# NINE KILLED IN GUNPOWDER BLAST

## E. RUDGE TELLS HOW A QUICK THINKING CARPENTER STOPPED AN EXPLOSION WHICH COULD HAVE BLOWN HIS TOWN APART.

It was 11.15 in the morning of November 27, 1811. The little town of Waltham was quietly going about its business, and by the river, behind the Abbey church, the gunpowder factory was working to capacity to supply the urgently needed powder for the fighting services.

At that moment an ominous rumbling explosion was heard, almost immediately followed by a second one.

The first had occurred in a press house, from which fiercely burning debris was scattered over a wide area. Some fell on a corning house, which blew up in turn, killing nine of the workmen.

In the accounts of the disaster which were published the next day, it seems that the whole town was in great danger, for it was thought that the magazine would blow up. A man was sent through the streets warning the inhabitants to leave their houses at once, and with an emotion very near to panic the villagers waited for the threatened blow.

But the final explosion never came, though no one knew the reason at the time. It was only revealed a few days later at the inquiry held by the governing body.

Meanwhile the reports continued to come in, describing almost freakish effects over a wide area. At Stepney a plate-glass mirror was shattered; at Hackney and at Blackwall windows were blown in; at Marylebone several houses were damaged; and men at work in Regent's Park felt the ground shake. Among the Thames docks, ships were shaken as though by an earthquake.

Had the magazine been involved one can only imagine the extent of the damage which would have followed, for here were stored the barrels of powder consigned to the use of the forces, then at the height of the Napoleonic wars.

The mills were working to full capacity and there is little doubt that the magazine would have potentially wrecked the little town, and the abbey church. The streets and the quaint houses would have suffered a blow which might well have inflicted irreparable damage. What then was it that averted this calamity?

The answer is recorded in a single entry among the letters preserved among the archives of the old gunpowder works, which were discovered and reprinted by the Waltham historian Winters in 1887.

It is a bald statement that: *'an appeal was made to the Hon. Board of Governors for some reward of merit to William Peyton (or Paton), carpenter, who after the explosion extinguished a firebrand that fell near the door of the magazine. The door had been forced open by the explosion. Reward a donation of £20.'*

In this inadequate statement is hidden an act of supreme heroism such as is inspired in a moment of great peril.

We see this man in the midst of a scene of destruction. Two explosions had destroyed at least two buildings; nine of his co-workers had been blown to pieces and burning debris had showered down upon the factory precincts. One burning timber had fallen at the open doorway of the magazine; and with no thought for his own safety, and with great presence of mind, he put out the flames and saved Waltham from a great disaster.

It is strange that this heroic act was recorded only in an obscure minute of a board meeting, in which even his name is not accurately known.

Surely if ever a man deserved a memorial at the hands of a grateful community Waltham Abbey owed it to William Peyton, or Paton.

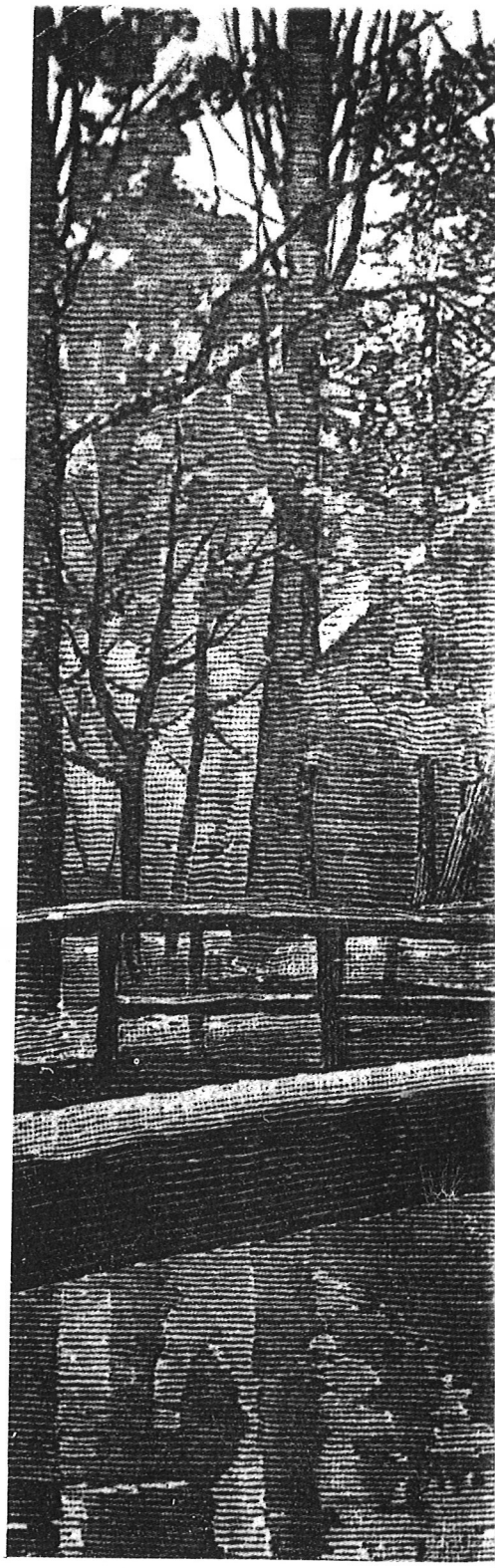
The existence of a gunpowder factory in Waltham Abbey was a curious development of the dissolution of the monasteries.

