

MAKING SILVER AND GOLD JEWELLERY

## BIRMINGHAM AND ITS JEWELLERY.

BY JOHN FOSTER FRASER.

*Illustrated from Special Photographs by HAROLD BAKER.*



WHO will acknowledge to wearing Brummagem jewellery? Not many. And yet Birmingham can produce other than flash trinklets. Of course it is the home of imitation.

What becomes of the millions of cheap wedding-rings, brooches, bangles, and other ornaments which are turned out would be as interesting a speculation as to discover what becomes of all the pins that are made.

A jeweller shrinks back with a gasp of horror when you suggest that the clasp he is showing you, and desires you to purchase, is made in Birmingham. Why, Birmingham never turns out a ring above fourpence in actual value! Gold and silver articles? Not a bit of it! They are all gilt! And the pearls and stones, what are they but paste? No, sir, this clasp is high-class West-End workmanship. So he wants you to believe, and as probably you have been nurtured in the idea that no good can come out of Birmingham, you do believe it. Birmingham

has, with respect to its jewellery, received a bad name, and although jewellers can hardly deal with it as they would with the proverbial dog, they do their best to ignore it. During the time I was in the great Midland town I had opportunities placed in my way not only of seeing the manufacture of imitation goods, for which the place is so famous, but of seeing truly high-class work, where the gold is up to standard and the jewels are precious and rare.

The Birmingham jewellery trade is different from any other trade. The works that are of any size are few. Operations are generally carried on in mean streets in rickety and grimy buildings no larger than a cottage with a number of ramshackle buildings at the back. There is generally a dirty board over the door, and if you have good sight you may decipher the name of a jeweller. In other instances there is not even the board to assist you. The place is practically unknown except to the merchants.



Each jeweller in Birmingham works, in the classic words of Mr. Gus Elen, "on his own." He is not envious, but he is suspicious



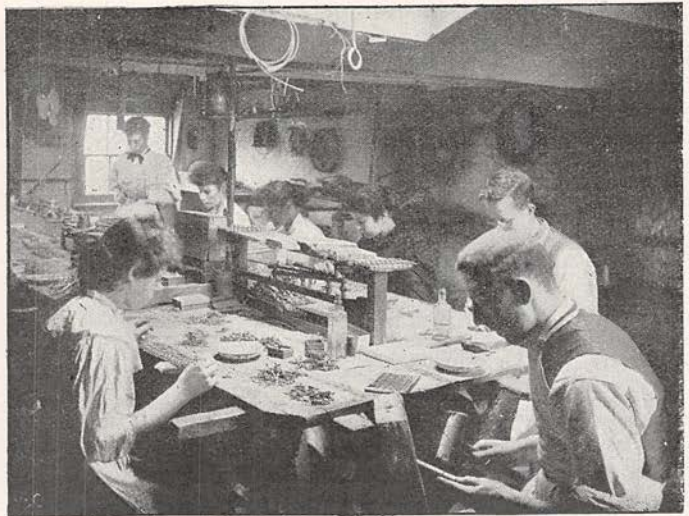
MAKING CHEAP RINGS.

of his neighbour. He is not at all desirous that the man down the street should know anything about the business he is doing. Indeed he has rather a contempt for the man down the street. There is no trade unionism among the workpeople in the Birmingham jewellery trade. As each manufacturer makes a different style of article to the other man, there can be no uniformity of prices existing to any extent. Although there are jewellery works, well built and healthy places, a great peculiarity of the trade is the number of small employers who work at home or in a house that is little better than a hovel, and for which they pay a rent of three or four shillings a week.

I want first of all in this article to deal with the making of imitation jewellery, in which there is an enormous industry. One maker of this class of goods

was shocked at my audacity in proposing to tell the world something about the rubbish he and his town produced. - He was a bull-necked, brusque, rude-mannered man, who said, "What's the good of telling folks that the jewellery isn't real?" "But they know it isn't real, and all I propose to tell them is how it is made," I answered. "And how cheap it is?" he continued, and I added, "Precisely." "And that we make rings for twopence-halfpenny which are sold for a couple of shillings?" "And why not?" I asked. The man snorted and instructed me in my work something like this: "Instead of telling people that they are wearing rubbish, why don't you elevate them by telling them they are real. You don't want to make 'em dissatisfied with their lot, do you? Make them happy by letting them think they are wearing something really fine. And if you would like to mention our firm, here is a case of imitation gold chains of which we make a speciality, and you might say that we are far ahead of any other —" and so on, clearly showing that there is human nature to be found even in a Brummagem jeweller.

