

HOME OFFICE.

EXPLOSION OF GUNPOWDER ON REGISTERED PREMISES No. 3359, AT  
MARPLE, NEAR STOCKPORT.

ACCIDENT No. 123. 1902.

No. CLIII.

REPORT

TO THE

RIGHT HONOURABLE THE SECRETARY OF STATE FOR THE  
HOME DEPARTMENT

ON THE

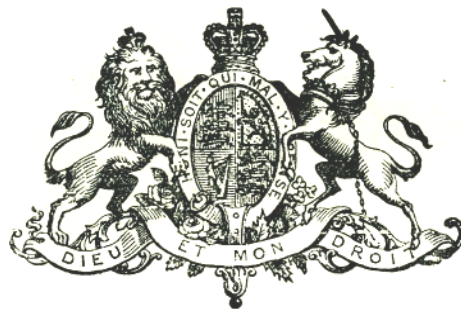
Circumstances attending an Explosion of Gunpowder which took place on the Registered  
Premises of Messrs. James Lee and Sons, New Road, Marple, on the 26th April, 1902;

BY

**CAPTAIN M. B. LLOYD,**

H.M. INSPECTORS OF EXPLOSIVES.

**Presented to both Houses of Parliament by Command of His Majesty**



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CAPTAIN M. B. LLOYD,  
H.M. INSPECTOR OF EXPLOSIVES.

Home Office,  
5th June, 1902.

SIR,

I HAVE the honour to report that, in obedience to your Order (Home Office Papers, X. 86,331), I have held an inquiry into the circumstances attending an explosion which occurred on the 26th April, 1902, on the premises of Messrs. James Lee and Sons, Ironmongers, New Road, Marple, and which resulted in the death of Robert Lee, the son of the head of the firm, and manager of the establishment in which the explosion occurred.

I also attended the adjourned inquest held by Mr. F. Newton, Coroner for the Stockport Division of the county of Chester, on the 2nd May, 1902.

The premises on which the explosion occurred were registered for keeping mixed explosives with the Justices in Petty Sessions, who, by delegation from the County Council, are the Local Authority.

## **Description of the premises**

The premises consisted of a large ironmonger's shop, situated at a corner of one of the two principal streets of the town. The shop and back premises formed the ground floor of a three-storied building. On the first floor, over the back portion of the shop, was a workshop used in connection with the cycle department of the business, and here was an enamelling stove, heated by gas. In the storeroom over this on the second floor was a safe in which the gunpowder was kept. This was in one corner of the room near the window, and in the centre was a bench; these were the only fittings in the room to which I shall have to allude. The floor was of bare boards, open-jointed, and not laid with any special care.

## **Circumstances of the accident**

At 7.30 p.m. on the day of the accident, a stone merchant, named George Barker, called at the shop and gave Robert Lee, the deceased man, an order for four pounds of blasting powder. The deceased was the only person in the shop when Barker came in, and went himself to fetch the powder. About three minutes later, as estimated by Barker, a violent explosion occurred. Barker ran out into the street unhurt, though somewhat shaken by the explosion. The deceased was seen to come to one of the first-floor windows, and some people who had run up at the sound of the explosion shouted to him not to jump and fetched a ladder, by means of which he descended to the street. He was seen shortly afterwards by a medical

man, who treated him, and had hopes of saving his life; but on the 28th, about 48 hours after the accident, he collapsed, and died from the shock to his system. With the above exceptions, no persons were in any way injured. This was the more remarkable, as the side street at the corner of which the shop stood was inhabited by people of the working classes, and the end of it outside the shop was much used by children for play; but on this particular day there was some sort of fair just outside the town, and the children had all gone to see the roundabouts and swings; further, owing to its being Saturday evening, no persons were in the workshop below the store in which the powder was kept, and Robert Lee was the only person anywhere about this part of the premises. Had matters been in a normal condition, many personal injuries, and probably other deaths, would have resulted.

### **Material damage**

The premises themselves were completely wrecked by the explosion, and, with the exception of the front shop, had completely fallen down. The damage done was increased by the nature of the goods stored over the back part of the premises. These consisted largely of bar and rod iron and heavy ironmongery generally, so that when the building was badly shaken by the explosion the heavy load on the upper floor caused it to collapse entirely.

Considering the completeness of the wreck of the shop and premises, the damage done to surrounding property was fortunately comparatively small, and, so far as I learnt, was confined to broken glass, and slight damage to roofs and window frames, &c., caused by projected debris.

### **Quantity of explosive**

From the statement of one of the shop assistants who had gone to the post office at the time of the explosion, there was about 25 lbs. of gunpowder in the safe and a few 12 bore cartridges in the drawer of it; some of these were found unexploded in the debris.

