

How the Victoria Cross is Made.

With photographs taken by George Newnes, Ltd.



COME see the *Dolphin's* anchor forged." That was the invitation of a poet. Mine, however, is for a subject of much less magnitude, yet of far greater value. I ask you to accompany me in your imagination to see made the little bronze cross which, insignificant in money worth though it be, is yet, in the estimation of the nation and of the world, the most priceless which the British Sovereign can bestow. No wealth can purchase it; no Prince of the most Imperial purple can, with all his pride of place, procure the privilege of wearing it suspended among the insignia of the orders which blaze upon his breast. It must be won as it is worn, worthily, and it marks the wearer as a king among his fellows though he be only a private in the Army, a bluejacket in the Navy, or the least considered of the non-combatants in the world. "For valour!" That is its motto. That is the inspiration of its award. It can only be won by him who is not merely not afraid to look on the face of death, but is willing to dare the King of Terrors and try a fall with him, with the odds in favour of the grim conqueror coming off victorious.

It is not yet fifty years old, for it was instituted, as anyone may see who cares to turn up the records, by a Royal warrant dated January 29th, 1856, at the end of the Crimean War, and its design is understood to have been made by no less a personage than the artist hand of the lamented Prince Consort.

Its object was, as everyone knows, "to place all persons on a perfectly equal footing in relation to eligibility for

the decoration, that neither rank, nor long service, nor wounds, nor any other circumstance or condition whatever save the merit of conspicuous bravery shall be held to establish a sufficient claim to the honour" — qualifications which were, on April 23rd, 1881, more clearly defined as "conspicuous bravery or devotion to the country in the presence of the enemy" — the condition which makes the youngest private the equal of the Commander-in-Chief himself and binds them in the brotherhood of blood bravery when the bronze Cross hangs upon their breast.

Whenever occasion calls for the bestowal of the cross the War Office sends a written order to Messrs. Hancocks and Co., of New Bond Street, silversmiths to the Queen, for the number required. The order invariably states that they are to be made the "same as before," an almost superfluous instruction, one would think, for it is hardly within the region of speculative politics that any jeweller would be found bold enough to vary the pattern, least of all the firm which has always made the crosses and preserves all the traditions of the manufacture as carefully and as worthily as they deserve.

With the order for making crosses there is sent a supply of bronze which once formed part of some Russian guns taken in the Crimea. If, however, as sometimes happens,



THE BRONZE, TAKEN FROM RUSSIAN GUNS CAPTURED IN THE CRIMEA, IS SENT IN THIS FORM FROM THE WAR OFFICE TO THE MAKERS.

the jewellers have a supply of the metal left over, the War Office waits until that is used before sending another supply. Until the last time the metal has always been sent in rough lumps of various irregular shapes, but the last lot consisted of two cylindrical bars packed in a wooden box as represented in the illustration on the preceding page. These bars were, for some reason, covered with paint, one a very dark green and the other khaki colour, but the bright copper yellow lustre of the metal could easily be seen at the two ends, which were not painted.

The process of the manufacture of the Victoria Cross is entirely different from that of all other war medals and decorations. Although, therefore, their intrinsic worth is practically nothing, for the worth of the bronze would not exceed a few pence at the most, yet the cost of production is relatively considerable. Indeed, it has often happened that in the auction-room, to which necessity or some circumstance of another character has brought the bronze "badge of courage," the collector has willingly paid for the emblem which he is not privileged to wear a sum a hundred times greater than it originally cost to produce.

In the case of the ordinary medals, steel dies are made and the articles are stamped up complete with one blow of the press, so that they can be turned out by the hundreds and thousands with little or no trouble at all. For the Victoria Cross, however, no dies are in existence to produce them by the score, much less in larger numbers. Each one is, in fact, made separately and goes through a certain number of manual processes, which culminate in the production of what is really a work of art. This is as it should be to mark out its possessor as different from his companions who, without undervaluing in any way their services or their danger and devotion, have merely shared with all

their other comrades the brunt of the campaign.

The bronze used is of a very hard quality, and as a record is kept by the Government of the quantity supplied and the number of crosses which are made, it has all to be accounted for, allowance being naturally made for the waste which is inevitable. For this reason the bronze is weighed out to the workmen with as much care as if it were one of the precious metals like gold or platinum.

The first operation in connection with the manufacture takes place in the foundry where the cross is cast. The first cross was modelled by the artist in a hard wax from which a model pattern was cast. This was preserved with great care, and from this pattern moulds are made in specially prepared sand, which is capable of retaining a good impression. These moulds, which, it need hardly be said, are made in two parts, are allowed to become thoroughly dry and hard, and the surfaces are prepared with plumbago to give them additional smoothness.

