs. Hennett, Spinks and Else, who were the contractors for erecting the bridge over the Thames at Hampton Court and many other notable engineering works, with the closure of the works the site was taken , over by Messrs. Bowerman & Sons, English Timber Saw-Mills, followed by Trojan Tractors, Salisbury Transmissions, Hardy Spicer, Wilmot Breeder and now Wellworthy. It was a bold decision to purchase a factory in an area where the industrial expansion had already called for large numbers of skilled and unskilled labour with many skilled men having to be imported.

Wellworthy began to realise that it was only by their own efforts in training that the labour requirements could be met or maintained, for with such a factory and the drift associated with over-industrialisation, losses must occur to be made good, this calls for re-appraisal of the technical training facilities in the Borough in ain endeavour to satisfy the increasing requirements for skilled operatives and the Somerset County Council must realise that Bridgwater is an industrial Borough and must therefore make every effort to extend the training facilities thus assisting all industries on which the future prosperity of the Borough depends.

Many subjects dealt with by a Technical College can be considered unnecessary and can have little relation to the requirements or the needs of industry within the Borough and further expenditure on the College must be directed towards meeting these needs.

Unless the labour requirements are met, there will be many changes or drift from one undertaking to another and it is most discouraging that firms who have given extensive training for four or five years then lose the operatives to another firm.

It must be generally recognised that over-industrialisation of an area can create a vicious spiral in wages and many workers constantly seeking changes of employment. This is most disconcerting to a factory such as Wellworthy with a number of specialised branches of engineering for which good training is necessary,, Conditions of employment at the factory must be of some attraction and these seem to be much in evidence, a contributory factory to the maintenance of good industrial relations which obviously prevail. The various sections of the works have every evidence of being well-controlled with all operations following in the correct sequence, no doubt due to the careful consideration given to time and motion study from the handling of the raw material to the finished article.

Whilst the ownership of the works has changed a number of times, there is every indication that Wellworthy will continue to make a large contribution to the industrial prosperity of the Borough.

H. F. TOTTLE & SONS LTD

In recording the activities of the many firms that have come to Bridgwater within the past 'tO years, the history of those that were founded in the early part of the Century and, indeed, those that were a part of the industrial life of the Borough in the last Century, must be worthy of some mention.

In most cases the success that has followed, bears testimony to the spirit of adventure that influenced those who commenced with little capital and in meagre surroundings, one of the most successful is that of H. F. Tottle & Sons Ltd., of Bristol Road, the founder being Harry F. Tottle who ventured to start business on his own account in 1908 in a small building at Enmore.

His next venture was the opening of a china shop and general bazaar in St. John Street but at a time when the requirements of the day were small items of joinery and cabinet making, a small workshop being erected in the back garden of the shop and some of the main lines were the Windsor chairs and "living-room furniture" associated with the general class of working families of those days, finished in a serviceable stain and varnish.

Progress was being well maintained during the years that followed until the intervention of the 1914-18 war and when the founder was called to undertake other work as a part of the war effort it was not until 1918 that he was able to recommence operations in the joinery and cabinet making field, expansion and growth over the next few years was rapid and, after buying the dwelling house and garden next door, a two-storey factory was built over both gardens, but ever this was inadequate to cope with the expanding business and further thought had to be given to the provision of larger premises.

It was in 1926 this decision was made and a field was purchased just one hundred yards outside the then Borough boundary and in the Parish of Bridgwater Without, the industrialisation on the Bristol Road then commenced with the erection of a factory which housed, what was at that time, some of the most modern machinery known to the - wood-working trade, the factory then being virtually "in the country"

General design of the factory, being on the main road, was most important and this was entrusted to Mr. F. A. Gabbut, the well-known local Architect, whose efforts would today meet the exacting and dictatorial demands of the established Planning Authorities, the design and general appearance of the building comparing most favourably with many of those that have since been erected in the Borough.

The building was erected by the H.F.T's own labour force with materials from the old Temple Mead Station at Bristol, including the roof, and was one of the first Joinery Factories of its kind in the country and many craftsmen, some of whom are now in business on their own account, were trained in this factory.

This was, of course, before very much mass-production and standardisation was the rule of the day and craftsmanship was still essential.

1965 saw the passing of the founder of the business but the family connection still continues with a son, Mr. George Tottle, a . Director in the Company and another son, Mr. Wilfred Tottle, having been for many years Managing Director of Somerset Timber Products Ltd., Avalon Joinery Works at Glastonbury, and one of the English China Clays group.

The works at Glastonbury incorporate some of the most modern timber processing plant known to the industry, working conditions and welfare having every consideration, these no doubt having made some contribution to the continuing success of the Company, but whilst it is pleasing to record the progress that has been made, it is most gratifying to know that in spite of many changes that have taken place in many industries in recent years, members of the family of the founder of H. F. Tottle & Sons Ltd., are still actively engaged or associated with timber processing.

A fire of a serious nature occurred at the Bristol Road works in August 194 which greatly interfered with production and it was only by a supreme effort by all employees of the Company that the fire was brought under control which made possible an early resumption of normal production and the completion of many contracts.

Housing in those days was primarily of prefabrication, being mainly of wood construction and for which the Company provided the component parts for many contracts in various parts of the Country, particularly for the Cornish Unit type dwelling, favoured by many Local Authorities on price and speedy erection, Bridgwater Borough Council being one of the Authorities, erecting many of this type on the Sydenham Estate.

QUANTOCK PRESERVING COMPANY LTD

In recording the various industries that have contributed to the industrial prosperity of Bridgwater, few can be of such interest as the Quantock Preserving Company Limited for the firm was founded in 1926 at the time when unemployment was exceedingly high and the start of an industry that would alleviate the position by providing some employment was most welcome.

The acquisition of the premises, formerly the Wembdon Brewery and owned by the Churchill family, was really intended for the purpose of manufacturing jam and sold under the name of Somerset Fruit Products Limited, this was followed by the formation of the present Company under the Chairmanship of Robert Chamberlin Esq., and by sheer initiative and remarkable foresight, excellent progress was made in the years that followed.

The Company expanded and modernised its production technique to a point where it became recognised as a reputable Company with a national distribution for jams and candied peel, the manufacture of which is carried out with the most stringent attention given to hygiene, a necessity in the preparation of food, with every endeavour having been made to provide good working conditions for all employees, so necessary in the establishment of good industrial relations.

During the Second World War the Company, in line with other food manufacturers, was controlled and zoned by the Ministry of Food but at the end of this period, expansion and modernisation took place once again.

In the late 1940's, the Company had one of the most up to date jam boiling rooms in the Country and was situated on a 17 acre site. Although jam was still rationed during this period, expansion was allowed to take place due to the relaxation of controls by the Ministry of Food until the early 1950's when the controls were abolished.

Due to a general retraction in the preserve industry, when the demand halved, competition in the trade became extremely acute, and whereas in previous years the trade had been built up on domestic size contents of 1, 2 and 3 lbs. the Company decided to

specialise in the production of Bakers and Confectionery jams to meet the demand of the developing plant Bakeries. This proved to be a fortunate decision, as the domestic market continued to shrink while the confectionery and bakery markets increased. New products were introduced to support the jam production, although the main bulk of the turnover remained in preserves.

In the early 1960's, the Company made a tremendous advance with] the introduction of the bulk handling of jams in 7 and 15 ton road tankers for use on automatic plant bakeries and biscuit manufacturer 's lines.