The powder was kept loose in three large canisters, each containing, as estimated by the same assistant, from 10 to 15 Lbs. of powder. I found the remains of one of these canisters, and am inclined to think that the higher limit is probably the more accurate, though of this, in the battered condition in which it was found, it was difficult to form an estimate.

### **Cause of the explosion**

The deceased was able to give his version of how the explosion occurred, and two statements of his on the subject were given in evidence at the inquest. The first of these was to the doctor, to whom he stated that some powder had leaked out of the safe and had exploded. The second was more detailed, and was made to the Sergeant of Police who visited him for the purpose of obtaining information in the morning of the day on which he died. To him he stated, "A man came in for some powder, I asked him 'What kind?' He said, " 'blasting' "; he did not know the man's name; " I could not find the tundish\* " and struck a match to look for it; I was two or three yards away from the safe when I struck the match. I remember nothing more. I had not opened the safe door."

An examination of the remains of the safe pointed to the door being either ajar or swung to without the bolts being shot, as the clips on the hinge side of the door were distorted, but the bolts showed no signs of having been forced. Evidence was given that the practice which obtained in dealing with powder was as follows: — Gunpowder was received in ¼ barrels containing 25 lbs., these, when brought to the premises, were decanted into the large canisters above mentioned, and when powder was wanted it was again decanted from these large canisters into a smaller one from which the customer was served.

Under these conditions, all powder was exposed at least three times during its passage through the shop, and this operation would be performed twice in the immediate vicinity of the powder safe. This had been going on for some years, and there can be no doubt but that grains of powder spilt in the operation would find their way into the cracks in the wooden floor, and so in course of time form trains of powder all over the room, leading to and culminating at the powder safe, where they would contain the most powder.

\* Local name for a funnel

Under these circumstances, even walking about the room in iron-shod boots would be attended with considerable danger, and still more dangerous would be the striking of a match, a spark from which falling on the floor would in all probability cause the explosion of all the powder in the room. A theory was put forward by the police, that a gas explosion due to leakage from the enamelling stove in the workshop below was the means of exploding the powder, but there seems to be no reason for looking so far as this for the cause. The workmen had not been in the room below for several hours, and since their departure the assistant had passed through it several times and had noticed no smell of gas. The storeroom also was provided with five windows, so that it is unlikely that any slow escape of gas would form an explosive mixture in the room. No smell of gas had been noticed on the premises for some time.

I am of opinion, therefore, that the explosion is to be attributed to the striking of a match in the room by the deceased, and that either a spark fell from this or the match itself dropped on a crack in the boards which had become filled with gunpowder spilt in the operation of decanting, and that this communicated with the safe.

### **Offences against the act**

In the course of my inquiry it became evident that the provisions of the Offences Explosives Act, 1875, were not adhered to, and that several illegalities had been committed on the premises, or existed at the time of the explosion.

### **Breaking bulk**

The most important respect in which the Act was being contravened was breaking bulk of packages exceeding 1 lb. in contents. Order in Council *No.* 16, made under Section 40 (2) of the Act, lays down in Section 2 (5) that "All explosives (with certain exceptions which do not here apply) shall be kept in a substantial bag, canister, or other case, made arid enclosed so as to prevent any explosive from escaping, and no package containing more than 1lb. of explosive (with the exceptions above alluded to) shall be opened on any registered premises unless all explosive therein is contained in inner packages which themselves fulfil all the foregoing conditions."

In opening the 25-lb. kegs and decanting these into the large canisters, and again in opening these canisters to bring loose powder down to the shop, and again in weighing out the powder, the above quoted rule was frequently disregarded. In places where the Act is not rigorously enforced by the authorities charged with its local administration, and these, I regret to say, are by no means few, this illegal practice is not uncommon, notwithstanding that we have repeatedly called attention to it on every available occasion, and to the necessity for enforcing it. There is no difficulty whatever in obtaining gunpowder, or other explosives, in small packages for retailing to meet this requirement of the Act, and, unless a dealer intends to sell the larger packages whole and unbroken, he must arrange with the manufacturers to supply him with explosive so packed.

I fear that the small extra charge amounting, I have reason to believe, to not more than 2s. 6d. on 100lbs., is a sufficient deterrent in some cases to prevent dealers from ordering their powder in these packages. For my part, the charge seems a most reasonable one and well worth incurring if only from the point of view of convenience and safety in handling, and absence of any loss in weighing out small quantities from bulk.

### **Receptacle not closed and secured**

The same Order in Council, Section 2 (1), thus defines the mode in which, in this instance, the explosive was being kept: -

" Mode B, that is to say, in a substantial receptacle (whether or not secured a fireproof safe) closed and secured so as to prevent unauthorised persons having access thereto, &c., &c."

This regulation was contravened in that the safe was probably not bolted and certainly not locked, as from the circumstantial evidence of the safe itself the bolts did not appear to have been shot, and the assistant stated in his evidence that it was never locked.