In the year 1540 the abbey of Waltham shared the general fate of the abbeys, and part of the lands of the abbots came into the possession of Sir Anthony Denny, of Cheshunt. Among the property so acquired were a fulling mill used for the treatment of woollen cloth and two watermills probably employed in the milling of grain.

From that day onwards they were put to a new use, for Sir Anthony was the appointed maker of gunpowder to the sovereign, and the mills were adapted to operate the machinery of powder-making.

The Waltham mills were the first in England to make gunpowder. Prior to the sixteenth century all supplies were imported from the continent. The adoption of gunpowder as a weapon of warfare had been very slow, and it had taken many years to overcome the prejudice against so unpredictable and inefficient a material as it seems to have been in those days.

Although cannon were used as early as 1346, at the battle of Crécy,



little progress had been made with powder as a propellant. Its explosive power was well known, and it is interesting to note that Waltham powder was used in 1556 to blow up the foundations of the central tower of the ancient abbey, which had stood at the east end of the present nave.

No one can say for certain when the explosive mixture we call gunpowder was first discovered. There is little doubt that it originated in the prehistoric east, probably in China or India.

This much is logical enough, for the three ingredients would have been well known to Asian man, and in course of time someone would discover the startling effect which could ensue when they were mixed together. These three ingredients were nitre or saltpetre, sulphur or brimstone, and wood charcoal.

Nitre is a product of the decay of animal refuse, and occurs in the soil of old village sites. Since time immemorial it has been leached out from such soils in tropical countries like India.

Bengal nitre was one of the most important commodities carried by the East India Company formed in the year 1600 largely with the object of providing English powder factories with vital supplies – and 'Bengal lights' is a name still used to describe one type of firework.

It is said that during the civil war Cromwell augmented his supplies of nitre by extracting the soil of ancient churchyards.

Brimstone or sulphur occurs naturally in many parts of the world, particularly in areas of volcanic activity. It was one of the first elements known to prehistoric man, and its combustible nature has been known throughout the ages. Wood charcoal is easily produced by the controlled burning of wood in circumstances where air is partially excluded.

How it came about that these three were first mixed we do not know, but there is no doubt that the fireworks traditionally associated with the Chinese were invented many centuries ago.

The earliest mention we have in England of this combustible mixture occurs in the writings of a 13th century Franciscan monk, Roger Bacon, who perhaps experimented with it. It was not until a century later that a German Franciscan monk named Berthold Schwartz discovered its powers as a propellant, and so artillery was born.

By the middle of the 16th century gunpowder was becoming established as a weapon of warfare, and its manufacture began upon the fields and meadows of the once great Waltham Abbey.

The making of gunpowder involved several processes. The impure ingredients had to be purified, each separately ground to a fine powder, mixed in the correct proportions, moistened with water and dried to a cake. This cake was finally crushed into grains, or 'corn' of a uniform size.

Thus many buildings were required – grinding mills, mixing houses, pressing and drying sheds, and corning houses. The finished product was stored in a magazine until such time as it could be transported to the arsenals.

It was a dangerous occupation, for, as Dr Thomas Fuller, the 17th century historian wrote: 'It is quistionable whether the making of gunpowder be more profitable or more dangerous. The mills in my parish have been blown up five times in seven years, but, blessed be God, without the loss of any man's life'.

