

HERE AND THERE

In Vilna temporarily in the possession of Germany, lives Peter Lapteff, one of Europe's "old men," born in the year 1789. When Napoleon invaded Russia and got as far as Dvinsk he needed a guide. But the inhabitants had fled. Lapteff's family hiding in a forest. He was captured and taken before the Emperor, who ordered him to guide the army. This he did for thirty-five hours and then escaped. He fought against the French at Borodino; against the English in the Crimea. Tired of making history, he took to making bricks, but now lives in retirement with his son and grandson.

It is curious to recall that just seventy years ago Herbert Spencer was hoping to take out a patent for a "flying machine." Only, he had given up as hopeless the problem since solved by the aeroplane, regarding it as impossible to carry the motor engine and motor power required for a long flight. His idea was suggested by the principle of the kite, and involved the drawing through the air of an inclined plane by iron wire cords attached to an endless wire rope moved by stationary engines.

In the German wireless communication, as wired from Holland, there is a reference to the British use of "intoxicating" gases. There is reason to believe that any gases that may have been used were weeping or lachrymatory gases, which are not poison gases and have no ultimate effect on the system, producing only violent weeping, which makes the soldier unable to see. These gases off after a certain time, leaving weakness, but no ill-effects.

The United States navy has dropped the term "helm" and will in the future use the unmistakable word "rudder." Instead of the old-fashioned command, "Starboard your

helm," the new direction will be "Right rudder." The old phrase sounds more nautical, but quickness of comprehension and action are nowadays essential, and picturesque terminology must suffer.

A novel suggestion for raising revenue following the war from alien enemies has been made in London. It is suggested that a poll tax should be levied in the case of every German, Austrian and Turk wishing to reside within the length and breadth of the British Empire, a sum of at least \$125 a year being charged for the privilege accorded.

Riga itself, which is the capital of Livonia, one of the three Baltic provinces of Russia, is the third seaport of Russia. It lies on the River Dwina, which at that point is crossed by a bridge of boats and a railway bridge. The town is 350 miles from Petrograd, and still retains many mediaeval houses and stores, for Riga was founded as far back as 1201 by a Livonian bishop. It has been Russian for the last two centuries, and was blockaded by Britain in 1854. Nearly one-half the population are Germans, with German-speaking Jews, one-fourth being Russians, and one-fourth Letts.

The report that the seaport town of Focha, in Asia Minor, on the Gulf of Smyrna, has been burned and that the Turks are retreating into the interior is of interest. Its founders, the Athenians, forsook the town, then known as Phocaea, rather than fall under the domination of the Persians, as the Turks now fear the Persians are forced. Secondly the event is of interest because the Phocaeans who fled in former days, after many adventures, found their way into France, and there founded Marseilles.

The body of Richard Andrews, mining prospector, sixty years of age, was found in a boom of logs in the river near Dryden.

CHARACTERISTICS OF HIGH EXPLOSIVES

The characteristics of high explosives, says a writer in the Daily Mail, is the extreme violence and suddenness of their detonation. Water is an explosive when it is heated and when it becomes steam, but the expansion is so slow that explosive results do not usually follow unless there is gross negligence. Gunpowder of the old type expands more rapidly than water and produces a large volume of gas, but again it acts with comparative gentleness. High explosives on the other hand, pass instantly from a solid or liquid form to gas and act with terrific energy, tearing to pieces any vessel which contains them. To make them act in this manner they usually require a detonator, which applies a violent shock to them and starts the explosion. It is a curious fact that most of the high explosives, when lighted with a match burn quite quietly. The experiment is not to be recommended, as accidents will happen, but in ninety-nine cases out of a hundred there is no danger.

Almost without exception high explosives are composed of some organic substance, which means some form of carbon, treated with nitric acid. Without nitrogen, which is the chief ingredient of nitric acid, there might be said that there can be no explosives. Yet by a paradox nitrogen is one of the most inert gases known, and the chief ingredient of the air we breathe. Possibly its explosive value arises from this inertness; it combines so exceedingly reluctantly that on small provocation the compound breaks up into gas, giving the enormous expansion needed for explosive effect.

The most famous modern high explosive and one of the most powerful is lyddite, which is very similar to the French melinite and the Japanese shimose. Lyddite is simply picric acid melted with a little vaseline. Picric acid is a yellow, crystalline substance largely used as a yellow dye and also very serviceable in medicine for the treatment of burns. It is intensely poisonous and a powerful explosive. Attention to its value as an explosive was first drawn in England by the destruction of a Lancashire factory where it was being manufactured. About the same date it was independently studied in France, and early in the nineties of last century it was adopted there for use in shells.