### **Safety cartridges kept in safe**

It appeared that a certain number of safety cartridges were kept in the drawer of the safe; this was in contravention of Section 2 (2) of the same Order in Council. By this the use of a safe is confined to the keeping of gunpowder and small arm nitro-compound.

### **Due precautions not taken**

Section 23 of the Explosives Act requires that the "occupier of \* \* \* \* registered premises, and every person employed in or about the same, shall take all due precautions for the prevention of accidents by fire or explosion in the same."

I do not consider that in striking a match in the vicinity of the safe that the deceased was observing this section.

### **Question of blame**

As the occurrence of the accident may be said to be primarily due to the first and last of the above illegalities and contributed to by the second, it follows that the blame for it is attributable to the firm for infringements of the Act and neglect of precautions. The person mainly responsible for these illegalities was the deceased, who managed the shop. It was actually registered in the name of his father, but the latter took no active part in the business, though as the registered "occupier " he cannot be acquitted of all blame.

The deceased had the reputation of being a careful and steady young man, and though, in law, ignorance is no excuse, I cannot but think from what I heard of his character that had he been informed of these points, he would have been not only ready to set them right, but anxious to do so in the interests of safety, and therefore, morally perhaps, he was not so much to blame. I regret that I cannot say the same of the Local Authority and their officer, Superintendent Oldham, of the Cheshire constabulary.

Superintendent Oldham was appointed Officer by the Justices for the Stockport Division of the County of Chester in Petty Sessions as long ago as 1894, and he admitted at the inquest that he had never inspected these premises at all, and urged as an excuse that they were registered before he was appointed officer. For this grave neglect of duty, I consider that he is deserving of the strongest censure, as I consider that the chief blame for this young man's death rests upon him. There is no doubt but that had the provisions of the Act been strictly enforced the accident would not have occurred, and it was his duty to see that they were so enforced.

Only second to the officer in culpable neglect is the local authority, who, having appointed an officer, left him to do as he pleased, and took no steps to see whether he was doing his duty.

Again, no steps had been taken to acquaint persons who registered their premises with the requirements of the Act. It may be urged that this is not the definite duty of the local authority or of their officer, and that ignorance of the law is no excuse for offences against it. This may be so, but it is quite certain that an intricate Act can never be really effectively administered unless some attempt is made to acquaint those concerned with the nature of its provisions. Had the superintendent possessed one particle of zeal, he would have at any rate taken some steps in this direction. With regard to this point, I may mention that summaries of the provisions of the Act with regard to registered premises have been prepared by this department, and will be found in the Guide Book to the Explosives Act, \* or may be obtained separately through any bookseller at a nominal price. As we have often urged, both in our annual reports and elsewhere, these summaries should either be distributed to, or placed within the reach of, occupiers of registered premises by every local authority in the Kingdom.

\* A new edition of this guide book, with a revised index, has recently been issued, and can be obtained, either directly or through any bookseller, from Messrs. Eyre and Spottiswoode, King's Printers, East Harding Street, Fleet Street, London, E.G. Price

Where the inspection of the officer of the local authority is carried out in a perfunctory manner, or is not carried out at all, as in the present instance, the Explosives Act must tend to become a dead letter. Occupiers of registered premises will come to regard their responsibilities as merely nominal, and even those who are most willing to conform to the Act, and anxious to secure the safety of their premises, will be disheartened at finding that their rivals in the trade are allowed to disregard every regulation. As a consequence of this state of things, the danger to life and property in a populous town may become very considerable, and this danger is the more subtle in that no householder can be assured that his neighbour who keeps explosives takes even the most simple precautions to avoid a disaster.

### **Verdict of jury**

The jury at the inquest found that deceased met his death accidentally through throwing a match on to the floor, which communicated by a train on the floor to the safe in which the gunpowder was kept. In the main, I am in agreement with this verdict, but think it a matter for regret that full advantage was not taken of the opportunity of publicly censuring the local administration of the Act by means of a rider to the verdict.

### **Previous explosions on registered premises**

In an Appendix hereto, I have collected from our books a list of explosions which have occurred on registered premises since the passing of the Act. In this list it will be seen that on 13 occasions the explosion has been that of explosives on registered premises which contained a fireproof safe, and it is perhaps a good opportunity to review the question of the advantage, or otherwise, accruing from the use of these safes.

### **Fire-proof safes**

The introduction of fireproof safes was due originally to inquiries made by the late Sir Vivian Majendie prior to July, 1872, as to the most effectual means of securing retail stocks of dealers in gunpowder against explosion in the case of the burning of their shops or stores. Under the law as it then existed, it was lawful for any person to store 200lbs. of powder without license anywhere and anyhow, and this fact must be borne in mind in considering what followed.

