

ment should have a brass foundry of their own, and whereas Mr. Bagley's foundry is the only one for casting brass ordnance, and liable to dangerous accidents wh<sup>ch</sup> can't be prevented, it is therefore ordered that a proposal and estimate be made for building a Royal Brass Foundry at His Majesty's Tower Place at Woolwich, and the charge thereof defrayed out of the £5,000 given this year by Parliament for re-casting brass ordn<sup>ce</sup>, and y<sup>t</sup> no time be lost herein, inasmuch as there are but two 12-pounders, and not one 18 or 24-pounder for land service. A letter to Mr. Henry Lidgbird to attend the Surveyor-General the 20th, about providing bricks for the Royal Brass Foundry at Woolwich."

Within two months from the date of the above decision, the sum of £300 was paid for bricklayers' work upon the New Brass Foundry, and on the 10th of July the following advertisement appeared in the *London Gazette*:—"Whereas a brass foundry is now building at Woolwich for His Majesty's service. All founders as are desirous to cast brass ordnance are to give in their proposals forthwith, upon such terms as are regulated by the principal officers of His Majesty's Ordnance, which may be seen at their office in the Tower." A month later it was ordered that, if the results of inquiry proved satisfactory, Mr. Andrew Schalch should "be employed in building the furnaces and providing of the necessary utensils for the Royal Foundry at Woolwich, at £5 a day, until everything is provided and his performances approved."

The foregoing statements from the Tower Records, as Mr. Grover remarks, tend to disprove the popular tradition, mentioned above, that to Mr. Schalch belongs the credit of selecting the site of, and virtually founding, the Royal Arsenal at Woolwich.

Andrew Schalch continued for sixty years master-founder at Woolwich. He died at Charlton in 1776, aged eighty-four, and, as we have seen, was buried in Woolwich Churchyard. The Brass Foundry, as we now see it, was completed in 1717, and is said to have been designed by Sir John Vanbrugh. A writer in the *Quarterly Review* for January, 1858, describes it as "stately, solemn, and picturesque, with its high-pitched roof, red brickwork, and carved porch, looking like a fine old gentleman amid the factory ranges which within these few years have sprung up around. It is impossible to contemplate this building without respect, for forth from its portals have issued that victorious ordnance which, since the days of George II., has swept the battle-grounds of the old and new worlds."

The Arsenal, as originally established at Tower Place, consisted of but forty-two acres, whereas at the present time it covers upwards of 300 acres. Considerable advance was made in the works during the French wars at the end of the last and the first fifteen years of the present century; but since the introduction of machinery consequent upon the great strides made in the "science" of warfare, its progress has been rapid and almost continuous. Usually the number of artisans employed here is about 10,000, but in times of war the number sometimes reaches as high as 14,000. In 1796, according to Lysons' "Environ of London," published in that year, the number of artificers and labourers (exclusive of convicts) employed in the various departments of Woolwich Warren was about 1,500, including 300 boys, and the making of canvas bags for the use of the Warren furnished employment for a large number of poor women in the town.

Fifty years ago the manners and customs of the place were very different from those of the present day, and this will especially strike a Government employé in the fact that at that time an hour a day was allowed in the Royal Arsenal for "watering time." For half an hour every morning and half an hour every afternoon, work was suspended, and barrels of beer were brought in from the public-houses to keep up the spirits and energies of the workmen. This custom was abolished in 1829, and the abolition caused some heartburning at first, though all now admit that it was a judicious step.

The Arsenal is surrounded by a high brick wall, and has a massive entrance, opening on to a wide gravelled space, the ranges of buildings and houses within, with tall chimney-shafts pouring out volumes of smoke, and seeming almost like a town in themselves.

It is time now for us to glance over the various buildings and workshops of this great hive of industry. In the west lodge of the main gate a small stone let into the wall bears the following inscription:—"This entrance to the Royal Arsenal was planned, and the gateway constructed, by order of General Viscount Beresford, G.C.B., G.C.H., Master-General of the Ordnance, in the tenth year of the reign of His Majesty King George IV., A.D. 1829." On the green, opposite the gates, stands a handsome brass culverin, of French manufacture, but brought from Malta. It is twenty feet long, and bears the date of 1607. It is mounted on a gun-carriage, made here in 1827.

In the rear of this curious cannon are the officers' quarters and the various offices connected with the