In 1965, negotiations took place with the largest jam manufacturers in the British Isles for the whole purchase of the issued share capital of the Company. On June 10th, 1965, the Quantock Preserving Company Limited became a wholly owned subsidiary of the James Robertson & Sons Preserve Manufacturers Limited. Since this date the Company has continued to expand and diversify its efforts.

In 1946, a new canning line to produce domestic fruit fillings was built and within twelve months had become second to the brand leader in this market.

A. further sophisticated canning line was built a year later to process canned new potatoes. It is intended that this canning line should be extended to incorporate a complete range of canned vegetables.

Currently the Company is now situated on a 21 acre site of which approximately 14 acres are covered with modern storage and process buildings. The Company currently produces 6% of the jam produced in this country; 85% of all the cut mixed peel produced in this country and uses some twelve million cans per year. Approximately 550 personnel are currently employed.

Extensions to the existing buildings are envisaged, evidence of the progress that is being maintained, this will call for additional labour and it is hoped that when Planned Expansion for the area is being discussed, due consideration be given to the requirements of the already established industries whose labour requirements must be satisfied before encouraging further industries which will do no more than stretch the already short labour force of the area, thus creating further spirals in wages and increasing production costs.

It is interesting to know that members of the family of the late Lt. Col. Robert Chamberlin, O.B.E., whose services to the Borough are widely known, are now Directors of the Company, Mr. M. R. Chamberlin as Managing Director.

THE POST OFFICE SUPPLIES DEPOT.

Trade and commerce today calls for an efficient Telecommunication system and much progress has been made by the Post Office in providing this service to industry and, indeed, the whole community.

The technological advance in recent years in the field of Telecommunications has introduced a wide variety of new plant and equipment which calls for an extensive range of spares or supplies making it necessary for a comprehensive stock to be held to supply or to maintain the service.

The Depot radiates an efficient service over approximately half of the Country being one of seven depots serving the British Isles and it is obvious that close attention is necessary te stock control with inventories constantly under review, with despatches needing to be promptly and efficiently dealt with, and there can be no doubt that all phases of the administrations are well and adequately dealt with.

Mention must also be made of the security arrangements at the Depot, common to all Government establishments, those engaged appearing to be most efficient but helpful and courteous.

The Depot provides employment for a little over 200, male and female with ample opportunities for the ambitious to secure advancement or promotion within the framework of the Post Office Service.

Whilst the Depot cannot be regarded as an industry in the true sense of the word, it obviously is an undertaking which is capable of providing good and remunerative employment although labour changes are inevitable from time to time.

The building was originally constructed before the Second World War for Messrs. Brintons of Kidderminster for the making of carpets but closed some years later, the premises were then acquired by the Post Office Supplies Division in 1953 and in 1963 extensions were carried out and completed within ten months at a cost of £200,000, the Depot now having a covered area of 12 acres with a further 5 acres for extensions if required.

The location of the Depot is such that being near the town and on the main bus routes little difficulty is experienced by employees in getting to work, although many have their own transport.

CLARKS LTD. REDGATE
Shoemaking in Bridgwater

Shoemaking in Bridgwater began in the dark war years when American boots were being rebuilt in the Street factory. In the Company acquired No. 28A St. John Street for the purpose of machining the uppers

of service shoes and later "demob" shoes. These premises were later to be known as Eastgate. This was the first Clarks factory in Bridgwater, but more important, it was Clarks first venture outside Street since the Company had been founded 119 years before. Eastgate became a Closing Room employing 87 girls, machining Wessex shoes for the women's factory in Street.

The next step was to take over No. 66 a little further up St. John Street, Formerly a dairy, the factory building had also been used as a steel store by the Trojan Car Company who had been commandeered by the government for shell-making. An unlikely place to start a shoe factory, but production began in July 1945, the object being to develop the manufacture of Californian slip-lasted shoes which was a new process brought from America in 1947. The factory at No. 66 became known as 3t. John's Factory and the Closing Room at Eastgate continued as a Closing contract unit until July 1962.

It was soon decided tc build a permanent factory in Bridgwater, and a site was purchased on what was previously farm land, the farmhouse itself and all the buildings being taken over at the same time. These are still in existence and are known as Redgate House, the farm and the bull pen.

In May 1946, the foundations of the present Redgate factory were laid, the first spit being cut by the grandson of Field Marshall Smuts, the factory going into production in January 1947, and being officially opened by the Mayor of Bridgwater, Lt. Col. Robert Chamberlin O.B.E., in May of the same year. The slip-lasted work was transferred from St. John's and by the end of 1948, Redgate was making 4,000 pairs a week, with a labour force of 260.

In April 1951, Redgate celebrated making the first 100,000 pairs of the Moonraker shoe and by 1954, 500,000 pairs of this best seller had been sold. In 1955, the Redgate farm buildings were used to develop the new Coronella range of shoes (originally Grown Clippers) which were later moved to St. John's until 1957 when the Coronella unit at New Road was opened. Just over 100 people were employed there until 1959 when it was closed and Coronella moved back to Redgate.

Clarks shoemaking in Bridgwater continued at both Redgate and St. John's factories until December 1966, when St. John's was absorbed by Redgate and the premises closed down.

Among the very latest shoemaking techniques being used at Redgate is the manufacturing of shoes with light-weight, hard-wearing polyurethane soles and heels. This is a new process which Clarks have been developing since 1966 and with which they lead the industry in this country.

Over 15 million pairs of shoes have been made at Redgate since 1947 and today 570 employees make over 20,000 pairs of women's casual shoes and sandals per week. This pairage includes both slip-lasted and conventionally constructed Caribee sandals and Clipper shoes together with a new range of waterproof polyurethane soled shoes.

The factory, being well designed and with good amenities is obviously capable of being a great attraction to those who desire employment with good conditions and good earning opportunities.

The training of personnel for the factory is carried out within the framework of the Clark organisation, hence the reason why no course has been provided at the Local Technical College.

KRAFT PRODUCTIONS LIMITED

If a manufacturing company is to be successful, it must be constantly aware of the need for continuous progress and initiative in its endeavours to cater for the general public with products that are not only novel and attractive but of necessity.

The furnishing of homes in this day and age calls for constant change in styles, coupled with the fact that prices must bear some relation to the value offered.

This has no doubt been the policy of Kraft Productions Company since its formation over forty years ago and the continuing success is obviously the result„ It must, therefore, be a source of considerable pride that in only one year, in the changeover from Peace to War in 1940, has it failed to make a satisfactory profit.

Such a record of success had been rare in the Furnishing Industry and in an endeavour to cover the position of Death Duties it was decided to make a Public Issue and the public having such confidence in the Company that priority applications for shares were nearly four times over and above the number of shares available, the applications having to be heavily scaled down.

When the business was started in 1927 by a Mr. I. D. Goldsworth who, incidentally, had close connections with Mail Order Companies, he wished to have his own production source for the handmade wicker armchairs which were then popular in Mail Order business and when he set up in business in Bridgwater, Mr. C. W. (Dan.) Lewis, whose passing in 1967 was a tragic loss to the Company, came in charge of production by a handful of workers who were undoubtedly highly skilled in wicker work, for which a high reputation had already been established and this had been one of the traditional trades of the

area.

The trade was on the verge of big changes and, in 1929, the first woven chair material, as it became known was marketed.