One of the principal firms in imitation and very cheap ornament is that of Messrs. W. T. Horton. Mr. T. Horton told me candidly that he made as cheap stuff as could be made. He had no desire to pose as a high-class manufacturer. There was an enormous demand for nice-looking articles which could be purchased at a small cost, and he simply supplied the demand. He made thousands of wedding-rings which he



MAKING CHEAP BROOCHES.



sold at two shillings a gross—serviceable rings which would stand acid—and which were sold retail at fourpence each. I endeavoured to elicit who were the buyers of these rings, and I found they were married women who pawned their true wedding-ring and deceived their husbands by a piece of coloured metal. The firm of Horton pride themselves on their cheap studs. I have long known those studs. I never walk along the Strand without some wheezy-voiced individual offering to sell me four for a penny. I have never been so rash as to purchase any. The Hortons made these at a penny a dozen.

Up to twenty or thirty years ago Birmingham made cheap but not imitation jewellery. The cheap jewellery was of a white alloyed metal which nobody ever mistook for anything more valuable. But a great change came when the discovery was made that it was possible to deposit a coating of silver or gold on metal so that the most experienced eye might be deceived. A Mr. Thomas Fearn, a servant in the employ of Messrs. Elkington, was the inventor of the electro-metallurgic process—dipping a metal article in a bath where there is a solution of gold and then applying an electric current which induces some of the gold to cling to the metal. This discovery gave a great impetus to the making of Brummagem jewellery, for people who would not wear the white metal jewellery and could not afford gold were now able to sport brooches and bracelets and watch-chains which were as good looking as the real article. Fearn takes a foremost place in the ranks of electro-metallurgists. His invention has been the means of bringing millions of money into the town of Birmingham. The impetus he gave to the trade has increased with the years until Brummagem jewellery—and to use the word Brummagem as distinct from Birmingham is

to signify the imitation and not the genuine article—is sent forth to all the corners of the earth. The designs of imitation jewellery are always taken from a popular article in the real metal. When a particular form of gold brooch becomes a favourite the imitator is soon on the field, so that the servant girl can have something for eighteenpence which for a time, at any rate, will look as good as the brooch her mistress gave four guineas for. As soon as the servant girl wears that patterned brooch it drops out of fashion, and the high-class jewellers design something else. So it is constantly working round. Time was when there were not above twenty or thirty new patterns in a year. Now there



CARDING AND BOXING CHEAP JEWELLERY.

are as many in a month. The imitations are not all of a showy order, but are often of a light and artistic style. A great trade is carried on supplying ornaments with which the Kaffirs can decorate themselves. Formerly they liked their armlets and rings to be big and flashing, but of late years, probably through the interest the inhabitants of South Africa must be taking in art as it is taught at South Kensington, they like something daintier and fragile. Particularly do they love ornaments made of real coins. Dealers and merchants nurture this laudable love. Farthings are used for the purpose. But the Brummagem trade is chiefly with our Colonies, for the ladies of Australia are just as fond of finery as their sisters on the