The sand is packed in a little iron case made in two halves interlocking very closely and accurately, and at the upper part of each half of the case is a semicircular hollow which, when the two halves are joined, forms a complete circle. When the mould is got ready a piece of wood is placed in the sand, and when the



CASTING A VICTORIA CROSS.



FILING AND DRILLING THE ROUGH CAST.

two ends of the case are brought together and joined the wood is removed, thus leaving a tube connecting directly with the mould of the medal so that the liquid metal may be poured into it.

Thus prepared, the mould is placed in a large iron bath, so that in case any of the metal is spilt in pouring it may be readily recovered. The bronze is melted in crucibles of clay or plumbago placed in a powerful draught furnace.

The temperature of this is somewhere about 2,000deg. Fahr., a heat almost intolerable for the ordinary individual even to come near. In spite of this, however, the operator watches carefully for the melting of the bronze. When it becomes liquid he withdraws the white-hot pot by means of a pair of long tongs, and pours the molten liquid into the moulds with as much dexterity and with, as a rule, as little loss as a lady pours out a cup of tea in the afternoon.

Although, to the untrained individual, it may seem quite easy, it nevertheless requires great judgment to get the metal at exactly the right temperature, and only practice does that. If the bronze is too hot it burns, and the zinc and tin evaporate, giving off noxious and dangerous fumes, at the same time altering the composition of the alloy. If, on the other hand, the bronze is not hot enough it does not flow readily, and so fails to fill up the interstices of the mould accurately. Even with the employment of workmen who have made the cross for many years, it often happens that when the metal is cooled and the moulds are broken many of the medals are found to be

imperfect, and have to be re-melted and cast a second time over. The same is true with regard to the bar decorated with laurel leaves, to which the letter "V" is attached, and which is made in exactly the same way as the cross, but separately from it.

On taking the cross from the mould it is quite easy to see a thin, rough line along the edges where the two halves of the mould have joined. This is always intensified in places where the metal has run, and gives the medal a distinctly rough appearance at the edges. The design, too, is dull and flat, and is anything but sharp, while the colour is like that of a dirty penny. Each of these defects has to be remedied in turn. For this they are sent from the foundry to the factory, where they are examined carefully, and all the faulty places are repaired.

The first thing is to make the edges true and smooth. This is done by hand and with a file, but it is not easy work on account of the hardness of the metal. After the edges are smoothed the workman drills a hole at the top of the cross for the ring which connects it with the bar.

While now perfect as to shape, the surface still remains rough and entirely lacking in the detail of the finished cross. To produce this the medal is sent to the chaser, who embeds it in a ball of pitch on an iron bullet in order to keep it steady. With variously shaped punches and a small hammer he goes carefully over the whole surface, back and front, until all the detail is brought up and the design appears in bold relief from the matted ground-work.

In this process, too, the letters are brought into sharp relief, the tufts of hair on the mane and tail of the lion are engraved, and



CHASING THE CAST, WHICH IS EMBEDDED IN PITCH.



THE ROUGH CAST—REVERSE SIDE.

the effect of the different portions of the crown is heightened. By the time the cross leaves the chaser's hand it looks quite different from what it did when he received it, as will be seen by comparing the two illustrations showing the cross

for delivery to the War Office.

Even then, however, the jeweller's work is not finished, for each cross is sent back to Messrs. Hancocks and Co. in order to have the name of the recipient and the date on which he won it engraved upon it.



THE ROUGH CAST—FRONT VIEW.

The name and rank of the man are cut on one line on the bar and the name of the regiment in another immediately under it, thus:—

PRIVATE THOMAS ATKINS,
10th Hussars ;

just after casting and when it is complete.

This chasing process, insignificant though it may appear, is a matter of several hours' hard work to a good man, who dare not, even if he would, neglect his task, for each cross when it is finished has to be submitted to the War Office for its inspection. The same processes are gone through with the making of the bar, and when the chasing of both is entirely satisfactory they are sent to be bronzed by treatment with various acids until the uniformly dark tone so well known is given to them.

Then the top bar with its steel pins and connecting ring are put together; the ribbon, which is red for the Army and non-combatants and blue for the Navy, is attached, and the cross is ready

and in the semicircular part of the cross at the back are the day, the month, and the year of the deed of conspicuous bravery set out in three lines, as is seen in the illustration. As it hangs on the breast of the hero it adorns

the cross, with ribbon, bar, and pin complete, weighs less than 1oz.: about 432grs., or 9oz. to be accurate. Of this the cross itself takes as nearly as possible 240grs., the bar 72grs., and the ribbon and pin the remainder.



THE FINISHED CROSS—REVERSE.



THE FINISHED CROSS—FRONT.