

NAMES AND PLACES

Louvain's Fate

Once again the shocking fate of Louvain has been repeated. This beautiful Belgian town, once enclosed in five miles of walls, was almost completely destroyed by the Germans in 1914. A most valuable library and the Weavers' Hall, which dated from 1317, and had been incorporated in the University, were reduced to rubble by the German bombardment. Since the last war a new University library had been assembled and housed in the new building, which was completed in 1929. Many English and American universities contributed to the cost of both university and library. Among the historic buildings of Louvain was the town-house, a richly-decorated Gothic building dating from 1448; the Church of St. Peter, irreparably damaged in 1914, was famous for its rood-loft and paintings; and St. Gertrude's Church, which was celebrated for its oak carvings. Only a few fragments remained of "Caesar's Castle," built after the conquest of King Arnulf in 891. Louvain is also celebrated for its medical school and for the manufacture of its lace and chemicals.

Once Impregnable

Wedge in the corner of the German, Belgian and French frontiers Luxembourg was easily overwhelmed again by the invading Germans, just as it was in 1914. At the beginning of the 19th century, however, this little grand-duchy, one of the smallest countries in the world, would have put up a stout defence, for the town of Luxembourg itself was considered then to be the strongest fortress in the world, with the exception of Gibraltar. The town itself stands on a rocky platform and is connected with the neighbouring country only in the west; everywhere else a valley 200 feet deep surrounds it. Spaniards, Dutch, Austrians and French have each held Luxembourg and fortified it, but in 1867 the fortifications were demolished when the duchy was made a separate state under the Treaty of London. The people are of Low German stock.

Link With New Zealand

Admiral Sir Dudley North, K.C.V.O., C.B., C.S.I., C.M.G., C.V.O., who succeeds Admiral Sir Charles Forbes as commander of the British Home Fleet, visited New Zealand on the staff of the Duke of Windsor when he came here as Prince of Wales. Another link with the Dominion is that he commanded H.M.S. New Zealand during the Battle of Dogger Bank in 1915 and Jutland in 1916. Earlier in the last war he was in the same ship in the Battle of Heligoland. Admiral North has had long experience in naval organisation and command. After serving in several ships of the line he became Director of

Operations Division, Admiralty Naval Staff from 1930 to 1932 and from that post he became Chief of Staff of the Home Fleet until 1933. He has commanded H.M. yacht since 1934 and has toured with the Duke of Windsor (then Prince of Wales) to Canada, India, Japan, Africa and South America, as well as New Zealand and Australia. His first wife was a Sydney girl. His brother, Brigadier Harold

rebuilt and strengthened. Two great French generals, Turenne and Macdonald, were born in Sedan. For many years this town has been famous for its woven materials, the factories for which were first established there by Colbert in Louis XIV's reign. Sedan gives its name to the Sedan Chair, first used in England by the Duke of Buckingham in the reign of James I.

Into the Fight Again

Widely known among men on Public Works, for he was a Public Works man

ALLIED LEADERS (26): General Petain

GENERAL PHILIPPE PETAIN, who has become M. Reynaud's right hand man as vice-premier of France, will be remembered as the soldier who commanded the heroic defences of Verdun during the last war. By his personal courage and his initiative he organised such defences that the onslaughts of the German armies were opposed for months. Verdun is one of the imperishable stories of the last war. All the might of the German Crown Prince's armies could not batter their way through the line.

General Petain, who is a marshal of France, was commanding a brigade of infantry when the last war broke out. By 1917 he was General in Chief of his country's army in the field. Until recently he was French Ambassador in Madrid.

The vice-Premier began his military career at the famous military school of St. Cyr, which he left in 1878 with the rank of lieutenant. After a course at the Ecole de Guerre he became captain of an Alpine regiment, then, after a period on the staffs of the 15th Army Corps and the Military Governor of Paris, he was appointed first to the staff of the Army School at Chalons and then to the staff of the Ecole de Guerre.