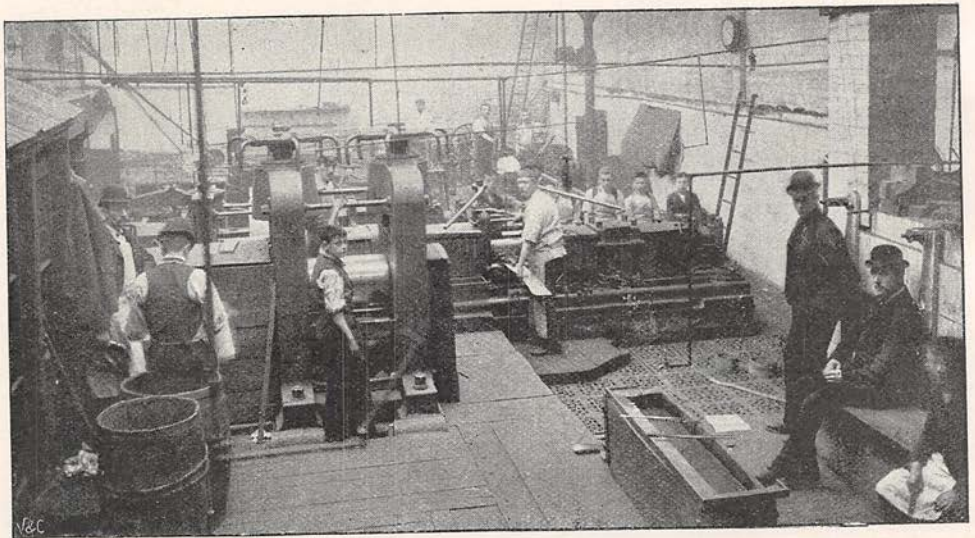


top of the world. Birmingham also looked after the interests of the Continent in the same line until Germany proved she could do it equally well and gently edged Brum-magen ware out of the market. Still there is enough being done to allow fortunes to be made. This is the less hard because merchants deal with particular makers and there is little or no competition or underselling. "What do you think, Bill, we ought to charge for them brooches?" said a well-known maker to his foreman. "Well, sir," said the foreman, "it's a lot to ask, but I think we might ask eight shillings a gross for them." "Eight shillings be blanked!" retorted his master, "they'll think they're worth nowt. Mark 'em fifteen bob!"

forgotten. But not many months ago they flourished again and will doubtless continue to flourish.

There are few men, and certainly no women, who have not noticed the banjo brooch inlaid with pearl. No other article has ever sold so well. The pattern was brought from Paris, and hundreds of thousands are made every year.

The paste jewels, which are so common, are brought from Bohemia. The stone is gathered at a place called Gablonz and is cut into shape before reaching England. If you look at the back of a paste jewel you will see it has yellow foil. This is to throw what light there is in the stone out one way, and so increase the brilliancy. Twelve or



HALL STREET ROLLING MILLS.

Gauging the taste of the public has risen to a fine art. The great millinery establishments in London drop hints to the makers how the tastes of fashionable dames incline. Then the makers cultivate the taste and gently force it until the imitation jewellers get hold of it, and from that day henceforward no more are made in gold of that particular design. There is only one case on record where the jewellers, without any hint from London, produced an article, forced it into popularity, and made it fashionable. This was known as the kerb jewellery and was much in vogue some four or five years ago. Just the same as in bonnets and gowns, old styles gradually come back again. Twenty years ago band-clasps at the waist were worn by every lady. Then they were

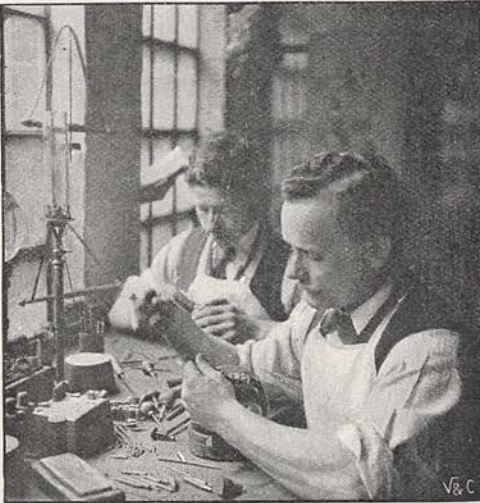
fifteen years ago, before this foil was used, tinsel had to be placed at the back of every stone. This could only be done with care, and consequently very slowly. But with the introduction of foil there was rapidity and economy, and Messrs. Horton showed me a sample of the first gold-gilt brooch with imitation diamond which they made, and which was sold to the public for sixpence.

And now, having given a rough, general idea of the Birmingham jewellery trade, let me describe how the articles are made. One is astonished at the many processes through which a trinket, intended for no higher place than a lucky-bag, has to go. The expense is enormous, but like the old lady with the eggs, it is the quantity that makes it pay.



First of all I went to the Hall Street rolling mills. It is here that makers send their metal, be it gold, silver or composition, to be rolled out to the required thickness. The value of gold, I may remark, is £4 6s. an ounce, and I found bars of it lying about on the floor like rods of old iron. The bars were not like gold. Were you to see one lying in the roadway, and worth two or three hundred pounds, you would probably not take the trouble to carry it home. The bars are first put in a muffle and afterwards annealed, meaning they are made soft and pliable, and when they are pulled out with a pair of tongs they look to the lay eye not unlike huge pieces of india-rubber. While I was in the mills the men were rolling and cutting up bars of gold intended to be converted into wedding-rings. Every piece of gold as it is brought into the mills is weighed and a receipt given, and when it is taken away it is weighed again.

