must go through a number of hands, and fre- quently a number of months before it is com- plete. Throughout the works labour is care- fully specialised, each workman confining him- self to one particular operation or kind of work, thus getting a rapidity and accuracy which he could not otherwise acquire. Much of the work requires an accurate judgment on the part of the worker, as well as considerable skill. Thus in splitting the log from which is procured stumps, rakes, hoe, or other handle to be made, advantage must be taken of the shape and grain of the log to avoid waste and to secure the best result. In bending or otherwise shaping and turning the greatest care must at all times be exercised.

Messrs. Constance and Sons obtain their supply of timber—from the aspen, alder, birch, and other woods—mainly from the Forest of Dean, Herefordshire, Monmouthshire, and Shropshire. All of the rough timber is stacked in the yards and thoroughly seasoned before being used; and in many cases, after being split and sawed into lengths, it is again seasoned for months. This care is characteristic of their methods throughout every stage of the work, from first to last. Their entire reputation has been established on quality, and if the customer does not wish to buy a cheaper article, but it is not too much to say that no firm has consistently maintained a higher standard.

The present members of the Company are Messrs. Stephen W. Constance (the senior mem- ber), and his sons, W. J. and John Constance, all of whom devote their whole time to the busi- ness. Although the industry is more than a century old, it is still thriving and progressive, and it has been a pleasure to refer to the thorough and conscientious methods which characterise its management.

IRIELAND AND COMPANY, GLOUCESTER. Wholesale and Export Brush Manufacturers.

MESSRS. IRELAND AND COMPANY's brush manufacturer, New Inn Lane, Gloucester, has been in continuous and successful operation for considerably over a century, having been established in 1876. The original factory—where at the West Street, and after several removals to more convenient quarters, made necessary by increasing trade, the present commodious premises were secured in 1889.

As is the case with several of Gloucester- shire's industries, the appearance of the Company's factory is but little known, even to our own people, as it is so surrounded by other business premises as to be almost obscured from the view of the casual observer. The buildings, however, are quite extensive, with a frontage of 38 feet, and large workshops of modern construction in the rear. In recent years several important additions have been made, including a spacious and substantial two-storey building erected last year. Immediately opposite the factory is a separate building, 70 feet in depth, used exclusively as a ware- house.

Brush making in Messrs. Ireland and Company's factory is highly specialised, the factory being divided into a number of separate departments, in each of which only a part of the work is done. Among the departments are the "pan room," where sweeping brooms, bass brooms, hearth brushes, basket makers, etc., are made; the drawing room, for

scrubbing brushes, stove, shoe, dandy brushes, and others; the mixing room, the varnish room; and several large stock rooms. The factory gives employment to between 25 and 30 hands, whose productive power is increased by a thorough knowledge of the work and appreciation of the same. All of the operatives work under agreeable conditions, the various departments being well lighted and ventilated and thoroughly well ordered. One large room are thousands of backs and handles—enough, one would imagine, to supply the trade for years. In other rooms are kept large quantities of assorted fibre and bristles, varying in fineness from those used for paint brushes to the heaviest and coarsest pavement and street brushes. Many of the bristles are imported from the most distant countries, Russia, Siberia, China and India contributing largely to the stock, the price for some varieties ranging as high as 12s. per pound. All of the fibre and brushes are carried from South America, Mexico and Africa. Thousands of pounds of fibre and brushes are always kept in stock, to enable the Company to promptly meet any order.

Messrs. Ireland and Company manufacture almost every variety of brush known, though they have for many years paid special attention to the manufacture of best quality brushes and brushes for household purposes. They also keep men specially engaged for all classes of mill work. Their trade extends throughout the Midlands, the West of England and South Wales, where their reputation has long been firmly established. It is worth noting that they have never advertised their wide circulation, having been secured and maintained wholly through the invariably high quality of their manufactures.

The present members of the firm are Messrs. G. H. Harris, R. J. Templeman (manager), J. G. J. Lane, and A. S. Lane, all of whom devote their entire time to the management of the business. Of these Mr. Harris has been identified with the business continuously for thirty-four years, and Mr. Templeman for thirty-two years. It should be added that during its long and prosperous career of 140 years the business has never been suspended for lack of work, and that under the present management its high standing is being fully maintained.

S. J. MORELAND AND SONS, GLOUCESTER.


MESSRS. S. J. MORELAND AND SONS' match works (one of the oldest and largest in existence in Gloucestershire) were established over fifty years ago by Mr. S. J. Moreland, the present senior partner of the Firm. The business was carried on a small scale and was only carried on in Bristol Road, and the original premises would be lost in those required-today.

From the date of its establishment until the present time, the growth of the business has been very rapid. The industry has been unbroken growth. Fifty years age match-making was undeveloped, and both the methods of manufacture and the product were of the crudest description as compared with those of to-day. But, like nearly all industries, the manufacture of matches has been completely revolutionised by modern science and invention, and the highly specialised machinery now in use has enor- mously reduced the time and cost of producing matches, and at the same time minimised the cost. In this development Messrs. Moreland and Sons have taken a very important part, and many of their machines and special appliances are of their own inven- tion.

Co-incidentally with the constantly increasing demand for the Firm's matches the buildings and machinery have been greatly enlarged, the premises, including the large timber yards on the canal side, now comprising an area of six acres. The buildings are of the most substantial construction, and are pro- vided with every convenience which long experience or forethought could secure. They are lighted by electricity, and are equipped with the automatic sprinkler system throughout. The works are entirely self-contained, con- prising, in addition to the actual manufacturing departments, carpentering and fitting shops and a complete printing plant.

It is but just to add a word here as to the con- ditions under which the operatives (of whom there are upwards of 1,000) perform their work. The buildings are admirably lighted and venti- lated, and are heated with hot air, thorough ventilation being secured by means of fans. Every effort has been made to ensure the health and happiness of the workers, and that this object has been attained is evident to anyone who is privileged to inspect the works.

It would be wholly out of keeping with this brief article, and would be beyond our present purpose, to attempt anything like a technical descrip- tion of the various processes in use in Messrs. Moreland and Sons' works. It is interesting to know, however, that such is the rapidity and precision of their special machines that in less than an hour a rough piece of timber is con- verted into the finished article. One of these machines, into which are placed sheets of wood of the proper thickness, turns out the completed splints at the almost inconceivable rate of 12,000,000 per hour, and another machine has a capacity for turning out over 700 boxes per minute. Other processes are not less rapid, and in the course of a single day tons of wood are converted into finished matches, packed in boxes and ready for shipment.

Messrs. Moreland and Sons manufacture all kinds of Safety, Paraffin, and Vesuvian Matches, and Matches of all kinds for export to foreign countries. These matches were introduced a few years ago, are appro- priately named the "John Bull" brand, and, like the other products of "England's Glory" match works, have gained a world-wide popularity.

It is perfectly accurate to say that the products of no other manufacture in Gloucester- shire or the West of England are known in as many homes in various parts of the world. The "England's Glory" and "John Bull" matches are not only familiar words in every British household, but they are in daily use in all our Colonies and dependencies, and in other countries. Whenever they go they are a favourable advertisement for Gloucestershire manu- facturers.

There is another very commendable feature of Messrs. S. J. Moreland and Sons' great industry to which we should refer in conclusion. The firm have never been the benefactor of any combine or syndicate, but, on the contrary, have held their own, and have consistently combated monopoly. The present members of the Firm are Messrs. Moreland and his son, Messrs. Harry and Philip, all of whom devote their entire time to the business.