When the last war broke out he was appointed to command Charleroi. As the war developed he was given an infantry division in the Battle of the Marne and



then command of the 33rd Army Corps, with which he stormed Carancy. In June, 1915, he took over command of the 2nd Army and from February to May he was the hero of Verdun. From there he was given command of a group of armies and in May, 1917, he took over complete command in the field. General Petain was Secretary of War for France in 1934.

North, D.S.O., was Chief Engineer of the Eastern Command of the British Army from 1933 to 1937.

Memories of Sedan

Sedan, round which the battle raged a fortnight ago, is a town of bitter memories for the French, and one of the several fortresses guarding the northern French frontier. It stands on the banks of the River Meuse, midway between the big railway junction of Rheims and the border of Luxembourg. In 1815 Sedan capitulated to the Germans and later, in 1870, Napoleon III. surrendered his army of 83,000 men, with all their baggage and war materials to the German forces, and ended the Franco-German war. The fortresses were dismantled in 1875, but have since been

himself, and also well known to the denizens of the Government Life Building where, for the past 18 months he has been employed as one of the custodians, Bert Watson has enlisted to fight for a second time. He was a soldier for four and a half years of the last war, in the Ulster Division of the Royal Irish Rifles; when he first made application to take a hand in his second war, he was rejected, but on his second application, accepted. The staff of the National Provident Fund and the Friendly Societies Department, hearing he was going into camp, clubbed together and gave him a presentation, a red leather money belt. The presentation was made by the Superintendent of the Department.

THE IMPORTANCE OF NITROGEN

THOUGH modern explosives are as different from the early gunpowder as chalk from cheese, one element has remained unchanged. Whatever form explosives may take—whether they be called gunpowder, T.N.T., cordite, lyddite, melinite, amatol—the prime and truly moving factor of their violent force is nitrogen.

Nitrogen is an inert gas, which means that it is difficult to get it into combination with other elements. It is an unsocial element—mixing with the greatest reluctance, and needing but little encouragement to send it flying off on its own again. Millions of nitrogen elements, in some form of a solid nitrogenous compound, lie side by side with their hydrogen, carbon and oxygen components, in a charge of cordite, until detonated by the merest spark or explosive wave, when they instantly seek release.

What follows is something resembling a human panic; the nitrogen, having started the stampede, the rest follow suit, crowding for an exit, with the result that they push against the only movable surface present—the bullet or shell.

In the case of a high explosive shell or bomb, the reaction is repeated when it reaches its objective. The detonator once more agitates the nitrogen atoms and the stampede results, this time in the bursting of the shell or bomb.

For centuries the natural source of nitrogen was saltpetre, which is the common name for potassium, calcium and sodium nitrate. Potassium nitrate came from the farmyard heap, while calcium nitrate was scraped from the damp walls of caves and cellars. In 1809 a natural deposit of sodium nitrate was found on the western slope of the Andes.

Here, in a bed of ancient guano, deposits that had decomposed and precipitated their salts—2 miles wide and 250 miles long—were sufficient nitrates to supply the world's most extravagant needs.

The outbreak of the last war found Germany and Britain as Chile's best customers, with the two countries importing a yearly average of one million tons of nitrates. By the end of 1914 Britain's fleet had assured Britain's nitrate supply and cut off Germany's.

Germany was forced to fall back on her meagre stores, well knowing that, unless she was soon able to develop means of procuring this essential sinew of war, she was doomed to an early defeat.

Science came to her rescue, for, strangely enough, nitrogen is about the freest thing in creation, composing 78 per cent. of the atmosphere. For years chemists had been experimenting with various methods for its synthetic production from air. Seizing upon these experiments, Germany successfully put them into practical operation, thus enabling her to obtain supplies for the rest of the war.

Since then Britain has developed the synthetic production of nitrogen, and today finds us as independent of Chilean supplies as Germany.