I was witnessing the making of a cheap brooch from the time it is nothing but a sheet of metal till it is a bright gold ornament, with a neat design and three stones sparkling; so first, I saw the metal rolled; then it was taken to the works of Mr. Theophilus Watkin, a designer, to be stamped.



DIE SINKERS.

The making of the die is an important and laborious task, requiring delicacy of touch and taste. With the design before them, the

men cut the pattern in steel, which is hardened by being heated to a cherry heat. The die, which often costs as much as fifteen



PIERCING SHOP.

pounds to make an article sold for a penny, is fastened beneath a great hammer pulled up by means of a rope worked with the foot. The metal is then placed over a concave impression of the die, the foot is hurriedly withdrawn, and the weighted die falls like the knife of a guillotine, but with a thud, and an impression is made on the pliable metal. If the design has much fine work in it the stamping is done by degrees; that is, there is first the stamping in rude outline, then in further detail, and then in complete detail. When there is open work in a design, such as in a belt clasp, all the pieces are cut out by another machine worked by a girl and called a piercer. The girl has a heap of stamped discoloured pieces of metal at her side, and as with dexterity she slips one piece under the machine with her left hand she works the lever with her right, and at the same time the holes are pierced the edges of the pattern are cut away. This is not all. There are little studs to be raised, bright and glistening. This is accomplished by having four lots of tools for each stud. They are fitted together, but to yield slightly. Thus, when the stamp is given, they slip over the stud in four ways, scraping it and producing a similar effect in colour to the mark on a dull shilling when you scrape it with a knife. The tools for this work have to be kept exceedingly fine, and have to be sharpened after every ten hours of use.

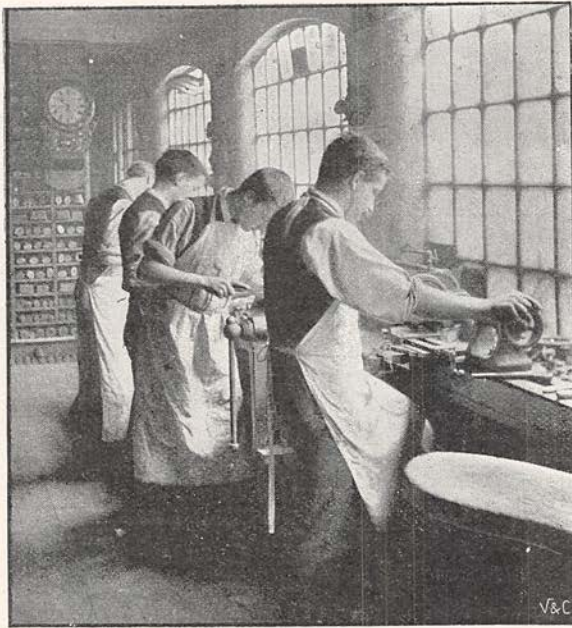
All round the premises are hundreds of dies—dies of fashionable designs which have



long been forgotten, but which may some day become popular again. It is a good sign that the tendency of the present day in

diamonds. With a pair of pincers she pressed back the pointed edges which had been pierced, and slipping in a stone, bent them back again to hold it in its place. This girl was engaged in putting five stones in each brooch, which would be sold in a shop for a penny, but the wholesale price of which was only a halfpenny. Other girls were busy with deft fingers slipping stones into bangles, a dozen of which had to be sold for twopence. An old man was making mourning rings with "In Memoriam" and "In loving Remembrances" worked in brass on a background. One would think that when a mourning ring was worn it would at least be real. But, no; hundreds of thousands of imitation rings are sold. "But they won't last long, will they?" I questioned the workman. "No, sir, they won't," he replied; "but they look all right at first, though they very soon begin to lose their colour. You know you can't expect much gold on a ring which has to be sold for twopence, and yet enough is put on to withstand the acid. Several girls were engaged in fastening gilt daggers through gilt

