machines, which reflect a very high order of inventive ingenuity and mechanical skill, are remarkably interesting in their tireless operation, automatically converting miles of polished wire into thousands of hair pins and hooks and eyes, being operated by ten firms in Great Britain making these exclusive specialties. But although the output is limited to the great variety of modern, less very great, as many as twelve distinct shapes and sizes of hair-pins, and several kinds of hooks and eyes having been manufactured. The present capacity of the factory is approximately one and half tons daily, while the actual numbers turned out are almost beyond computation. This output is distributed to all parts of the world through the great London, Manchester, Birmingham, and other factors, the goods having found singular favour in the trade generally.

In the foregoing brief reference to a very interesting industry there has been no attempt to cover the whole ground. Even if it were possible to minutely describe the ingenious machines and processes, it would be an ill acknowledgment of the courtesy of the Company to the public if we were to gainsay their success through their peculiar ability in perfecting and guarding their mechanical equipment.

But it remains to be said that the individual members of the Company have consistently displayed a race push and energy, and there is every indication that the industry has by no means reached its limit.

WATKINS & OKEY, PAINSWICK. One of the oldest Hair Pin Manufacturing Companies in England.

The business carried on under the firm name of Watkins and Okey, King's Mill, Painswick, has had a peculiarly interesting history. It was established some hundreds of years ago by the late Mr. Peter Watkins, who was one of the pioneers among the hair pin manufacturers in England. Partially to engage in business on his own account, Mr. Watkins had for some years been connected with the leading pin manufacturers in the Stroud valley, and was well known in Birmingham, a market of knowledge in which he had few competitors.

The rapid and economical manufacture of hair pins by machinery has been probably due as much to Mr. Peter Watkins as to any one man in England, and for many years his manufacture was one of the most famous in the trade. Being of a highly inventive turn, he designed and made special machinery which not only conferred a great advantage upon himself, but which did a great deal to give the trade its present importance.

It should be stated, in passing, that Mr. Peter Watkins added to his technical skill those business traits which gained him a position in the school British manufacturer a high repute throughout the world. Throughout his long business career his methods were singularly free from all those faults to which a number of exclusive manufacturers were subject. In the competition the community of which he was an honoured member. In 1853 Mr. Peter Watkins formed a partnership with the late Mr. C. Okey, of Stroud, the firm establishing themselves at Cap Mill, Painswick. In 1860 the business had increased to such an extent that larger premises became necessary, and the King's Mill, which is still used by the firm, was taken over. About the same time the partnership was dissolved, Mr. Peter Watkins carrying on the business alone until his death, in 1901, when his son, Mr. George Price Watkins, who had long been actively identified with the industry, became the sole proprietor. Mr. G. P. Watkins is assisted by his brother, Mr. Chas. J. Watkins.

As had been stated, the present proprietor was for many years actively identified with the business before becoming proprietor. He possesses a full share of his father's kindliness and inventiveness, and nearly all the machinery in his factory was invented and made by him. He also inherits in a marked degree his father's kindly traits, and of the connection established many years ago—a proof that both their methods and their product are of a high order.

W. H. COLE AND COMPANY, PAINSWICK. Manufacturers of Exclusively High Grade Hair Pins and Hooks and Eyes.

The business carried on by Messrs. W. H. Cole and Company, manufacturers of the highest grade of hair pins and hooks and eyes, is one of the oldest, if not the very oldest, of its kind in the district. For over half a century the works have been operated continuously, and almost each succeeding year throughout that period has witnessed an appreciable increase in the Company's trade. Adjoining the main building and along the Stroud valley, Messrs. Cole and Company's premises were formerly used for other purposes, at one time having been well-known silk mills. This adapting of the old silk mills to another and comparatively modern industry is a gratifying proof, of which Gloucestershire furnishes so many, that the resourcefulness of British manufacturers is still able to meet with changing conditions.

What was the main silk mill is still the main building used by the present Company. It is constructed of stone taken from the hills near by, and, judging by the massive foundations and thick walls, was designed to outlive many generations. Adjoining this main building are several additions which have been made from time to time. In fact, alterations or additions are being projected almost constantly, and a large plot of ground is held in reserve for possible further extensions.

The mechanical equipment is kept up-to-date by the frequent instalment of new machines, all of which are designed and constructed in a special workshop on the premises. The power is furnished by a water wheel, supplemented by a steam engine. All of the departments are lighted with incandescent gas, and are heated with steam, and every possible provision has been made for the comfort of the operatives.

Messrs. W. H. Cole and Company employ in their Painswick factory upwards of 80 hands, besides almost as large a number in their London warehouse and distributing depot. When it is remembered that the efficiency of the operatives is multiplied by the ingenious view of Watkins & Okey's pin factory, Painswick.

and rapid automatic machines in use, one may have a faint conception of the tremendous quantity of hair pins and hooks and eyes that are turned out each day. In the main building are upwards of 20 automatic machines in constant operation, with machinists turning out hair pins at the rate of 70 or more a minute, aggregating millions daily. How so vast a quantity of pins and hooks can be made, and an article which is not easily destroyed, can be disposed of is one of the mysteries of trade. The same may be said with regard to the machine which turns out the fine expensive eyes manufactured by this firm, many of these useful little articles being turned out at the rate of 120 per minute. © Coaley.net
The intelligent visitor to Messrs. W. H. Cole and Company's factory must be impressed with the wholesomeness and cleanliness of the operative's environment, both without and within the buildings. This phase of the industry has frequently been commented on by London and other buyers, who have from time to time visited the factory, and who had expected, apparently, to find conditions such as prevail among the factory toilers in large cities. A greater contrast, indeed, could scarcely be imagined. The appearance and deportment of the average operative in the Painswick factory is a strong argument in favour of the establishment of industries in the less crowded districts.

The Company endeavour in many ways to conserve the morale of the employees. All of the female operatives are dismissed both at noon and at night a few minutes before the men, and during working hours they are assigned to separate quarters.

Messrs. W. H. Cole and Company manufacture all varieties of hair pins, including the so-called "invisible" pin in all shapes. They also manufacture hooks and eyes in large quantities, and safety pins, being the only Company in the district that does so.

Although it would seem to the initiated that hair pins and hooks and eyes do not offer much scope for difference in quality, this is far from being the case. The Company have for many years confined themselves to the highest grades, and the finish of their encoloured and electro-plated goods has given them an enviable distinction in the trade. They make a number of exclusive brands of hair pins, including the celebrated "Colbatta," "Bloc," "Arrow," "Queen of Hearts," and "Rento" brands.

![View of Savory & Sons, Ltd., Pin Factory, Painswick.](image)

The patented "Rento" brand is quite an innovation in hair pins, combining all the requirements of a perfect pin. As the word "Rento" implies, the shape of the pin is such that it remains fixed in its position. How this merit is obtained may be readily seen from the accompanying sketches. The "Rento" is a pin that is accurately finished, and within a few months after its introduction became widely popular.

Savory and Sons, Ltd., Painswick.

The manufacture of pins, hair pins, and hooks and eyes furnishes a sort of epitome of the changes that have taken place in all the metal-working industries during the past half-century. At one time there were in Gloucester alone not fewer than nine plants concerning with the manufacture of pins, hooks, and eyes. Now one, and that by far the largest, occupies the place of all the others. The manufacture of pins and hair pins is a work of comparatively crude mechanical equipment, and is executed by relatively unskilled labour.

The manufacture of pins, hair pins, and hooks and eyes is a large and excellently equipped factories, turning out dozens of tons of pins, hair pins, safety pins, and hooks and eyes each week. The product eventually finds its way to the remotest parts of the world.