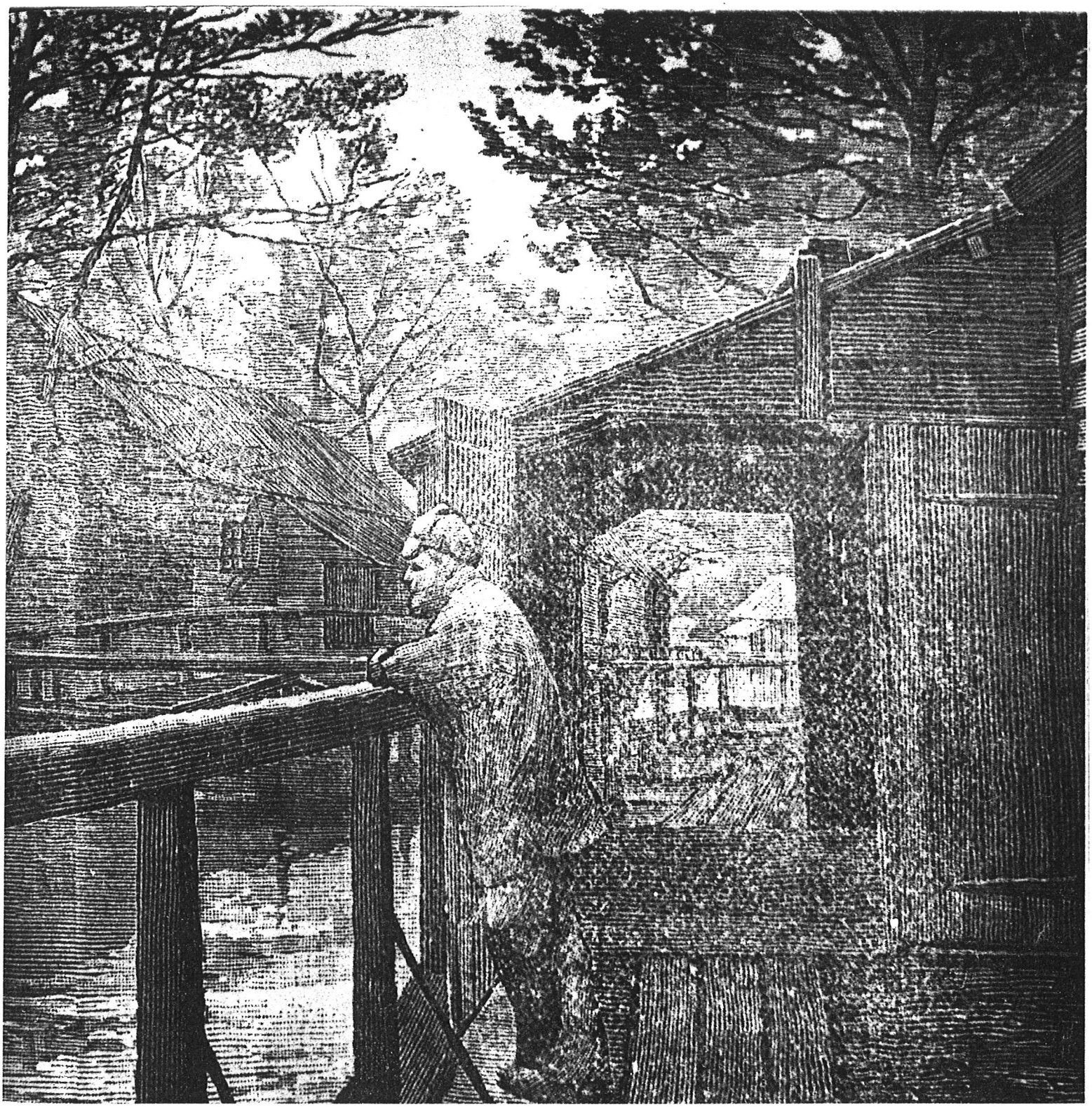
As time went on the demand for gunpowder increased, and accidental explosions became more frequent. The old watermills became inadequate as a source of power, and horses were introduced to turn the machinery.

W. Winters, the historian of Waltham Abbey, compiled a valuable detailed account of the year-by-year progress of the Waltham powder mills, published in 1887.

The first fatal accident was recorded in the old parish register for October 4, 1665: 'Buried, Tho. Gutridg, kill'd with a powder-mill.' The next entry was in 1720: 'Peter Bennet, Kill'd ye powdermills.' In 1739 a charge of powder in one of the mill-houses went up and one man completely disappeared. Only his clothes were found on Galley Hill, a mile and a half away!

In those early days the manufacturing method relied on experience, and not on any depth of technical knowledge.

The causes of explosions were found by painful experience. Thus one was attributed to an overheated



*The Powder Mills at Waltham Abbey from Philips' Country Reader for Essex published in 1898.*

bearing, another to a spark from an iron hammer, and yet another to a small fragment of flint in the mixed powder. But many happened for no apparent reason at all, and they occurred with greater frequency as the production of gunpowder increased.

Between the years 1789 and 1810, when Britain was at war with France, nearly half a million barrels, each holding 100 pounds, poured from the Waltham mills, and during the same period scarcely a year passed without a violent incident recorded in the minutes. Some were minor explosions with no loss of life; others, as in 1801, when a corning house blew up, killing nine men and four horses, emphasised only too tragically the hazards of this dangerous industry.

The Waltham powder mills are today only a memory, and a name of a road. Powdermill Lane, beside the River Lea, from where the ancient tower of the abbey church can be seen across the meadows, is today an unimportant cul-de-sac. About the middle of the 19th century the importance of gunpowder began to fade. The discovery of other, more powerful, explosives by the Nobels accelerated the decline and final closure of the Waltham factory.