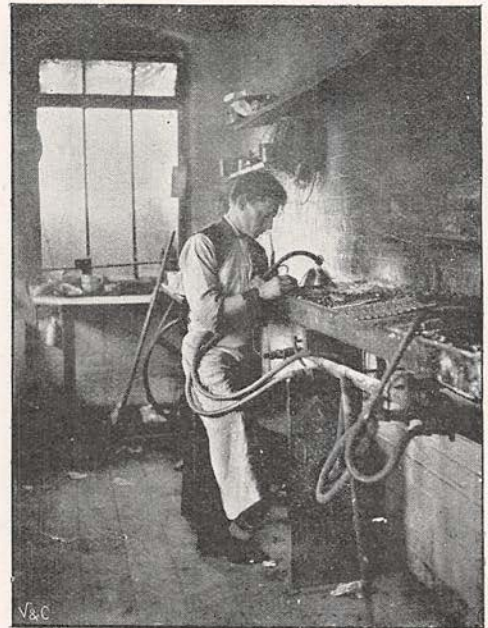
hearts, ornaments which are particular favourites with little servant maids. A brace



DIE AND TOOL CUTTING.

ornaments is to avoid what is large and ornate, and to wear what is small, simple, and if chased at all, then very delicately.

In the case of a cheap brooch the piece at the back has to be soldered on. I saw this process in a long narrow shop with a long table running by the side of one wall, and working at which were a number of girls and men. Each had before them a pile of articles in a tray—pins, rings, bangles and other ware. One girl filled the inside of a brooch with a green solution, and then placing a piece of wire round it to hold, laid it upon a grill. When the grill was covered with brooches they were all placed over a fire and a strong gas heat was blown upon them so that the backs would be fastened. It was hot work, and the man who was doing it looked as though he had been baked in an oven himself. His cheeks were drawn and thin, the skin clung tight to his forehead, and his hair was lank and scant, looking as though constantly stooping over the fire had drawn all elasticity and freshness out of his features. As soon as a brooch was cool it was passed on to a girl who had a tray before her of pieces of coloured glass—red, green and white, imitation rubies, emeralds and



SOLDERING SHOP.



of red-headed damsels were making wedding-rings out of bars of metal. With a twist of the wrist the circle was formed, a touch of solder joined the ends together, a blast of fire made the contact firm, and then, by



MOUNTING JEWELLERY.

brushing and polishing, followed by a dip in a gold bath, the join was almost hidden.

Before the articles are dipped into this bath they are "pickled" in sulphuric acid, which removes all the dirt and makes them fit for the mild solution of gold to which they are then subjected. The setting of stones in imitation goods is done in exactly the same way as in genuine articles, though necessarily with much less care. Every stone there is has its imitation, and so good is it that even an experienced eye is often deceived. It is easy enough to distinguish the metal, but to so great a perfection is the manufacture of false jewels carried that almost a new industry has sprung up of placing good imitation gems in brooches of real gold. Then it requires a clever man indeed to say that the gems are not honest. But the particular branch I am describing goes in for nothing of this kind. To be cheap, to give a pretty article for a few coppers, that is the sole aim of the manufacturers. The taste of the public is a singular thing. We all know how fancies change, and we are all waiting for somebody to write a philosophy of fashion, and makers of imitation jewellery have to be as careful to be in touch with the vacillating times as a bonnet-maker in Bond Street. One style of article will be all the rage in one particular part of the country, whilst in another part not the most unsophisticated of farm wenches will look at it. There is a particular brooch, with the word "Baby" worked upon it, which sells rapidly beyond the Tweed. Scotch girls, for some

singular, unexplained, and altogether bewildering reason, have fallen in love with the word. Perhaps it is a term of endearment addressed by Wullie to his Jean, or perhaps it is liked for its own sweet sake. Anyway, "Baby" brooches are all the rage in Scotland, whilst there is no sale whatever for them in England.

But English, Scotch and Colonial girls are mad after bangles. When a nice bangle, with a fine rich gold bloom upon it, and embellished with five paste diamonds, can be made for threepence-farthing, they need place little restraint upon their vanity. When I saw the piles of rubbishy jewels, which had no other object than to deceive the foolish—piles which were the successors to hundreds of similar piles in past years, and the forerunners to others in years to come—and when I learnt that this trade was increasing, and a means of livelihood to thousands of artisans and girls, I felt inclined to play the rôle of a young Solomon and burst forth with an apostrophe on the vanity of mankind, and especially of womankind. Few of us have any idea of the extent of this industry in Brummagem jewellery. One marvels who wears it, and where it all goes to!

Although the manufacture of false jewels is one for which Birmingham has become notorious, it is by no means to be set down that good workmanship and valuable articles are not also made in the capital of the



ENGINE TURNING.