The outcome of the above-mentioned inquiries were :—

First, to elicit the opinion of the heads of the various fire brigades that any safe which could withstand fire for six hours might be regarded as being practically fireproof, as under no circumstances actually occurring in practice would this time be exceeded.

Second, Messrs. Milner offered to prove by actual experiment their ability to fulfil this condition.

Experiments were carried out by Messrs. Milner, under the direction of Sir Vivian Majendie, on Plumstead Marshes, and the result was that four safes were exposed to a furnace heat in specially constructed brick furnaces. \* Eventually, of these safes the first was removed after six hours, and the contents were undamaged by fire, the second exploded after 15 hours 52 minutes, the third after 18 hours 45 minutes, and the fourth, which was of thicker construction, was uninjured after 22 hours exposure to the fire. As regards the fire resisting qualities of the safes these results were eminently satisfactory.

Three years later, in 1875, the Explosives Act was passed, and the result of these experiments was given effect to in Section 22 of the Act, whereby, in registered premises for keeping gunpowder only, fireproof safes were given what I may call a statutory advertisement, in that a dealer who had such a safe might keep 100lbs. of gunpowder inside his house, whereas, under other circumstances, he might only keep 50lbs. in the house.

\* A full report of these experiments will be found in "Royal Artillery Institution Proceedings, No. 1, Vol. IX.

### **Order in Council No. 7**

On premises registered for keeping mixed explosives a similar advantage was given to fireproof safes so far as gunpowder was concerned, but no other explosives were allowed to be kept in such safes. (Order in Council No. 7, dated 27th November, 1875.)

### **Order in Council No. 7b**

On the 12th August, 1885, small-arm nitro-compound was allowed to be kept on registered premises in the proportion of  $\frac{1}{2}$  lb. of small-arm nitro-compound in lieu of every 1lb. of gunpowder not kept in a fireproof safe, and  $\frac{1}{4}$  lb. of small-arm nitro-compound in lieu of every 1lb. of gunpowder kept in a fireproof safe, still giving an advantage to the trader who had a safe for his gunpowder, but not allowing its use in the case of small-arm nitro-compound.

### **Order in Council No. 16**

On the 26th October, 1896, the law as regards premises registered for mixed explosives was entirely re-cast, and from this date the advantage to a dealer who registered for mixed explosives and who had a fireproof safe disappears, as the amount now allowed in Mode B is only 50lbs, whether or not contained in a fireproof safe, but, at the same time, it allowed small-arm nitro-compound to be kept in a safe under the same conditions as gunpowder.

### **Previous explosions of safes**

I have gone carefully through our records of accidents in premises where safes were used, and, out of the 14 cases, including the present accident, three involve only small quantities of explosive, and the records are not clear as to the distance of the safe from the site of the explosion. This leaves 11 cases for consideration, of these, in no less than eight, the safe was in all probability open at the time of the explosion, or, at all events, not properly closed. In one case the safe was closed, but became injured during the progress of the fire on the premises by falling from the attic to the ground through the floors of the building. In another case the safe saved the gunpowder from explosion though it was fully exposed to the fire; but owing to its position the firemen were able to direct a hose upon it and so assist its own powers of resistance. In the remaining case, when the safe though closed, exploded, there was reason to think that gunpowder had been spilt and crushed in the sill of the safe door, and thus communicated the explosion to the contents of the safe.

One fact is most prominent throughout the records, and that is the heavy damage caused by explosions in safes, this is due not only to the projection of pieces of the safe itself, but also to the powder exerting its full force by reason of its being strongly confined.

### **Conclusions**

The resulting conclusions to which I have arrived from these considerations are, that although fireproof safes are of undoubted advantage in some cases in preventing the occurrence of an explosion, this advantage is counterbalanced by the more serious effects resulting from their explosion; and that under careful and wise management the probability of an explosion is small, but that such management is frequently absent, the principal faults of management being: —

- (1.) Leaving the safe open or improperly secured.
- (2.) Breaking bulk and so making a train of gunpowder through the crack round the door.
- (3.) Putting the safe in such a position that under the action of fire it is liable to become damaged mechanically, and so lose its fire-resisting properties.

Another objection to the use of a safe is that its great weight renders its removal a matter of considerable difficulty in the event of a fire occurring in its neighbourhood.

To sum up, the result of the inquiry is to convince me that:—

- (1.) The explosion was that of gunpowder in the safe.
- (2.) That it was caused by the action of the deceased in lighting a match in the room.
- (3.) That the Local Authority and their officer are deserving of the gravest censure for neglect of duty in not enforcing the Explosives Act.,
- (4.) That the use of a fireproof safe under careful management is advantageous, but that in careless hands, and where the provisions of the Act are not observed, it increases the danger both to the public and to the personnel; and matériel of the premises.