Picric acid is prepared from coal tar—the refuse of gas manufacture. When the heavy oil of coal tar is boiled and chemically treated phenol, or carbolic acid, separates from it. The carbolic acid is taken, boiled in strong sulphuric acid, and into the evil smelling liquid strong nitric acid is carefully poured. The resultant is picric acid. It has great virtues as an explosive, but also some vices. Its virtue is that it is not easily exploded when pure and dry, and it can be dropped or even thrown about, and that it does not act violently when lighted. To make it explode it needs a powerful detonator, which usually contains fulminate of mercury and tetryl. Its chief fault is that it is intensely acid, and when moisture is present attacks lead and other substances, forming exceedingly explosive compounds which go off quite unexpectedly.

An explosive similar to lyddite, but differing from it in chemical composition is trinitrotoluol, or "T.N.T.," which is largely used in the German army and navy. It is less powerful than lyddite in the proportion of 119 to 135, but it has certain important advantages over lyddite. It is much more stable and it is not acid, so that it does not form dangerous compounds. It is not affected by water or by the air. While a rifle bullet will detonate gun cotton or lyddite if fired through a charge of either of these explosives, it does not detonate trinitrotoluol. A weight of 4 1/2 lbs. falling 3 in. will explode gun cotton; falling 8 in. it will explode lyddite; but a fall of 39 inches is required to explode trinitrotoluol. Thus "T.N.T." is the safest of modern high explosives.

"T.N.T." is a yellow, crystalline powder, not unlike picric acid. Lyddite is a coal tar product, manufactured from toluene or toluol, which is very closely related to benzene and is one of the same group of hydrocarbons. Experiments made in 1889 at Karlsruhe showed that about seven pints or rather less than a gallon of toluene could be obtained from a ton of coal. The modern process of low-temperature distillation of coal has, however, greatly raised the quantity that can be obtained from each ton, and toluene is now being produced on a much larger scale.

Benzol, which is used extensively as a motor fuel, in ordinary circumstances may contain quite a fair percentage of benzene, but during the war all the toluene is being carefully extracted from it for use as an explosive. This toluene is an aromatic, colorless liquid resembling benzene. It is cooled into "T.N.T." by means of nitric acid. The same process being employed as is used to convert carbolic acid into picric acid and lyddite. Under suitable conditions strong nitric acid turns toluene into

trinitrotoluol. To give a good explosion with "T.N.T." as with lyddite, a powerful detonator is required. Tetryl, a coal tar product, which contains even more nitrogen than "T.N.T.," or lyddite, is usually employed with a little lead azide, which is less sensitive and safer than mercury fulminate, the material generally used in detonators.

Ammonal, a high explosive largely used by the Austrian army, is simply a mixture of picric acid, "T.N.T.," aluminium in fine powder and nitrate of ammonium. It is safe and powerful, but has the disadvantage of being hygroscopic, or attracting moisture and for that reason shells containing it do not always explode. Gun cotton, the oldest and best known of high explosives, is little used for filling shells, though it was commonly employed in our navy for charging the heads of torpedoes until the present war. In power it is slightly inferior to "T.N.T.," and considerably inferior to lyddite, which has this further disadvantage that it is liable to be set on fire by a shot. It is prepared by steeping the very finest cotton in a mixture of nitric and sulphuric acid, using great care and taking precautions to prevent the temperature rising. The process of steeping occupies from one hour up to a whole day, and strong acid fumes are given off while the work is in progress. After steeping, the cotton is washed, kept until it is slightly damp, when it is compressed into cakes, and blocks, in which form it is ready for use.

PAPE'S DIAPEPSIN FOR INDIGESTION OR BAD STOMACH

Sour, gassy, upset stomach, indigestion, heartburn, dyspepsia; when the food you eat ferments into gases and stubborn lumps; your head aches and you feel sick and miserable, that's when you realize the magic in Pape's Diapepsin. It makes a stomach misery vanish in five minutes.

If your stomach is in a continuous revolt—if you can't get it regulated, please, for your sake, try Pape's Diapepsin. It's so needless to say, a good stomach makes your next meal a favorite food meal, then take a little Diapepsin. There will not be any distress—eat without fear. It's because Pape's Diapepsin "really" does regulate weak, out-of-order stomachs that gives it its millions of sales annually. Get a large fifty-cent case of Pape's Diapepsin from any drug store. The quickest, surest stomach relief and cure known. It acts almost like magic—it is a scientific, harmless and pleasant stomach preparation which truly belongs to every home.

Old World Notes

A Septuagenarian couple have just been married at Hull. Bride and bridegroom are both inmates of an institution founded for the benefit of tradesmen and others who find it necessary to leave their declining years to seek assistance. Each has a grown-up family. The bride has been a resident of the home for some time, but the bridegroom obtained admission only three months ago. Within a few days he was attracted to the lady, the rules of the institution permitting freedom of social intercourse little less than that enjoyed outside. The attraction was mutual; an acquaintanceship of boyhood and girlhood days was revived, and an offer of marriage was made and accepted. It was necessary to obtain the consent of the governing body of the institution to the marriage, but this was a mere matter of form, and was readily granted. A pleasant country village a few miles from Hull, invited the pair to spend the honeymoon with her.