The Company had further success between 1929 and 1933 when it produced the first practical chair in Woven Fibre and selling at eight shillings and sixpence, from there on, there was steady expansion which demanded larger premises. The current site was acquired in 1935 when the first private Company, Kraft Productions Ltd. was registered. There was another problem in that there was not then a really satisfactory cellulose or synthetic finish for Woven Fibre and Loom materials and paint troubles were common, it therefore became necessary to secure or manufacture a completely functional enamel to overcome the difficulties the Company and others were having with existing products, a small enamel paint plant was then installed for making the desired finishes which gave the Company fresh boost, it was then that Mr O A. Aitkenhead joined the Company.

The new venture was a success and at the outbreak of war, over a hundred people were employed and the Company's products interested the Mail Order companies, but as with many other companies, the war brought disaster with the solitary financial loss and the break-up of the labour force, requisitioning of most of the factory followed.

Many articles necessary to the war effort were produced, in particular when it was realised that the wicker basket was the best way of delivering supplies to both troops and the occupied territories, many Airborne Panniers were called for and within eighteen months, Kraft had become the largest national producer. The war ended however with the Government in occupation, worn out machinery and a large sum of money owed by the Ministry of Supply, the settlement being obtained after costly litigation.

Plans were, however, put in hand in 1946 for rebuilding and the installation of new machinery, providing work for men returning from the forces and no man had to wait for his old job back.

The Utility scheme introduced for furniture after the war excluded Woven Furniture, but the Company was most successful in having this included and approximately 75% were designed in the factory,. This at the time when the Managing Director, Mr. C.W. Lewis, was granted Letters Patent for the tubular leg and understay for chairs, this became a universal method of construction.

With the end of Utility, the Company was free to extend its range including fireside chairs and veneered ottomans and expansion continued, meeting with difficult trading in the mid-sixties, but this was offset by increasing the range of products, combined with new selling techniques.

It is very hard indeed when immersed in day-to-day problems and difficulties to stand back and analyse the whole undertaking and it was considered expedient to bring in outside expertise which sharply increased the expansion rate and if in the past it was common to despatch 550 pieces per day, despatches have reached 862 pieces.

In the process of consolidation and expansion, the Company has maintained close contact with its customers and in return have secured and maintained their confidence, a tribute to the Sales Organisation that has been so successfully built up, particularly on the mail order side but new methods and new ideas have to be tried and priced with a readiness to invite or to accept constructive criticism in an endeavour to make the Company a co-ordinated whole. There can be no doubt that the reputation that the Company has built up will be retained and whilst the furniture trade will be highly competitive, there are reasons for believing that the future of the Company is full of hope and promise, continuing to make a useful contribution to the industrial prosperity of the Borough.

It is a matter of interest to know that two sons of the late Mr. C. W. (Dan.) Lewis, (Chairman of Directors for many years) are still actively engaged with the Company as Directors.

The Company's turnover now exceeds half a million pounds per annum.

WILLS PRESSURE FILLED JOINT RING CO. LTD now FOTHERGILL & HARVEY LTD

Whilst the firm of W. & F. Wills Ltd has been dealt with earlier in the book on the founding of the firm and its progress in general engineering, a most interesting development was the invention of Mr. Percy Wills, son of Frank Wills, one of the founders of the firm, of the Pressure Filled Joint Ring for which patent rights were granted in 1932.

Experimental work and tests were carried out in various materials over a fair period and in due course a company was formed to produce the patent joint ring commercially, the product soon became widely known and is now used by many large undertakings in the country, also the main shipping lines for steam joints, the demand greatly increased before the war when the sole selling rights were granted to a Division of General Motors, Petters engines (Yeovil)

were also fitted with rings as cylinder head joints, the rings being made of cupro nickel.

In 1950 the Company started to trade far more independently, the success of the Company called for larger premises and a few years later a modern factory was built in Colley Lane.

Prior to that, particularly during the war, the products of the Company were directed to the Air Ministry, mainly to the British Aeroplane Co. Ltd. although there were many other purposes for which the ring was used in the vast armament programme and therefore making some contribution to the war effort, but the industries that have used the ring would of course be too numerous to mention.

The present outlets for the Wills Ring are the aircraft industry, nuclear industry and for use in hydraulic systems, and as the cylinder head joint for high performance engines, both racing and rally. One interesting application outside the jointing field, is that of the Martin Baker ejector seat, where the rings are used to absorb the energy created when ejecting, to prevent the seat ripping out of the aircraft, and also preventing recoil.

The Company diversified into P.T.F.E. (Polytetra-fluoroethylene) in 1953, and this allowed considerable growth, P.T.F.E. is a plastic material with extremely low friction properties, and the ability to operate at temperatures down to minus 100 deg. centigrade and up to plus 250 deg. cent, being almost completely chemically inert, and only attacked by the molten alkali metals. It also has extremely good electrical properties.

The Company produced its own semi-finished material in the form of moulded and extruded sheet, rod and tube, and the outlets were mostly to consumer's designs, typical applications being sealing rings, bearings, valve seats and electrical insulators. The basic powder was supplied in earlier years by I.C.I, under the trade names of Fluon and DuPont now under the name of Teflon.

The work of the Company is one example of how technical progress in most of the industries of Bridgwater has brought a complete change, of character from that of the earlier years of the century when the industrial life of the Borough was so dependent on the raw materials found in the area, the processing of which had remained primitive for so many decades.

Whilst some progress was made in certain sections, others were rather lax in appreciating the need for progress and continued to operate under these primitive and degrading conditions, in buildings that were long overdue for demolition with the result that many undertakings had to succumb under the pressure of the more advanced industries and competition of substitute materials.

SHELL MEX & B. P. LTD. DUNBALL

With the industrial expansion in the Borough of Bridgwater in recent years many firms have been converted to fuel oil for power and heating, it is therefore essential that a good and efficient service be provided to meet the requirements of the various undertakings, not only the needs of industry have to be met but the general motoring public and domestic premises have to be catered for.

The installation of Shell Mex & B.P. Ltd., at Dunball has proved to be most capable of providing this service and a fine example of this is the pipe line from the depot to the largest industrial under-taking in the area whereby fuel oil is preheated to a temperature of approximately 120 deg. Fah., stored and delivered as required, thus dispensing with the need for a continuous road vehicle delivery service.

Extensions to the depot are envisaged to meet the increasing demand for all grades of fuel, not only from the motoring public but by so many industrial undertakings desirous of changing to oil on grounds of economy, cleanliness and the unsatisfactory state of the declining coal industry.

From the depot at Dunball radiates a service over a very large area in the South-West of over 4,000 sq. miles from a line Weston-s-Mare to Devizes and from Weymouth to the west coast of Cornwall the area incorporating parts of Wiltshire, Somerset, Devon and the greater part of Dorset.

This very large area calls for service by both day and night, for which is provided a well maintained fleet of road tankers from the depot, the fleet to be increased, obviously, as and when necessary to meet the increasing fuel demands.

Those who have been concerned with trade of the Port must be aware of the decline in tonnage imports in the years prior to the last war and in the years immediately after, also that exports in recent years have ceased, but import tonnage since 1953 has shown a marked increase following the installation of the plant at Dunball. Petroleum to the depot constituting 86 per cent, of the total import tonnage in recent years, there is every indication that this total will be exceeded.

This is a true indication of the importance to be attached to the depot, for whilst it cannot be regarded as a manufacturing industry its service to the industrial undertakings, indeed to the whole community must not therefore be underestimated, in fact the evolution taking place, yet to be completed in

the utilisation of fuel oil brings full appreciation as to how much the life of the community depends on oil.