I have the honour to be,

Sir,

Your obedient Servant,

M. B. LLOYD, Captain,

*H.M. Inspector of Explosives.*

The Right Honourable

The Secretary of State,

Home Department, S.W.



ACCIDENTS on REGISTERED PREMISES which have occurred since the Explosives Act, 1875, came into force.

Date.	No. of Accident	Place.	Details.	Number of	
				Killed.	Injured.
29 June 1876	25—1876	Bishop Auckland, Co-operative Stores.	Fire involving gunpowder, which exploded.		
14 Nov. 1876	54—1876	Pemberton, Wigan ...	Boy was getting powder for a customer by candlelight, when explosion occurred.	1	—
17 April 1877	11—1877	R.P. of Messrs. Chew, Stroud	Gunpowder stored in attic fired by jackdaw's nest being set alight by sparks from an adjacent chimney.	—	—
39 July 1877	S8r-1877	R.P. of Messrs. Braddell, Castle Place, Belfast.	Fire involving gunpowder in an un-locked safe, which exploded.	—	—
18 July 1877	50—1877	R.P. of Mr. Adkins, Bedford.	In turning down a pin cartridge the workperson appears to have placed it improperly in the machine.	—	1
28 July 1877	45—1877	Do. do.	Explosion during cartridge filling. (Inquiry and Special Report. No. X.)	2	—
25 Jan. 1878	3—1878	R.P. of Mr. Jackson, Skelmersdale.	Boy dropped a lighted candle-wick into an open powder keg which was in the shop.	1	2
6 Nov. 1878	70—1878	R.P. of Mr. Jacobs. Newport, Mon.	Stock of fireworks ignited by a cracker being fired off in the shop.	—	1
2 Nov. 1878	71—1878	R.P. of Mr. Gill, Middleton.	Man lit gas and threw the match amongst some exposed fireworks, which ignited.	—	—
15 Oct. 1878	75—1878	R.P. of Messrs. Hart and White, Colchester.	Assistant struck base of central fire cartridge with a corkscrew. ¼ lb gunpowder ignited by ensuing explosion.	—	1
25 Jan. 1879	8—1879	R.P. of Mr. Crozier, Ballinamallard.	Match head dropped into gunpowder drawer.	—	1
2 Aug. 1879	89—1879	R.P. of Messrs. Wright and Whitworth, Crook, Durham.	Spilt powder on stone floor ignited and fired 7 lbs. of gunpowder in a box close by.	—	2
10 Sept. 1879	123—1879	R.P. of Mr. Marsh, Walworth, S.E.	Child got some Roman candles out of shop, and threw them on the fire in the sitting room.	—	2
28 May 1879	152—1879	R.P. of Mr. Jones, Islington, N.	20 lbs. of coloured fire exploded in tin box in basement, probably by spontaneous combustion	—	1
3 Jan. 1880	2—1880	R.P. of Mr. Hanson, Doncaster.	Fire involving gunpowder in attic. A second explosion occurred shortly after the first. A Milner's safe, bolted but not locked, fell to the ground from the attic, and, bursting open, exploded. (Inquiry and Special Report, No. XXIX.)	3	2
24 June 1880	54—1880	R.P. of Mr. Hamilton, Larne, Antrim.	Fire involving 11 or 12 lbs. of gunpowder.	—	—
.22 July 1880	63—1880	25, South Castle Street, Liverpool.	A boy accidentally fired a pin-fire cartridge in turning it down.	—	1
27 Aug. 1880	74—1880	R.P. of Mr. Bennett, Birmingham.	Illegally drying coloured stars, which ignited.	—	1
5 Nov. 1880	94—1880	R.P. of Mr. Dalton, Newport, Mon.	Lighted cracker thrown into shop ignited some fireworks in a case on the counter, open at the moment for the inspection of a customer.	—	—
11 May 1881	44—1881	R.P. of Messrs. Cadle and Blaksborough, Stockton-on-Tees.	Explosion of a cartridge whilst being wadded, communicating to ½ lb. of loose powder.	—	1
27 Sept. 1881	91—1881	R.P. of Mr. Cullen, Deal.	Fire involving 30 lbs. of gunpowder.	—	1
8 Oct. 1881	92—1881	R.P. of Mr. Everard, Athlone.	Man pushed tin box of gunpowder along the floor with his foot, thus igniting a match, which caused the explosion.	—	1
27 Aug. 1882	83—1882	R.P. of Mr. Smith. St. Albans.	Fire involving small quantity of gunpowder.	—	—
7 Sept. 1882	88—1882	R.P. of Mr. Bradley, Moss Side, Manchester.	Boy entering garret where powder was kept dropped a lighted match on the floor and ignited scattered grains of powder, communicating explosion to contents of a barrel.	—	3

ACCIDENTS ON REGISTERED PREMISES which have occurred since the Explosives Act, 1875, came into force—*continued.*

