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SOCIETIES.

Court Lorne, No. 17 C.O.F.

Regular meetings the Second and Fourth Mondays of each month at 8 o'clock. Court Room over Stapleford's store, Main street, Watford. B. Smith, C. R. J. H. Hume R. Sec. J. B. Collier, F. Sec.

POWDER AND BALL

The Deadly Successors to Man's First Crude Weapons.

FROM JAVELIN TO CORDITE.

Cannon and Guns Are Merely In the Nature of Chemical Catapults—The Introduction of Explosives and the Principles Governing Them.

When the first man in the old stone age thousands of years ago threw his first javelin against a hairy mammoth he put his foot over the threshold of the problem of explosives. For it seemed to him—and our feelings today are with him—that it would be more pleasurable if one could hurt and kill one's enemy without the gratuitous thrill of having to sit on the massive task on the verge of a cavernous mouth or of having to approach within a few paces of the huge legs which might the next moment descend upon him. It would be more convenient to stand at the cave entrance on a dizzy ledge of rock and hurl a weapon at the distant enemy.

So man was driven to invent the catapult, and a gun is merely a chemical catapult. The trigger is pulled back like the leather of the catapult, and the sudden and extraordinary expansion of the explosive corresponds to the elasticity of the rubber or spring, the essential feature of both instruments being the employment of some source of more than human power which can be made to yield up its energy at a given moment in the required way.

Explosives are, therefore, tabloid energy or power, and it is a just reminder of the fact that some substances are explosive generally, whereas quite a number of common things may be made explosive by some particular kind of treatment. When water boils on the fire there is no explosion as it is changed into steam, but if the spout were sealed and the whole of the water could be changed into steam in a second there would be an explosion. And the instance is good because it is really a kitchen model of a volcano. Moreover, steam guns were used in America in the sixties.

The essential idea of an explosive is then the violent release of some pent-up thing; just the opposite, from this standpoint, of the catapult, which works by allowing a distended thing—the elastic—to contract suddenly, whereas all explosives release a compressed thing. The release gives rise to an air wave, and this, of course, is experienced as a sound. It is the sound which is popularly called an explosion.

Now, it has been said that an explosive is tabloid force, power, energy. How is it made available? It is easy to follow the mechanism of an explosive further. Explosives, as commonly used, are solid substances which, by burning, produced almost instantaneously an extraordinary large volume of gases. The heat and pressure of a blow cause the burning to start, and the burning also produces heat which, acting upon the gases, increases the volume still further. It may be suggested that there is no obvious reason why even a sudden and enormous expansion should cause the damage of an explosion. And the suggestion is quite just.

It is only when they are confined that explosives are really dangerous. Gunpowder burned in the open merely causes a noise like "pouf" and burns quickly. Gunpowder may be burned on the hand—it is not to be recommended as a fashionable hobby—without any serious inconvenience. Indeed, gunpowder was first used as an incendiary composition. But a firework or a gun charged with gunpowder will explode with a loud report and may cause fatal wounds.

Gunpowder is the best known explosive mixture. It is made from the commonest ingredients—carbon, sulphur and saltpeter. There are several modifications of gunpowder, other nitrates being substituted for the saltpeter—potassium nitrates. The nitrates give the oxygen to the mixture, without which it would not burn at all, other explosive mixtures containing chlorates which have the same amount of oxygen as saltpeter and the nitrates. The different powders are used in different circumstances where a more violent or a slower or a safe explosive is required, for it is not always the same effect which one asks from an explosive. Velocity may at times be sacrificed, say, in favor of a higher weight of common shell. Gunpowder is a "low" explosive. Its explosion is slow, and its effect is less violently disruptive.

Dynamite is probably the best known "high" explosive, and the name does not stand for one particular substance, but for a large class, which are, in effect, diluted nitroglycerin and which

are generally used for blasting.

Gunpowder may be described as a nitrate of cotton wool (which the chemist would call cellulose). Both nitroglycerin and gunpowder are less useful as explosives themselves than their derivatives, although Russia and the United States use compressed wet gunpowder in their high explosive shells. One of the most famous derivatives is the smokeless propellant called cordite.—Philadelphia Ledger.

It is not what the best men do but what they are that constitutes their benediction to their fellow men.—Philips Brooks.

The Change of Mind.
"What's the baby's name, Bill?"
"Algernon."
"What? I thought you were going to name him John."
"Oh, that was when I still thought I had something to say in the matter!"
—Philadelphia Ledger.

Cause and Effect.
She—I don't see why you can't dress as well as Mr. Jinks. He is always in the height of fashion. He—Well, that's not remarkable either. I saw Jinks' tailor yesterday, and he was in the depths of despair.—Richmond Times-Dispatch.

Habit tends to make us permanently what we are for the moment.

LAUNCHING A BIG VESSEL.

Always a Risky Task For Which Great Preparations Are Made.