In such a large distribution depot much depends on the full co-operation of all personnel and the good industrial relations, which exist between employees and management.

[CONCLUSION]

The industrialisation of the Borough since 1935 has given it pride of place as being the largest manufacturing centre in the County of Somerset, which can be shown by comparing the rateable values of the industrial premises in the various towns.

It ranks first with a value in 1968 of £286,698 with a population of 26,730, the industrial rateable value of the Rural District Council being £42,363 with a population of 25,410. Keynsham being next with £182,966, Yeovil and Weston-super-Mare being third and fourth. Bridgwater is also high ranking in the rateable values of its commercial, Crown and other properties.

Factors favourable to the growth of further industrialisation in the area are its situation to near the centre of the County close to the spine road to the south-west, now in course of construction and of course the availability of suitable labour which may possibly be provided by a carefully arranged overspill population, this will however call for careful consideration in the light of existing labour requirements.

The present manufacturers of Bridgwater include animal foods, cellulose film, circulating pumps, diesel pistons, electrical gear, firearms, food preserves, furniture and timber products, lingerie, motor vehicle test equipment, shirts, shoe-making, steel wire and many other goods on a smaller scale.

Some firms export a large proportion of their products, one firm to over 80 different countries. Banks provide services not usually found in towns the size of Bridgwater. The Post Office has built up a territorial supply depot in Bristol Road, one of seven serving the whole of the United Kingdom.

Many of the older industries and on which the Borough at one time depended that relied on materials for manufacture found in the area, have now disappeared, having failed to make progress which was demanded in a fast moving technological era, the most important of these industries being the manufacture of clay roofing tiles and bricks, for which there were 20 works in the area. Much has, however, been written on the decline of that industry and the reasons but industrialisation of the area is such that no difficulty has been experienced in placing those that became unemployed as the result of closure of works, for there has been a gradual run-down of the labour force, which at one time at the turn of the century constituted approximately 50% of the employable population.

Bridgwater can no longer be regarded as a sizeable port for exports in the last few years have been nil and imports greatly reduced, the greatest imports being fuel oil to the Shell Mex and B. P. Installation at Dunball from which products are distributed over a large part of the South West region. Timber imports have been fairly maintained, and there is a concentration of some 15 firms dealing with bulk timber, joinery and furniture.

The expansion of the engineering and electrical goods industries has been most marked for from 1958 to 1968 there was an increase in the number of those engaged in these industries of 58% to a total of 2,350. The marked increase in industrialisation has obviously brought Trade Union membership to a very high level and the Amalgamated Engineering Union and Foundry Workers have a membership of approximately 2,000 but when the Amalgamated Society of Engineers merged in 1919 with other unions to form the A.E. Union, the local membership for some years did not exceed 50 but catering for sickness and superannuation with membership very selective.

In recent years the Union has opened its ranks to cover all engaged in the industry whether skilled, semi-skilled or unskilled and is made up by four Branches within the long established Highbridge and District Committee formed prior to the First World War when the Highbridge Branch was practically dependant on the Locomotive works which was closed in the 1920's and moved to Eastleigh, no doubt some of the present members being employed in the industries that have been opened in recent years.

Many women engaged in engineering establishments are now catered for by the Union by the formation of a. Women's Section which at one time would not be considered possible, but the employment of women c in all branches of industry has now become an accepted fact and represent approximately 36 per cent of the employable population of the Bridgwater and Rural District area which was 19,750 in 1970, the anticipated expansion of certain industries will call for many more.

Public utility employees have increased in the same period by 88% but Agriculture and Mining (quarrying) employees fell by 30%.

The drift from agriculture continues, obviously due to the better wages and conditions that are available in other industries but labour losses are mostly offset by the progress in mechanisation, greatly reducing the

demand for unskilled labour, the mechanisation however will mean that the agricultural employee will move into a category that will rank him as a skilled operative not only in handling complicated machinery but in its maintenance.

Due regard must therefore be given to technical training to ensure that there is a constant flov; of skilled operatives in all branches of the industry which will create higher efficiency and productivity.

The decline in recent years in the numbers employed in the building industry and construction is no doubt due to the fact that many skilled operatives have found more remunerative jobs, with better working conditions in other industries, being quite prepared to lay aside their tools of trade, the economic position has from time to time also curtailed building operations.

The type of building construction of recent years is such that work of the skilled bricklayer has gradually diminished, this will obviously mean that few youths will have a desire to become apprentices in this declining trade.

The growth of Trade Unionism in the past 50 years has brought little change in the aims and aspirations of the movement, with little narrowing of the gulf between employer and employee although the Bridgwater area has been fairly free from such disruptive elements that have become fairly prominent in other industrial areas.

It was during the later years of the last century and the early years of this that conditions were such that a higher standard of living was demanded with better working conditions and a true assessment of the value of man's labour and its contribution to the prosperity of any undertaking.

There were riotous times in the Borough which brought about an upsurge in Trade Unionism although it was not linked strongly with the then budding Labour Party which was destined to acquire power as the years passed, although it was a power that was subjected to the dictates of the Trade Union movement.

If Trade Unionism has as its prime objective the securing of better wages and conditions as the reward for men's labour, the duly appointed leaders must lead and be willing and capable of negotiating for such rewards on democratic lines which will eventually lead to a settlement of a dispute on terms honourably accepted by both sides and to ensure that agreed terms are duly implemented, unfortunately the uncontrollable power of the Trade Union movement has often been revealed when some sections, such as the Dockworkers and a few others refuse to negotiate or have discussions in an endeavour to reach at settlement, insisting that their demands must be satisfied, unreservedly and without compromise.

The efforts to obtain industrial peace and to prevent strikes were contained in the paper "In Place of Strife" and submitted to the Trade Unions in due course but rejected as being unacceptable in all its phases and the Labour Government had to concede defeat but if this happened with what was considered to be the "give all and take all" Government what hope can there be for any Government dedicated to bring about industrial peace and to offset industrial anarchy that could follow strong measures that may be taken to avoid further inflation or to halt the vicious rise in wages and costs of production.

No Government has yet been permitted to make progress in the halting of the spirals in wages which are followed by increases in costs of production and living, it may be that at the end of the century, the £ will have but little value.

70 years ago, the age often spoken of as the "good old days" marginal increases in wages asked for were between 1 and 2 shillings per week of 56 hours, demands are common now for £3 to £4 per week of 40 hours or less, it is therefore imperative that the answer be found to these astronomical increases, failing this the industrial war will continue with the rejection of wage claims being followed by strikes and unrest which will be detrimental to the Country's economy.

With strikes, as in war, there are no victors although one side will emerge with a little gain but achieving so little for wage increases must be countered by increases in selling prices to the consumer, the gain is therefore only temporary with a return to square one.

Whilst the major industries in the Borough have been dealt with in the book there are others employing less than 100 that are making some contribution to the industrial prosperity of the Borough and some will, as the result of successful trading, find the need to expand.

Local Councils may in due course discuss Planned Expansion whereby industries are invited to the area "lock stock and barrel" but this has not been too successful in other areas, for when firms have decided to move in some cases 40 per cent of the employees have refused to do so owing to their domestic obligations, with the result that the labour force in the area to which the firm moves is stretched and competition for labour follows and the survival of the fittest.