Midlands. Indeed I saw jewels which would rival any place in the world for beauty of design and excellence. It is hard to discover the actual amount of gold and silver brought into Birmingham annually. Manufacturers



are very reticent respecting the amount of the precious metals they employ. There is no reliable data, except the returns of the Assay Office, and these do not give a true indication, because a very large proportion of the articles sold are neither assayed nor marked. During the year from June 1895 to June 1896 the number of ounces of gold assayed and marked in Birmingham was 283,423. To show the strides the Birmingham jewellery trade is making, let me mention that ten years ago the amount was only 101,293 ounces. Take also the increase in silver ware. Ten years ago the amount of

without being met with the assertion, "Ah, times are bad, very bad. There's no business; it's not like it was in the old times." I heard the same cry from Birmingham jewellers, and when I pressed some of them, and referred to the above figures, all they said was, "Ah, well, it's not we who are doing a big business."

One of the most interesting visits I made during my stay in Birmingham was to the works of Messrs. Payton. They are at the other end of the scale when compared with imitation jewellery. I went to their works to see the making of high-class jewellery,



JEWELLERY SETTING.

silver work assayed and marked was only 905,852 ounces, whilst between June 1895 and June 1896 it was 2,117,622 ounces. Then again, take the number of pieces assayed and marked. For the year ending June 1896 the number of gold and silver wares entered for assaying in Birmingham was 9,877,972. The number for the previous twelve months was 8,127,234, but ten years ago the number was 2,926,132, so that the figures have more than trebled in a decade. I make no apology for quoting these figures, for the reason I will explain. I have never investigated the conditions of any industry

where all was gold and silver, where the articles were hand and not machine made, and where the jewels were real. In the working of gold and silver not much waste is allowed. The men work round shamrock-shaped tables, sitting, as it were, with a leaf partly on each side of them. They wear big leather aprons, which are fastened beneath the table, so that in filing gold the grains are arrested. When a piece of gold is handed out to a man in the morning it is weighed, and weighed again when returned in the evening. The filings are also weighed, so that there is little opportunity for thieving,



even were a man disposed. Cases have been known of a man pilfering filings and making up the deficiency by working in some brass



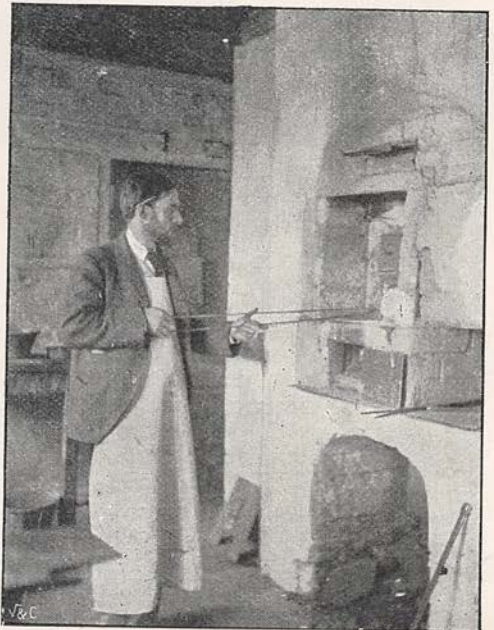
PREPARING AND PAINTING ENAMELS.

filings. But the deception is discovered when the filings are put in the melting-pot. There is a case on record of a worker in gold who was noticed to be constantly rubbing his fingers through his greasy hair. He was watched, and it was found that on reaching home he washed his head every night, and then allowing the water to run through flannel, got the gold dust. But theft is very rare. The workmen are of a superior class, and as little temptation as possible is placed in their way. Still, although every care is taken to collect the dust in the aprons, and although every man has to wash his hands in a special tank, so that the dust may be obtained, a little disappears somewhere. The sweepings of a place like Messrs. Payton are valuable. Indeed one of the partners told me that they sell the sweepings to a firm of refiners for £1500 a year. Enormous prices are given for old flooring from a gold workshop, and a jeweller's old waistcoat will sell for enough to buy a new suit of clothes. Every precaution is taken to prevent loss of gold dust. This was not always so. There are fortunes in many old rubbish heaps about Birmingham, where the sweepings of workshops were thrown before refiners found they were valuable.