Date.	No. of Accident.	Place.	Details.	Number of	
				Killed.	Injured.
27 Nov. 1882	130—1882	R.P. of Margaret Wilson, Cambusnethan.	Girl lit gas and threw burning paper away. It fell into a tin of gunpowder.	—	—
18 Oct. 1883	147—1883	R.P. of Mr. Clemens, Hanley, Staffordshire.	Loose gunpowder, illegally kept in a drawer, exploded.	—	2
29 Oct. 1884	115—1884	R.P. of Messrs. Watson & Co, Hackin's Hey, Liverpool.	Boy lit with a match some gunpowder sweepings on the floor. Flash communicated with about ½ lb. of gunpowder in a bag.	—	1
5 Nov. 1884	120—1884	R.P. of Mrs. Alien, Handsworth, Sheffield.	Fireworks exposed under a gas jet lit by spark from a match.	—	—
25 Oct. 1884	124—1884	R.P. of Mr. Piggott, Seven Sisters Road, N.	Fire (started by ignition of benzoline) involving 12 lbs. of gunpowder.	—	—
18 Jan. 1885	3—1885	R.P. of Mr. Stribling, Colnbrook, Bucks.	Boy dropped a match into an old biscuit tin containing ½ lb. of damaged gunpowder. He died from syncope shortly after explosion.	1	1
8 Aug. 1885	80—1885	R.P. of Mr. Cleland, Clerkenwell.	Fire (started by benzoline) involving ¼ lb. of gunpowder. Boy killed by falling into cellar of shop.	1	—
4 Sept. 1885	90—1885	R.P. of Mr. Reilly, 277, Oxford Street London.	Boy got hold of "garden alarm," and tried to open it.	—	1
5 Nov. 1885	111—1885	Anfield, Liverpool ...	Boy threw a lighted firework into shop while gunpowder was being served.	—	Several
14 April 1886	41—1886	R.P. of Mr. Baker, 88, Fleet Street, London, E.G.	During unmaking of small arm cartridges a pin-fire cartridge exploded, firing ½ lb. of loose gunpowder.	—	2
12 Sept. 1886	91—1886	R.P. of Co-operative Society, Muirkirk Ayr, N.B.	Boy lit some spilt gunpowder...	—	1
28 Sept. 1886	94—1886	R.P. of Mr. Grove, St. Philip's, Sheffield.	Child killed by the ignition of coloured fires illegally made by his father.	1	1
31 Oct. 1886	113—1886	R.P. of Mrs. Blake, Queen's Road Peckham.	Spontaneous ignition of coloured fires amongst other fireworks.	—	—
10 Nov. 1886	117—1886	R.P. of Mr. Strafford, Bamsley.	Fireworks exploded through the over- heating of a stove in an adjoining room.	—	—
7 April 1887	28—1887	R.P. of Mr. Mold, Cradley Heath Stafford.	200 lbs. of gunpowder illegally stored ignited by a flash from some gunpowder with which children were playing close by. (Inquiry and Special Report, LX XVII.)	4	2
14 July 1887	69—1887	R.P. of Mr. James, Bryimawr. Brecon.	Shopman struck a match to look for gunpowder under the counter. An explosion ensued.	—	1
3 Nov, 1887	107—1887	R.P. of Mr. Henry, Edinburgh.	Man injured by explosion of some cartridges, which he was illegally breaking up.	—	1
13 April 1888	34—1888	R.P. of Mr. Campbell, Broxburn.	Child threw a, lighted match on to cartridges which were being conveyed from safe in the garden.	—	6
1 May 1888	42—1888	R.P. of Mr. Horner, Limavady.	Explosion of 75 lbs. of gunpowder which assistant was getting out. No cause assigned.	—	1
3 Jan. 1889	1—1889	R.P. of Mr. Cameron, Ballymena, Co. Antrim.	Assistant lit a match near a tin containing 1 lb. of gunpowder, causing an explosion.	—	1
1 June 1-889	58—1889	R.P. of Mr. Grundy, Little Halton, near Farnworth	An explosion followed-the lighting of a match near an open canister containing less than 1 lb.	—	1
14 Oct. 1889	94—1889	R.P. of Mr. Ramsbottom, Manchester.	Fire involving fireworks	—	—
: 23 Nov. 1889	119—1889	R.P. of Messrs. Aitken, Grangemouth.	Fire involving 75 lbs. of gunpowder illegally kept.	1	Several
2 Sept. 1890	87—1890	R.P. of Mr. Argles, 143, Queen Victoria Street, E.G	Explosion during illegal unmaking of cartridges.	—	1
19 Dec. 1890	114—1890	R. P. of Mr. Wilton...	Fire involving 15 lbs. of gunpowder ...	—	—
19 Jan. 1891	9—1891	R.P. of Mr. Hunter, Bellshill.	4 lbs. gunpowder in an open barrel kept illegally in shop ignited by a spark from a candle.	1	4
28 Oct. 1891	111—1891	R.P. of Mr. Wood, Oldham.	Fireworks loose on shelves ignited by a match struck near them.	1	—
31 Oct. 1891	112—1891	R.P. of Messrs. Ware Brothers, Coventry.	Ditto.	—	—