The last decade has been one of frustration and social decay which has been so detrimental to the Country's

Economy and loss of confidence abroad, the trend has been towards strikes and protest marches, the latter not only with industrial disputes but demonstrations and disorder in the expression of views by many sections of the sick society in which we live, even prominent members of the Clergy have been active in leading some marches and demonstrations rather than confine their activities to restoration of sanity and endeavouring to halt the drift from true Christian Fellowship, There were a few protest marches and demonstrations many years ago in the Borough and associated with the brick and tile industry and the collar factory workers but only on one occasion was there disorder.

As Bridgwater has been free of industrial disputes entailing marches and demonstrations it may mean that industrial relations have locally reached a level of understanding that militancy has been somewhat subdued. This does not mean that the traditional gap between employer and employee has been greatly narrowed but it may mean however that there has been a higher level of understanding between the two sides by which the answers to many problems can be found, particularly if there is a genuine desire to find a solution on terms honourably accepted and implemented by both sides.

The industrialisation of Bridgwater in recent years has been such that some firms have and will experience labour shortages, what appears to be lacking is local labour research, for if this was possible it would be more effective in developing forward labour market intelligence in the area so that major redundancies could be foreseen and plans for redeployment made more effective, it could also mobilise resources for retraining and relate them to local labour shortages and surplus.

What must always be kept under review is the increasing pace of technological change, the persistence of labour imbalances and the changing composition of the area's workforce, further the rising costs will make employers more selective in engaging people and the problem of occupational choice may become more complex, it is also most apparent that with the higher level of income and social security payments people are becoming more selective about the jobs they will take.

It can be said that drastic changes have taken place in the industrial life of the Borough, but history will record the days of poverty and want when life for many was a mere existence with limited resources, there is now an era of prosperity and a promising future.

No survey of local industry would be complete without some discourse into the nature of the utilitarian buildings, relics of the old industries and legacies of a past era. Unfortunately they are disappearing from the local scene in the wake of modern industrial expansion, but demolition has revealed workmanship of actuated skill and stability, some will remain ghosts of former industrial activity.

An update to 2016

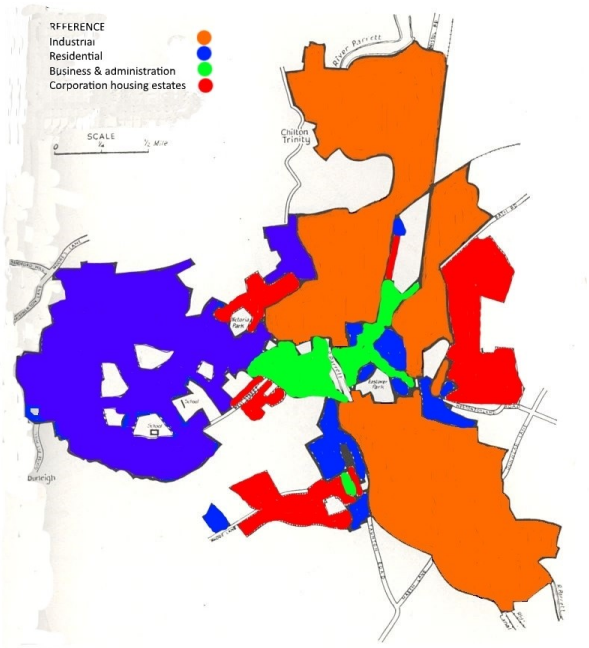
by Tony Woolrich
Hon Curator, The Blake Museum

It is not possible to discuss in great detail the events between 1970 and the present, but this brief outline will serve to indicate the main developments in Bridgwater's industrial and commercial life.

Bridgwater is now a major centre of industry in Somerset, with industries including the production of plastics, engine parts, industrial chemicals, and foods. It is a major regional centre for distribution and warehousing. In consequence the town has expanded way beyond the medieval boundary with more housing, in the adjoining civil parishes of North Petherton, Chilton Trinity, Bridgwater Without and Wembdon and the population at 2011 is 35,886, or 41,276, if the surrounding areas are included.

THE EXPANSION OF BUSINESSES

A number of smaller enterprises had historically been located within residential areas, and to encourage firms to locate in Bridgwater, business parks were established outside of the built-up areas. The Borough Council established one before the second world war along the Bristol Road, beyond the residential houses, and between the A38 and the railway. In 1936, British Cellophane Ltd started on a site beyond the Borough boundary at Bath Road. During the war a number of firms moved to Bridgwater following bomb damage to their premises in London and elsewhere.



Land use in the Borough in 1948
Extensive areas were occupied by the various brick and tile yards to the north, east and south of the town.

These had largely ceased to function by the 1960s, and some, such as the Crossways site at Huntworth had been used for landfill.

Another business park was established after the war in Colley Lane, on property which had been used by the military during the war as supplies depots, and also as workshops by the Great Western Railway Company. This extended to 30 acres, and the Council laid out new roads. Wills Pressure-filled Joint Rings, Wellworthy, Sealey & Sons, wicker furniture manufacturers, Herb Royal, Bridgwater Firearms. Ltd, Bridgwater Warehousing Co. Ltd, Quantock Metals, Premix Concrete Ltd were early there.

By 1974, when Sedgemoor District Council was formed, Bridgwater's manufacturers comprised:

Animal Feeding Stuffs
J. Bibby Agricultural Ltd., Dunball, Bridgwater.
Bowering's Animal Feeds, The Docks, Bridgwater.

Bonded Fabrics
Bonded Fibre Fabrics Ltd., Bath Road, Bridgwater.

Batteries
London Battery Co., Bristol Road, Bridgwater.

Concrete Blocks
Kenny & Murphy, Colley Lane, Bridgwater.

Electrical Control Gear
E.D.C. Electricals Ltd., Bristol Road, Bridgwater.

Electrical & Mechanical Engineers
Elliston, Evans & Jackson Ltd., Bath Road, Bridgwater.
The Great West Engineering Co. Ltd., Bath Road, Bridgwater.

Farm Buildings & Fittings
Somerset Agricultural Equipment Ltd., Edington, Bridgwater.

Firearms
Firearms Co. Ltd., Colley Lane, Bridgwater.

Furniture
Kingsley (Artware) Ltd., Colley Lane, Bridgwater.
Kraft Productions Ltd., Cornborough Place, Bridgwater.
W. Sealey & Son Ltd., Colley Lane, Bridgwater.
R. Slocombe & Sons Ltd., Monmouth Street, Bridgwater.

Fencing Contractors
Coate's Fencing Ltd., Bristol Road, Bridgwater.

Foundation Garments
S. Leffman Ltd., Provident Place, Bridgwater.

Flexible Packaging Materials
British Cellophane Ltd., Bath Road, Bridgwater.

High Pressure Temperature Sealing Devices
Fothergill & Harvey Ltd., Colley Lane, Bridgwater.

Industrial Brushes
Morgan Brushes Ltd., Combwich, Bridgwater.

Joinery
Gillson Bros. Ltd., East Quay, Bridgwater.
H. F. Tottle & Sons Ltd., Bristol Road, Bridgwater.
Western Woodworking (Bridgwater) Ltd., Puriton,

Milk Products
Milk Marketing Board, Cannington, Bridgwater.

Pistons
Wellworthy Ltd., Colley Lane, Bridgwater.

Plastic Products
Gazelle Plastics Ltd., Colley Lane, Bridgwater.

Plastic Vending Cups
Autobars Vendabeka, Wylds Road, Bridgwater.

