

On Her Majesty's Service

WASC 1583

HN 149

WAI 435

see also
(WASC 0371)



SOME ACCOUNT OF GUNPOWDER.



21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

VIEW OF THE GUNPOWDER MILLS AT WALTHAM ABBEY, AS THEY APPEARED IN 1735

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|------------------------------------|---|-------------------------------|---------------------------------------|
| 1 A Horse mill. | 8 The Carpenter's and Millwright's Workhouse. | 11, 12, Two Stamping-mills. | 18 The Dusting-house. |
| 2 The Corning and Glazing Engine. | 9 The Clerk's Counting-house and the Watch-house. | 13, 14, Two Dumb-mills. | 19 The Little Stove. |
| 3, 4, 5, Three Horse-mills. | 10 The Loading-house. | 15 The Charging-house. | 20 Three Sun-stoves, or Drying leads. |
| 6 The Stables. | | 16 The Old Composition-house. | 21 The Great Stove. |
| 7 Coal-mill and Composition-house. | | 17 The Store-house. | |



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SECTION I.

IF the importance attached by the reader to a subject depends upon its extensive use and demand among mankind, *Gunpowder* must be a subject of more than common interest. This extraordinary substance—a powerful weapon in the hands of the conqueror of nations—has for ages decided the fate of mighty kingdoms. As a means of defence, as well as of offence, to armies, it hurls the murdering bullet with force and precision alike tremendous. Nor are its uses confined to war and carnage. It aids the advance of civilization, by becoming in the hands of the miner and engineer a ready means of overcoming the obstacles which are presented to them in their search after mineral treasures, and in procuring materials for building. Immense blocks of stone, for architectural structures, are easily liberated from their quarries by its means; and it removes, by the sudden mechanical force of its explosion, obstacles which impede the progress of the engineer; and so, to a great extent, accelerates the progress of human exertion and industry. The sportsman, too, owes much of his pleasure to this agent, and the multitude manifests its joy on festive occasions by witnessing fireworks prepared by its means. The birth of princes and rulers it announces to the world: it salutes with its thundering voice the approach of those, who are, in common parlance, called *great*. In short, its uses, whether in war, in the arts, in sport, in exhibitions, or in the thunder of its compliments, are so extensive, and so varied, that we cannot wonder at the expression of any desire to add to the knowledge of its uses that of its History and Manufacture.

The invention of gunpowder has been marked as one of those grand epochs in the history of human invention, surpassed only by that of printing and of the steam-engine. It does not belong to our present purpose to trace the effect of this invention in the history of mankind, but we may allude to a common remark, that gunpowder has tended to make war

less sanguinary, and to diminish the mere *animal* courage (which perhaps is only a refined term for ferocity and brute force) and the conflict of revengeful passions, so certain to be excited when men meet in close conflict. It has reduced war, in fact, to a science of *tactics*, in the exercise of which skilful management and contrivance are of more avail than personal, individual valour.

There is some doubt as to whether the ancients were acquainted with gunpowder. Virgil, and many of his commentators, and other authors, speak in such a manner of Salmoeneus's endeavours to imitate thunder, as to make us think that he used a composition more or less resembling gunpowder. This prince was so expert in mechanics, that his machines imitated the noise of thunder; and the writers of fable state that Jupiter, incensed at the audacity of this prince, slew him with lightning. It has been more naturally, but we know not how correctly, assumed that he fell a victim to some of his own experiments. Dion and Johannes Antiochenus report of the Emperor Caligula that he imitated thunder and lightning by means of machines which at the same time threw out large stones. Themistius states that the Brachmans encountered one another with thunder and lightning, which they had the art of launching from on high at a considerable distance. Agathius reports of Anthemius Traliensis, that, having quarrelled with his neighbour Zeno, the rhetorician, he set fire to the house of the latter with thunder and lightning. Philostratus, speaking of the Indian sages, says that when they were attacked by their enemies, they did not quit the walls to fight them, but repelled and put them to flight with thunder and lightning. He also alleges that Bacchus and Hercules, attempting to assail them in a fort where they were intrenched, were so roughly received by reiterated strokes of thunder and lightning launched upon them from on high by the besieged, that they were obliged to retire. Mythology and history are so blended in the writings of