There are three large workrooms at Payton's, where the workers in silver, in 9-carat gold, and 15 and 18-carat gold are respec-

tively engaged. Everything is clean and in its place. The men and the apprentices have their work before them and their tools around them, and they work silently and with dexterity fashioning dainty ornaments. As they are all hand-wrought, there are never two alike. Much is left to the taste and the individuality of the workman. The engraving I found particularly interesting. Many of the articles are too dainty to be held in a vice to be worked, so they are fastened in a ball of shellac which holds them tightly. The ball can be moved about any way, so that when the fine chisels are used in cutting out designs they have free play. The article is loosened from its hard bed by softening the shellac before the fire. Designs were being cut by means of fret-saws. With a firm touch and quick-moving hand other men were engraving monograms and crests. Dainty brooches, earrings, scarfpins, and bracelets were all being made. In the rough the ordinary eye could not well distinguish between the silver and gold. A nice rich bloom is imparted to the articles by dipping them in solution, just the same as is done with imitation ware.

Melting and alloying is done every Satur-



FIRING ENAMELS.



day morning so that the gold and silver is all ready for work during the next week. Whilst I was at Messrs. Payton a bar of silver arrived from the merchants in London. It weighed 1154 ounces and was worth £154 wholesale. I was surprised to find it was sent in the ordinary way by luggage-train, just as though the box contained nothing of more value than biscuits.

There is a separate room where the diamonds are set. All articles in which jewels are to be fixed go before one of the partners, and he, taking out a box of jewels, selects the stones he considers suitable. Then the ring and the diamonds are handed over to the workman. With a sharp tool he presses back the inner edge of the gold

jewellery design. He conceived the admirable idea of making each link in mayoral chains historically emblematic, and was the first to employ the mural crown as a distinguishing emblem of civic dignity and then arranging links with alternating shields for the arms, crests, or monograms of successive mayors. He was the first to adopt the fasces, carried by the lictors in Roman processions, as emblematic of the union of the council and the magistracy in the administration of a town.

Mr. Tonks granted me every facility for gathering information concerning the industry with which he is so intimately connected, and explained various processes to me. There was no opportunity, as in the case of imitation



ENGRAVING AND EMBOSsing.

where the gem is to be placed, and then placing the stone, brings the edge of gold back again to hold it firm. Great delicacy is required. A cluster of diamonds in a gold ornament is always set in silver, for silver throws out the beauties of the stones far better than the more precious metal.

The making of mayoral chains, presentation caskets, maces, gold keys for opening hospitals, as well as general work in gold, I found in full swing at the works of Messrs. T. & J. Bragg. Mr. J. W. Tonks, who is at the head of this firm, and has done more than any other man in Birmingham to foster a true artistic taste in the manufacture of jewellery, is chairman of the Jewellers' Technical School. He is probably the highest authority we have in

jewellery, of seeing the making of an article from beginning to end. The work is done slowly and exceedingly well. I stood for some time and watched a man delicately manipulating a scroll of fine gold wire and working out a pattern. Links were being added to mayoral chains, a mace was in course of manufacture, and in one department the model of a big steamer was being made in silver. The enamelling was particularly interesting. Enamel is made of various powders ground with an agate, pestle and mortar, and then laid on the gold mixed with water. The article is then put in a furnace and subjected to a heat of seven hundred degrees. This is often done when jewels have been fixed, but as diamonds will



not melt under a heat of two thousand degrees there is not much risk of accident to them. As soon as the article is taken from the furnace the enamel sets. To get the colour even and clear sometimes two or three coats of enamel with subsequent firings have to be given.

The colouring of the gold is almost the last process to which an article is subjected. This is done by subjecting it to acids which eat out the alloy, which is always in a greater or less quantity in every article. Thus is obtained the beautiful dull surface on gold which is so much admired. For a long time jewellers were proud of the fact that this effect could not be obtained on imitation or poor quality gold. The dull colour was the genuine unalloyed gold, and therefore they

felt safe. But imitation has come along, not however by any chemical process. If you look at a gold ring with a bloom on it, and examine it under a microscope, you will see that it seems covered with minute holes. This of course is caused by the drawing away of the alloy. What the imitators therefore do is to subject the cheap article to a sharp blast with very fine sand. This makes an impression on the surface of the cheap gold, and the bloom is the same as on 18-carat gold.

During the time I was in Birmingham, wandering from one manufactory to another, and inspecting I do not know how many hundred thousand pounds worth of jewels, there was one fact that struck

me forcibly. I noticed that the chief aim of the makers, whether in imitation or real metal, was to produce an artistic article.



DESIGNING JEWELLERY.