Precision Engineers
W. & F. Wills Ltd., Salmon Parade, Bridgwater.

Precision Machining, Plastics & Metal
Trig Engineering Ltd., North Petherton, Bridgwater.
Preserves and Jams
Quantock Preserving Co. Ltd., Wembdon Road, Bridgwater.
Printers
Bigwood & Staple Ltd., 40 Market Street, Bridgwater.
B.W.W. (Printers) Ltd., Colley Lane, Bridgwater.
Robert Lee Ltd., 18 Northgate, Bridgwater.
Whitby, Light & Lane Ltd., 6/8 George Street, Bridgwater.
Pumps
Sealed Motor Construction Ltd., Bristol Road, Bridgwater.
I.T.T. Flygt Pumps Ltd., Parrett Way, Colley Lane, Bridgwater.
Shirts and Collars
R. M. Moody Ltd., New Road, Bridgwater.
British Van Heusen Co. Ltd., Bailey Street, Bridgwater.
Saws
A. E. Coles (Bridgwater) Ltd., Hamp Green Rise, Bridgwater.
Shoes and Boots
Clarks' Ltd., Redgate Street, Bridgwater.
Transport Servicing Equipment
Crypton Triangle Ltd., Bristol Road, Bridgwater.
Wire Drawers
Somerset Wire Co. Ltd., Bristol Road, Bridgwater.

Sedgemoor District Council redeveloped the Castle Fields area, where were located the remains of various brick and tile enterprises. The site of the former Somerset & Dorset Railway's terminus, Bridgwater North, was redeveloped as a Sainsbury's supermarket. The route of the Docks Railway from the Cross Rifles became a major road, crossing the river by Chandos bridge, funded by Sainsburys and opened in 1988. East Quay was extended by Wylds Road linking the new road with Bristol Road, and on it were built a series of multi- purpose structures which could be used for warehousing or retail.

Also re-developed was the town's swimming pool, the Lido (which had been opened in 1960) and the rugby club ground. These were adjacent to the route of the new dual carriage-way Broadway between Taunton Road and West Street. A Safeway super-market and a warehouse for B & Q were built there.

A small business park was in the remaining buildings of the old Bridgwater gas works (built in the 1830s), on Old Taunton Road, by the Canal but these were demolished when the site was redeveloped for residential use around 2010.

Adjacent to the Colley Lane estate, in Salmon Parade the old factory of Wills's has been redeveloped as a small industrial park.

RECENT BUSINESS PARKS

In North Petherton parish, beyond the Bridgwater boundary, Huntworth Business Park was built in the 1980s adjacent to Junction 24 of the M5, where were located depots for Argos and Gateway supermarket, Trig Engineering, a small hotel and a motorway services. This later expanded towards Bridgwater on the old Bridgwater Showground site, where are located Langdon's Transport depot. Also here, adjacent to the canal bank, and accessed from Marsh Lane, was the social club for CEGB Hinkley Point workers, which also could act as a command centre should there be an incident at the power station. It was later sold to the Brunstead Church, an evangelical outreach church, based in Norway, and is now used as a conference and exhibition centre. Here also is a mini gas-fired power station which can be activated during power cuts. Nearby is the meeting-house of the Exclusive Brethren, and also various service industries such as vehicle hire, plumbing supplies, vehicle maintenance.

This area is due (2016-17) to link with the Colley Lane industrial area by the Southern Distributor road, crossing the river and canal. Commercial delivery vehicles will therefore be able to bypass the middle of Bridgwater completely, and have good access to the M5 to the south of the town. When the bridge is finished it will allow access to land between the canal and the river, which can now only be crossed by a limited-weight swing bridge. Some future commercial development is planned here.

A new £100 m Regional Agricultural Business Centre opened at Huntworth adjacent to the motorway Junction in 2007, following construction which began in 2006. Here also is the Wiseman Dairy. Work is about (2016) to begin on the Bridgwater Gateway, located opposite, on the other side of the A38, which will enhance further the facilities available in the town.

To the north of the town along the Bristol Road, between the road and the river is located the Express Park business park. Here are included the relocated Gerber Juice and new enterprises Toolstation and Interpet as well as the Excel Centre for the NHS Logistics Authority. Also there are the local head-quarters of the Avon and Somerset Police Authority. There is also a pub and a hotel. On the other side of the A38 is Morrison's supermarket regional distribution centre. To the north of the pre-war business park, between the A38 and the railway is the Woodlands business park, where are located the local branch of the St John Ambulance Brigade, a firm that does commercial microfilming, and National College for Nuclear (2016). This augments the nuclear training facilities being established by EDF at Cannington.

A bridge over the railway by the Morrisons site connects Bristol Road with Bath Road. This part of East Bridgwater has been extensively redeveloped in recent years, with the Bower housing estate, and the new Bridgwater hospital, opened in 2012.

HOUSING GROWTH

Early in the nineteenth century the town's boundaries remained little changed from medieval times, with just a little residential building beyond it, mostly to the west, along West Street and the town end of Durleigh Road. In 1822 an Act was passed to permit the building of a new turnpike from Bridgwater to Pawlett. This commenced about 100 yards from the bend where the Bath Road swung away from the line of Eastover.

St John Street has a more complicated history. It apparently began as a footpath from the East Gate of Bridgwater to Redgate which is near the present railway station. Buildings were constructed at its western end by the middle 1830's, and it is clearly marked on the 1847 tithe map. It is probable that by this date it had replaced Salmon Lane as the turnpike route from Bridgwater to Langport.

These new roads allowed the construction of more housing. From 1830 Union Street started to be built. This is a street of terraced houses connecting the Bath and Bristol Roads. At about the same time Barclay Street was built connecting the western end of St John Street with Salmon Lane. In the western side of town Provident Place was built running off Wembdon Road a little distance beyond the Malt Shovel Inn, and from this time the Eastover part of Bridgwater developed during the remainder of the C19 progressively towards the railway line which formed the unofficial eastern boundary of the town until after the second world war. Many of the inhabitants were workers at the railway workshops.

It is clear that in the final quarter of the C19 Bridgwater entered a phase of unprecedented prosperity, if the amount of good-quality domestic buildings is a measure. As the town grew, small blocks of housing were built in roads radiating from the town.

This expansion in the nineteenth century generated public services. A gas company was formed in 1834 and built a gas works on the river bank on Old Taunton Road. Coal was delivered by sailing vessels whose masts could be lowered to pass upstream of the Town Bridge. The gas works survived until Nationalisation and the abandonment of Town Gas from 1961 and the construction of the Gas Grid, allowing the piping of natural gas supplies round the country. Its site was cleared and now mostly has housing built on it.

The Corporation constructed a waterworks at Ashford, near Cannington, which was opened in November 1879. There were settling tanks and a steam-powered pumping station, which pumped the water to a covered reservoir at the top of Wembdon Hill, from when it flows to the town by gravity. Water. A reservoir was built in the late 1930s at Durleigh to service the major industries of the town . The West Somerset Water Board came into being in 1963, taking over the responsibilities of the Bridgwater Urban and Rural concerns. In 1989, on privatisation, the Board in turn became a constituent part of Wessex Water. Plc. The settling ponds at Ashford are the site of a modern water-treatment works, and the historic engine house is the site of an education centre where pupils can learn about the ecology, natural history and history of the water supply locally.