ACCIDENTS ON REGISTERED PREMISES which have occurred since the Explosives  
Act, 1875, came into force—*continued.*

Date.	No. of Accident.	Place.	Details.	Number of	
				Killed.	Injured
3 Dec. 1891	128—1891	R.P. of Mr. Tannock, Catrine, Ayr, N.B.	Fire involving- 1 lb. gunpowder kept in shop.	1	2
21 Jan. 1892	8—1892	R. P. of Mr. Evans, Aapull, near Wigan.	Match struck whilst powder being emptied from a keg into a tin box.	—	2
7 March 1892	26—1892	R.P. of Mr. Young, Loanhead.	27 lbs. gunpowder were exploded in a cupboard. Probably iron-shod boots ignited powder grains on the stone floor outside.	1	1
17 Jan. 1893	6—1893	R.P. of Mr. Lyttle, Maghera, Londonderry.	Accumulation of spilt powder ignited by friction or a match.	—	2
10 March 1893	18—1893	R.P. of Mr. J. B. Warrilow, Chippenham.	Powder in a can placed on stove to dry exploded.	—	—
3 June 1893	45—1893	R. P. of Messrs. Doig & Sons, 9 High Street, Dundee.	1½ ozs. of soluble nitro-cotton had been taken from a bottle for the purpose of being converted into collodion, when it exploded.	—	2
13 Sept. 1893	75—1893	R.P. of Messrs. Sanders & Co., Kidderminster.	Shot got under base of a cartridge in an Erskine filling machine, firing the cartridge.	—	1
25 Sept. 1893	82—1893	R.P. of Messrs. Wood & Co., Gloucester.	Ditto.	—	1
17 Nov. 1893	98—1893	R.P. of Mr. Gatlaud, Islington.	Ignition of fireworks in a room. Cause doubtful.	—	—
19 Sept. 1894	65—1894	R.P. of Messrs. Holland, 98, New Bond Street, London.	Tray of Elephant cartridges fell, and several exploded on account of their being placed nose to base.	—	1
9 Oct. 1894	73—1894	R.P. of Mr. Smythe, 13, Blackwell Gate, Darlington.	The explosion originated in filling room in which a boy was present. Some nitro-powder fired and communicated with gunpowder in safe. Probably schultze powder spilt on floor ignited by being trodden on, or by boyish experiment. Special Report No. CX.	1	10
5 Nov. 1894	83—1894	R.P. of Mr. J. Scott, at Thirsk.	Occupier lit a cracker and threw it into doorway of shop and spark flew into cupboard and ignited fireworks therein.	—	1
13 Sept. 1895	100—1895	R.P. of Messrs. Hayward Brothers, 319, Kennington Road, S.E.	Fire on premises, exploding 20 or 30 lbs. of gunpowder.	—	—
24 Sept. 1895	101—1895	R.P. of Co-operative Stores, Chester le Street.	8 lbs. of gunpowder exploded in fireproof safe, cause not ascertained.	1	—
3 Oct. 1895	109—1895	R.P. of Messrs. A. Bell & Sons, Lancaster.	Fire broke out and involved 10 or 12 lbs. of powder.	—	—
24 Oct. 1895	118—1895	R.P. of Messrs. Holland and Holland, London.	An 8-bore cartridge exploded during process of wadding it.	—	1
2 Nov. 1895	122—1895	R.P. of G. W. Barnes, Ilford.	Occupier struck match to look for a cartridge in a drawer, in which were some loose grains of powder.	—	—
22 Nov. 1895	128—1895	R.P. of Messrs. Matthews Bros., Honiton.	An explosion occurred during loading of cartridges. Special Report, No. CXVIII.	—	2
6 Aug. 1896	82—1896	R.P. of Thos. Dainteth, Warrington.	Fire on premises, involving some small packages of explosive and a few sporting cartridges.	—	—
22 Aug. 1896	83—1896	R.P. of Caverhill & Co., Berwick-on-Tweed.	Explosion during operation of filling cartridges. Special Report CXXII.	3	1
25 Aug. 1896	88—1896	R.P. of Mr. Tather, 20, Brook Street, Hull.	Explosion of small quantity of amorces during removal.	—	1
2 Sept. 1896	91—1896	R.P. of Adam Smith, Stane, Cambusnethan.	Gunpowder with coals put on fire.	1	—
14 Sept. 1896	92—1896	R.P. of E. K. Storey, Newbiggin.	35 lbs. of explosive exploded, probably ignited by spark from candle.	1	—
14 Oct. 1896	102—1896	R.P. of W. J. Parry, Codmor Yard, Bethesda.	Fire in warehouse communicated with brick building used for storage of explosives.	—	—
5 Nov. 1896	115—1896	R.P. of Mr. Jas. Mortlock, 11, Hood Street, Accrington.	Fireworks in shop window set fire to by a girl.	1	—
5 Nov. 1896	116—1896	R.P. of Mr. H. Weaton, Devizes.	Girl lighted squib in shop, and spark there from ignited squibs and crackers in a tray on counter.	—	2