Daylight saving methods have been forced on the town on Grimsby, by the stringent lighting restrictions imposed on account of the proximity of the German coast. Notices have been issued that no lights can be allowed upon the fish pontoon this winter after dusk, and that work must cease with the coming of darkness. This means that fish workers will have to cease their activities as early as 2.30 during the afternoons of December. By special permission of the Admiralty, patrol lights will be permitted between 6 a.m. and daylight in order that the selling of trawlers catches may commence earlier. The Education Committee has revised the hours of school attendance to meet the new conditions. Schools will open at 8.45 and continue until 3.15 p.m., with a luncheon interval of an hour and a quarter. Some places of worship have arranged to abandon the evening service and to substitute an afternoon service.

There was a scene in a German church in London the other night. While the organist was playing the voluntary, an Englishman, who with a few, rose and, addressing the pastor standing in front of the altar, said: "Will you conduct this service in English?" The pastor replied, "No, I will not." The Englishman: "Will you express regret for the Zeppelin raids and request the congregation to rise with you as a sign of regret for those killed?" The pastor: "No, I will not do that." The visitor then left his pew and, standing by the altar with his face to the congregation, said: "I, John Lindsay Johnson, an Englishman, hereby announce the German Emperor as a blot on civilization, and an outrage on Christianity." Amid murmurs of dissent from the congregation, the Englishman supported Mr. Johnson's protest, and the party then left the church.

The laziest man in London was recently sentenced to a term of imprisonment for begging. He is able-bodied, twenty-five years of age, and cannot remember the time he did any work. When in the cell he refused

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November finds me with too large a stock of goods on hand, and to add to that my Christmas stock is commencing to arrive. It is nice to have lots of stock on hand when it is all paid for. I tell you frankly my invoices have not yet been all paid. The manufacturers want their money—they cannot or they will not wait. Therefore I must turn a lot of goods into money during the next few days. My loss will be your gain, as I am going to sell below cost during the next ten days. Read some of the price-wrecked lines.

Ten Days Sale
Commenced Wednesday

Men's "Gillette" Safety Razor Sets, the kind sold everywhere at \$5..... \$3.50
Men's English Steel Razors, entire stock included in sale at prices..... \$2.00 down to 50c
Sheffield Carving Sets, great value. During sale prices \$7.00 down as low as..... \$2.00
Dinner Knives and Forks, half dozen lots..... \$1.00
Silver Plated Dinner and Dessert Knives and Forks..... \$1.00
Great values in Scissors. A good pair at 25c, a better pair at 50c, and so on up to \$1.25. Then I have special scissors for tailors and cutters. Prices from \$1.50 to \$10.00. Every pair worth double.

Here's an opportunity to get a good pocket knife cheap. A 50c knife for 25c, a \$1 knife for 50c. Every knife in the store on sale at just such prices.

The above just gives you a slight idea what this sale means to you people. Call and see the many good things I am offering for ten days at prices never quoted before.

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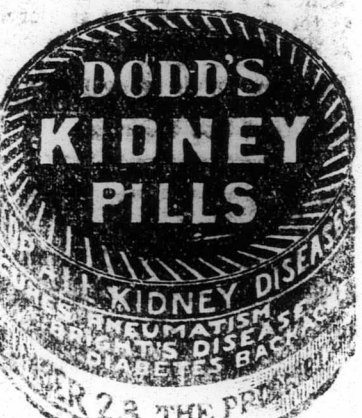
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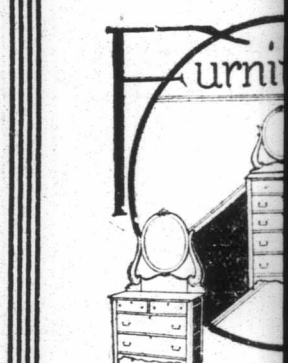
After the tragic death of esbury, his prostrate America's greatest beauty her death. Prof. Stillie the interests. Kidnaps three-year old baby girl her up in a paradise: no man, but thinks she angels, who instruct her to reform the world Barclay was her child.

Just then his head felt his breast, and he drew smelt boiling cauliflower smell to which he was sensitive, and which he hated. He waited for start, and the smell pers. He climbed to the top Field glasses in hand. He search the whole landscape for traces of human the woods were so dense like looking for a need stack. What he hoped what he did presently smoke, a pale amethysty it rising near the base of mountains. He took it carefully. It was dire him and the smallest of cliffs which formed the thrust of the mountain, judged about half a mile the cliff. At the base was a rattlesnake den, was in the habit of giving wide berth, for the snake wandered long distances favorite ledges in search water, and a good wood Tommy preferred that their hustling in peace.

He focused his glasses of the cliff and amused some time in trying to snake. But either the d too great or there was dence, and he was about when suddenly a man w ally into the field of his out of it.

"Well, I'm jiggered," s "I haven't found a snake found the next best thing is Prof. Stillier doing in the world?"

Again he lifted the again saw the professor, ed to be polishing some



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