In 1904 the Bridgwater & District Electric supply and Traction Co. Ltd. began the erection of a generator station in Mount Street. The generators were driven by gas engines, and Direct Current was supplied. Following Nationalisation of the industry in 1947 it was soon discontinued, and the building was used by Thompsons the ironmongers for a number of years. It is now (2016) a furniture store.

In the early years of the 20th century Bridgwater's builders continued to erect new dwellings – Streets of houses off Taunton Road – Ashleigh Avenue, Hamp Green Rise, Fernleigh Avenue, and Elmwood Avenue' and off Wembdon Road – Coronation Road , Victoria Road, Washington Gardens, Kendale Road and Kidsbury Road, and houses along town ends of Durleigh Road, Wembdon Road, Bath Road and Bristol Road.

These houses were almost always brick built and featured decorative detailing produced by Bridgwater's brickmakers.

In 1917 it became clear to the Council that there was a housing shortage in the Borough, and that a great number of properties were in an insanitary condition. The Addison Act of 1918 provided Government subsidised housing for the working classes at nominal cost to the Council, and the Borough Surveyor was instructed to prepare a report on building 100 houses in various sites in the Borough. The surveyor also prepared a plan for the refurbishment of a number of defective houses in the Albert Street area, which were occupied by poorly paid casually employed day labourers. This scheme would have included an extension to each dwelling upgrading the sanitary and cooking facilities on the ground floor and added another bedroom upstairs, and would have been let for 4/- per week, but the scheme was not pursued.

The Wheatley Act of 1923 greatly eased the trouble, and under it the Council built 735 houses by 1934, at a rental varying between 7/3 to 10/6 per week inclusive of rates. In addition 51 houses had been built by 1934 at rentals of between 3/10 and 5/3 per

week to house people displaced during a series of slum clearances in 1933. These properties were built in the Newtown area on the northern fringe of the town, and also to the west on the site of the historic Bridgwater Friary. The 1000th Council house was opened by Aneurin Bevin in 1953. The 2000th council house was completed in 1961.

Following the demolition of the cottages there, the West Street high rise flats opened in 1965.

One side of Taunton Road had terraces of Victorian and Edwardian housing, and terraces of council houses were built opposite from the 1940s. This time also saw the start of a significant increase house-building, with council house estates being started at Sydenham and Rhode Lane and the former Cooperative estate near Durleigh was extended westward with private houses

Various housing developments have been built since, surrounding the town. To the east of the Sydenham estate, housing has expanded regularly so it has now reached Bower Lane adjacent to the M5 motorway. Land to the west of New Town was developed with private housing towards Wembdon village. A Northern Distributor Road, beginning on Bristol Road, crossing the Parrett by the Drove Bridge, and linking to Quantock Road served this area.

Later, in the 1980s, housing was built beyond the town boundary in North Petherton parish to form the Wills Road estate. Wills Road connects Taunton Road with the far end of Rhode Lane. Around 2010 more housing was built beyond the Wills Road estate to form the Stockmoor and Willstock developments.

Since the demolition of the Cellophane factory in 2010, housing has been built beyond it adjacent to the motorway, the Kingsdown Estate. The cleared factory ground towards the town is earmarked (in 2016) for temporary housing for the workers drawn to the area by the construction of the new Hinkley Point power station.

EDUCATION

The primary and infant schools in Bridgwater include: Eastover Community Primary School, Hamp Community Junior School, Sedgemoor Manor School, St John and St Francis Primary School, St Joseph's Catholic Primary School, St Mary's Primary School, Somerset Bridge Primary School, Spaxton Church of England Primary School, Westover Green Primary School and Hamp Nursery and Infants School.

Secondary schools include: Robert Blake Science College, Brymore Academy, Chilton Trinity Technology College, East Bridgwater Community School which was previously known as Sydenham School and is a Performing and Visual Arts College, and Haygrove School which has specialist Language College status. Special schools in the town include: Elmwood Special School, New Horizon Centre School and Penrose School.

Bridgwater was selected as the first town in the South West, outside Bristol, for the UK government's Building Schools for the Future (BSF) initiative, which aimed to rebuild and renew nearly every secondary school in England. Within Bridgwater, BSF was to redevelop all of the four secondary schools and two special provision schools at an expected cost of around £100 million. This included the complete relocation and rebuilding of a new school combining the both Haygrove and Penrose School. In July 2010, several components of the Bridgwater BSF programme were cancelled and others were singled out for further review. Only Blake and Chilton schools were completed.

Further Education is provided by Bridgwater College which was formerly Bridgwater Technical School. It is located on the Bath Road.

In 1860 the Bridgwater School of Art was opened in George Street, possibly in association with the Literary and Scientific Institution there. Another art school was established in Queen Street in 1888, and in 1891 it moved to Lonsdale House, Blake Street, where art and technical schools were formally established. In the following year continuation night schools were also held there. The Bridgwater Art and Technical (later Technical and Art) Institute, from 1958 the Bridgwater Technical College, expanded to premises in Mount Street and Queen Street, and in 1959 to new buildings in Broadway. In 1975 it also occupied premises in Park Road. A new building in Bath Road was first occupied in 1978, and in 1988 most of the college departments were housed there, the Broadway site retaining the building and continuing education departments. In 1973 it became a tertiary college, and in 1989 had 667 full-time, 3,288 part-time day and evening vocational, and 3,443 part-time day and evening leisure students.

It now educates approximately 800 students between the ages of 16-18 in academic and vocational programmes in addition to several thousand part-time or mature students. It also has centres in Cannington, Yeovil, and Paignton.

The college offers courses from entry level through higher education. In addition to A-levels and BTEC qualifications, the college offers the International Baccalaureate Diploma Programme. The college has links with the University of Plymouth by way of the University of Plymouth Colleges network, Bournemouth University, Oxford Brookes University and is part of the Wessex Partnership, in association

with Bath Spa University. After a merger with Cannington College in September 2004, the college expanded its curriculum of full-time and part-time courses for school leavers, adults, university level students, the business community and students from overseas. In 2012 the college became the sponsor of Bridgwater College Academy

Bridgwater College has maintained its Ofsted 'Outstanding' rating for 13 years, with success rates that place the College in the top 2% in the UK. It has also won 13 national Beacon Awards. It received the Queen's Anniversary Prize for Higher and Further Education in 2015, and the *Times Educational Supplement* (TES) College of the Year 2016 award.

In 2016 it merged with Somerset College, based in Taunton and the new group will cater for more than 26,000 students and 1,500 staff across a range of further and higher education courses. It might well form the basis of a university.

CHANGES IN LOCAL GOVERNMENT, 1974

The prime political event was the abolition of the Borough and Rural District Councils in 1974, and their absorption into Sedgemoor District Council. This new council's area was made up from Burnham-on-Sea Urban District Council; part of Axbridge Rural District Council; Bridgwater Rural District Council and Bridgwater Borough Council.

The new council acquired the constituent councils' assets and responsibilities, and thus became responsible for the economic development of the area.

Charter Trustees were set up to maintain the continuity of a town charter or city charter after a district with the status of a borough or city had been abolished, until such time as a parish council was established. Duties were limited to ceremonial activities such as the election of a mayor, and in Bridgwater's case being responsible for the historic town silver, which included the Commonwealth silver maces.