ACCIDENTS on REGISTERED PREMISES which have occurred since the Explosives Act, 1875, came into force—*continued.*

Date.	No. of Accident.	Place.	Details.	Number of	
				Killed.	Injured.
7 Dec. 1896	130—1896	R.P. of Mr. Bisshopp, 124, George Street. Oban.	Cartridge exploded while being turned down in a lathe.	—	—
15 Jan. 1897	9—1897	R.P. of Mr. A. D. Dobie, Castle Douglas.	Explosion during filling cartridges.	—	1
5 Aug. 1897	102—1897	R.P. of W. R. Skeet, Woking.	Firing gunpowder in an iron tube which burst.	—	1
21 Aug. 1897	108—1897	R.P. at 12, Suffolk Street, Birmingham.	Drying fireworks in front of a fire.	1	—
12 May 1898	61—1898	R.P. of Mr. F. T. Ruston, Crown Street, St. Ives, Hunts.	Explosion of gunpowder, probably caused by a lad treading on some loose grains on a brick floor.	2	—
8 June 1898	71—1898	R.P. of Jos. Brooks, 48, Queen Street, Scarbro'.	Fire on premises involving stock of fireworks.	7	—
2 July 1898	90—1898	R.P. of A. Christie, Duke Street, Kilmarnock.	Two lads playing with explosives ignited about 30 to 40 lbs. of gunpowder in a safe.	1	11
4 Sept. 1898	129—1898	R.P. at 15, Silchester Road, St. Leonards.	Mixing lard and gunpowder together for killing wasps.	—	1
18 Oct. 1898	144—1898	R.P. of Geo. Clarke, Ballintra.	Gunpowder in shop ignited by a spark from a man's pipe.	—	3
31 Oct. 1898	152—1898	R. P. at Cardiff	Man lit a cracker in a shop, which ignited about 60 or 70 lbs. of fireworks in a case.	—	1
9 Nov. 1898	155—1898	R.P. at Fore Street, Chard.	Man took a lamp into building containing benzoline and gunpowder.	—	—
5 Jan. 1899	3—1899	R.P. of Messrs. J. C. and C. Isaac, Liskeard.	Opening metal case containing 5,000 detonators with a clasp knife. Special Report CXXXI.	1	—
15 April 1899	57—1899	R.P. at 15, Bull Street, West Bromwich.	Fire caused by bowl of varnish taking fire. Explosive removed.	—	1
1 July 1899	91—1899	R.P. at Pleasley Park, Pleasley, Derby.	While preparing charges outside door of building, charge exploded and communicated explosion to 30 lbs. of explosive in building.	1	—
11 Oct. 1899	142—1899	R.P. of London Sporting Park, Limited, Hendon.	Boy knocking off base of sporting cartridge when it exploded.	—	2
28 Oct. 1899	154—1899	R.P. of Auchinleck Co-operative Society, Auchinleck.	Spark fell into box containing explosive under counter, 4 lbs. of powder exploded.	—	3
14 Feb. 1900	49—1900	R.P. of Messrs. Blisset & Son, Liverpool.	Rim fire cartridge exploded whilst being opened.	—	1
11 Sept. 1900	197—1900	R.P. of H. Yates, Longton, Staffs.	Flame from painter's lamp communicated with escape of gas.	—	1
17 Oct. 1900	211—1900	R.P. of W. Phillips, 131, Beeston Road, Leeds.	Collecting spilled powder by aid of lighted taper.	—	1
22 Jan. 1901	14—1901	Premises of David Patton, Monaghan.	Spark from match fell into drawer containing powder.	—	1
29 Jan. 1901	25—1901	Premises of Messrs. Strain and Thompson, Belturbet.	Spark from match fell into drawer containing explosive.	—	4
30 Sept. 1901	289—1901	R.P. of Mr. Ormrod, at Market Square, Wigan.	Match thrown on floor ignited spilt powder which communicated with explosive in safe.	1	—
31 Oct. 1901	325—1901	R. P. at 35, The Butts, Frome.	Match dropped on to a box containing fireworks.	—	1
19 Feb. 1902	45—1902	R.P. at 12, Derby Street, Leek.	Spark from match which exploded 25 lbs. gunpowder in a safe.	1	—