To slide a steel structure as big as a thirty story office building down hill into the water and have it arrive right side up without damage is a big job, even in these days of big achievements.

The builders of the latest Dreadnought risked nearly \$7,000,000 worth of material and labor when the launching triggers were released. The outcome depended on the correctness of calculations made before the big fighting ship's keel was laid on the blocks, for before the first construction work on a ship is begun the preparations for its launching must be started.

It is comparatively easy to build a ship on land, but to get it into the water is another matter, as Robinson Crusoe discovered after working seven years to construct a boat which, when finished, proved so big that he could not launch it. After the Great Eastern, for forty-three years the largest ship in the world, was built in 1858 it took three months to get it afloat.

The larger the vessel the more ticklish is the job of sliding it safely into the water. Although years of experience and careful study have reduced the methods used to a standard practice, yet there is always a degree of uncertainty about the operation. In spite of the navy's record of an unbroken series of successful launchings, those responsible for each succeeding one experience considerable anxiety until the crisis is safely past. Even though every known precaution has been taken there is always the chance that some unknown factor may ruin the plan and wreck the ship.—Crosby McCarthy in Popular Mechanics Magazine.

Australia's Stony Desert.
The great stony desert of north Australia was discovered by Captain Sturt, an Australian explorer, in 1845-6. It is north of the river Darling and is about 300 miles long and 100 broad, consisting of sandy dunes or ridges. Its want of trees, except along the creeks, gives the country a sterile appearance. These ridges were probably formed by the joint effect of winds and a gradually retreating sea.

One on the Blower.
"Can't open the safe this morning," said the clerk in the theatrical manager's office.
"Well," said the manager between puffs, "wait until the press agent gets here. Perhaps he can blow it open."
—Yonkers Statesman.

On the Other Side.
"Is Mrs. Gaussip a friend of yours?"
"No; she's a friend of my wife."
"Isn't that the same thing?"
"Not at all. She feels very sorry for my wife."
—Stray Stories.

Then Silence Was Profound.
"Did you ever see a company of women perfectly silent?"
"Yes, once. Some one had asked which of those present was the eldest."
—Boston Transcript.

The Pill That Brings Relief.—When, after one has partaken of a meal he is oppressed by feelings of fullness and pains in the stomach he suffers from dyspepsia, which will persist if it be not dealt with. Parmelee's Vegetable Pills are the very best medicine that can be taken to bring relief. These pills are specially compounded to deal with dyspepsia, and their sterling qualities in this respect can be vouched for by legions of users.

The wise man has doubts, but the fool is always positive.

COUNTY OF LAMBTON

Treasurer's Notice as to Lands Liable for Sale for Taxes A. D. 1915

Take notice that the list of lands in the County of Lambton liable for sale for arrears of taxes by the Treasurer of the County has been prepared by me and that copies thereof may be had in the office of County Treasurer.

And further take notice that the list of lands liable for sale as aforesaid is now being published in the Ontario Gazette in the issues thereof bearing date the 10th, 17th, 24th and 31st days of July 1915.

And further take notice that in default of payment of the taxes in arrears upon the lands specified in said list together with the costs chargeable thereon as set forth in the said list so being published in the Ontario Gazette before the day fixed for sale of such lands, being the 16th day of October A. D. 1915, the said lands will be sold for taxes pursuant to the terms of the advertisement in the Ontario Gazette.

And further take notice that this publication is made pursuant to Assessment Act 4, Edward VII Chapter 23 and Amendments.

Dated at Sarnia this third day of July A. D. 1915.

HENRY INGRAM,
J16-13t. Treasurer of Lambton.

Aug. 28 Canadian National Sept. 13 EXHIBITION TORONTO

\$150,000 IN PRIZES AND ATTRACTIONS \$150,000

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Model Military Camp
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MAMMOTH Military Display MARCH OF THE ALLIES

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THE GUIDE-ADVOCATE AND

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Weekly Farmers Sun	1 85
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Weekly London Advertiser	1 65
Saturday Globe	2 00
Northern Messenger	1 40
Weekly Montreal Witness	1 85
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Daily News	3 00
Daily Star	3 00
Daily World	4 00
Daily Globe	4 00
Scientific American	4 75
Mail and Empire	4 00
Morning London Free Press	4 00
Evening London Free Press	3 00
Morning London Advertiser	3 00
Evening London Advertiser	3 00

GRAND TRUNK RAILWAY SYSTEM TIME TABLE

Trains leave Watford Station as follows

GOING WEST	
Accommodation, 75	8 44 a.m.
Chicago Express, 3, flag	12 13 p.m.
Accommodation, 83	6 39 p.m.
GOING EAST	
Accommodation, 80	7 43 a.m.
New York Express, 6	11 11 a.m.
New York Express, 2	3 05 p.m.
Accommodation, 112	5 16 p.m.
C. Vail, Agent Watford	

Children Cry FOR FLETCHER'S CASTORIA