Bridgwater parish council was not established until 2003, and adopted the designation of Town Council. Local facilities such as the Blake Museum and the Town Hall have been returned to the Town Council to fund and manage. There are sixteen elected members representing six wards of the town; Bower (three), Eastover (two), Hamp (three), Quantock (three), Sydenham (three) and Victoria (two). It has powers or functions over allotments, bus shelters, making of byelaws, cemeteries, clocks, crime prevention, entertainment and arts, highways, litter, public buildings, public conveniences, recreation, street lighting, tourism, traffic calming, community transport and war memorials.

SOURCES

This narrative has been compiled from:
Bridgwater Industries Exhibition: souvenir handbook held at the Blake Hall, 3-10 November 1948.
The firms described were:

- British Cellophane Ltd
- Quantock Preserving Co. Ltd
- The Somerset Trading Co. Ltd.
- C & J Clark, Ltd.
- Kingsley (Art Furniture) Ltd.
- W & F Wills, Ltd.
- Coates' Fencing Ltd.
- A. C. Gill, (Bridgwater) Ltd
- Crypton Equipment Limited
- Gallannaugh and Nicholls [Architects]
- Elliston, Evans & Jackson, Ltd.
- E.D.C Ltd.
- The Bridgwater Wire Rope Works, Ltd
- Brintons, Ltd.
- Morgan Brushes, Ltd of Combwich

A number, such as Brintons and the Wire Rope Works were not discussed in any detail by Porter, so this is a valuable source for their activities.

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Chris Sidaway, *A Short Commercial History of Bridgwater.* pub. Sedgemoor District Council, c2007

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Tony Woolrich, *Public Health and Water Supply in Bridgwater. A Research Paper*, 2013
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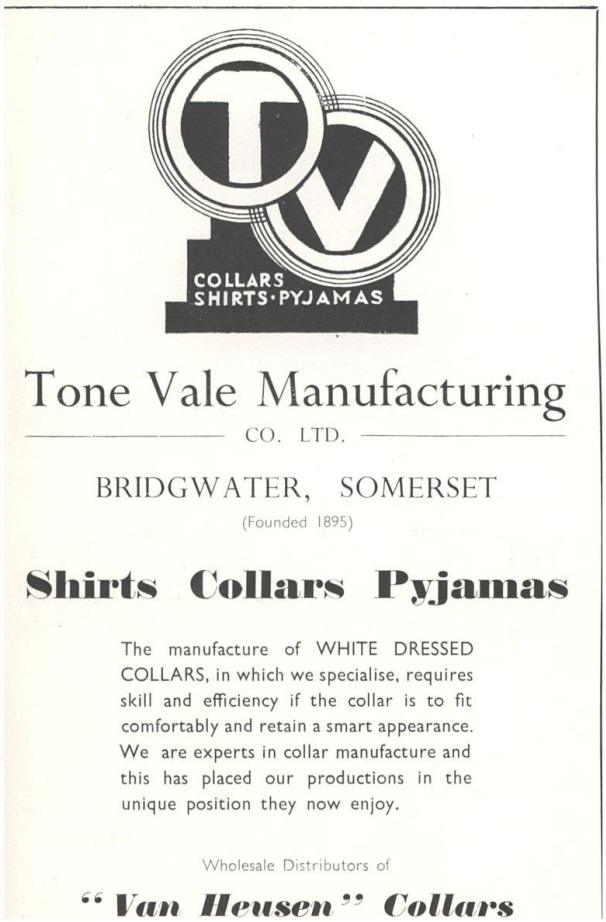
Advertisements from Borough Council Guidebooks


PARTOS
CORSETRY
MADE IN BRIDGWATER


TV
COLLARS
SHIRTS·PYJAMAS
Tone Vale Manufacturing
CO. LTD.
BRIDGWATER, SOMERSET
(Founded 1895)
Shirts Collars Pyjamas
The manufacture of WHITE DRESSED COLLARS, in which we specialise, requires skill and efficiency if the collar is to fit comfortably and retain a smart appearance. We are experts in collar manufacture and this has placed our productions in the unique position they now enjoy.
Wholesale Distributors of
"Van Heusen" Collars


Clarks
SHOES
"Totem" casual shoe, dashing and devil-may-care style for the young and the young in heart.
"Mackinaw" cold weather bootee with fleece lining. In Brown or Black Suede.
Clarks shoes carry the prestige of West Country craftsmanship all over the world. Here are just two styles from Clarks Bridgwater factory which, combined with their factories at Street and Shepton Mallet, produce over two million pairs of Shoes in a year.


THE HOME OF "CELLOPHANE"
It is now some 30 years since British Cellophane Limited started to build their factory at Bridgwater for the manufacture of transparent cellulose film. Production started in April 1937. Today, the factory employs over 2,600 workers, covers more than 90 acres and is the largest plant of its type in Europe and the Commonwealth. Producing various types of the famous "Cellophane" cellulose film, BCL are the largest cellulose film makers outside the U.S.A. and the world's biggest exporters of the material.
BCL exports represent some 40 per cent of output—worth several million pounds a year. They go to over 90 countries, earning currency which helps pay the nation's bills for essential foods and raw materials from overseas.
The company's products assist the country's prosperity indirectly too. Used for packaging by an enormous number of trades, they stimulate the sale of British goods throughout the world. Transparent film packs keep their contents fresh and clean and, by letting the shopper see what's inside before buying, they show the makers are proud of their wares and have nothing to hide.
BCL also make a range of plastic films at Bridgwater—polythene, polypropylene and others—and a subsidiary, Bonded Fibre Fabric Limited, has been producing bonded fabrics there for some years. The plastic films have many uses in packaging and in other fields, such as agriculture, horticulture, building, civil engineering and hospital work.
BCL
BRITISH CELLOPHANE LIMITED
BATH ROAD, BRIDGWATER, SOMERSET
"Cellophane" is the registered trade mark of British Cellophane Limited and denotes the brand of cellulose film manufactured by them.

TOP : An interior view of Clarke's Shoe Factory, showing the new lighting system
LOWER : The finished articles being loaded for the first stage of their journey to the export market

PARTOS

BRASSIERES AND BELTS

Made by

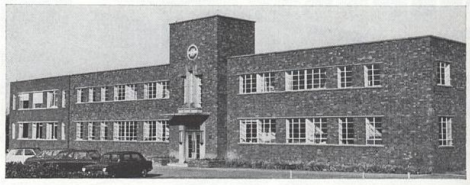
S. LEFFMAN LIMITED
PROVIDENT PLACE
BRIDGWATER

It's rewarding to work at Leffman's

Up-to-date conveyors make light work of manufacturing the glamourous range of Partos and St. Michael foundations at the Bridgwater Factory.

CRYPTON

The Head Office and factory of Crypton-Triangle Limited, (a member of the Tube Investment Group of Companies) is situated on the A38 Bristol Road, Bridgwater.



Crypton-Triangle are one of the leading manufacturers of Transport Servicing Equipment and their products are sold throughout the World.

Products manufactured include

Electronic Engine Analysers
Battery Chargers and
Battery Service Equipment
Diagnostic Dynamometers
Brake Testers and
Brake Analysers
Portable Test Equipment
Arc and Spot Welders
Test Benches and
Workshop Tools
Work Benches
Motorist D.I.Y. and
Leisure Equipment

A typical Crypton Engine Analyser in use

Moving to Somerset ? If so, why not contact our Personnel Department and enquire if we have any vacancies that may be suitable for yourself or any member of your family.

CRYPTON

CRYPTON · BRADBURY · CHURCHILL · TRANSERVICE... SYSTEMS

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