

A NEW EXPLOSIVE.

The Power of Bellite Demonstrated by Recent Experiments.

A distinct advance has been made in the invention of new explosives in recent years, and there can be no doubt that dynamite, which has so long held the field as a high explosive, is being seriously threatened by competitors. The idea of a high explosive—that of combining absolute safety with great energy—has been the aim of all inventors, but until lately success in this direction has only been partial. In most instances the explosive has represented the required energy, but has failed to comply with the Home Office regulations as regards the standard of safety.

The direction in which the more successful inventors have labored was indicated by Dr. Sprengel, F. R. S., in his investigation recorded in "A New Class of Explosives," a pamphlet published some fifteen years ago. Of these "bellite," the invention of M. Lamm, of Stockholm, is one of the first practical outcomes, and judging from the very severe tests to which it was subjected, both as regards safety and power, it would appear to approach nearer to the ideal than any of its predecessors.

Its safety was, indeed, amply demonstrated in the experiments made at Middlesbrough under the direction of Mr. Napier Hake. Some cartridges containing bellite were, for example, placed on an iron plate and subjected to the sudden descent of a block of iron weighing over half a ton, from a height of twenty feet, with the result that the cartridges were only crushed into a hard mass. But when the crushed cartridges were afterward detonated by means of a fulminate, immense energy was developed. Again, when placed in the fire of a smith's forge, it simply volatilized. Its safety was also demonstrated in a remarkable manner by exploding a three-ounce cartridge on the lid of a case of bellite, the effect being to simply pulverize the wooden case and scatter the contents. A large number of experiments were also made by way of comparing its power with dynamite, with the view to showing the injury which equal weights of each would inflict on steel rails and iron plates. In these it was clearly shown that, when confined, the energy developed on detonation was equal to that of dynamite, but that, when unconfined, bellite apparently did less work. This can be accounted for by the fact that bellite is much slower in developing its full energy than dynamite, and therefore less local in its action. Some practical tests made in the blasting of coal in the Cleveland iron mines were of a highly satisfactory nature, both as regards economy and adaptability, for they clearly proved that bellite was capable of doing the work of three or four times its own weight of gunpowder, and without the objectionable result of producing those noxious fumes so characteristic of dynamite and gunpowder. —*London Saturday Record*.

STOWAWAYS ON BOARD.

Discoveries Often Made by the Captains of Ocean Steamers.

Hardly an ocean steamer bound for America leaves a port in Great Britain but has four or five unfortunate creatures stowed away somewhere. Within the experience of captains it is known that twenty, or even more, of these undesirable passengers aboard, and that they have as many more mouths to feed. This makes some skippers savage, as when they see they have stores only proportionate to their crew, with due provisions for delays from stress of weather, will of God, etc.

The stowaways are recruited from all sorts and conditions of men, but as a general rule they are mostly incapables and the scum of the streets of London and other great cities. It can be truthfully said of them as a class that their leaving is usually for their country's good. They hang around the docks until an opportune moment arrives for shipping abroad. Usually they select ships which are taking in a cargo of pipes or some other material in which they can make a comfortable hiding place. As a general rule they are assisted by the "chumbers," or ship laborers, with whom they are leashed, and who, while loading a ship with bricks, can easily build up a square room in a dark corner in which stowaways can be accommodated with comparative comfort.

When the cargo consists of pipes the stowaways creep inside them and wait patiently until they think the pilot has gone off and the vessel is well away from land. This plan has its inconveniences, as directly as ship leaves port the officers start upon a tour of investigation and often throw "awakers" into the pipes. When they hear an appreciable howl they make the stowaway crawl out. The majority of the men, however, either escape the missiles or bear the slings and arrows of outrageous fortune with Spartan fortitude, because it often happens that after the officers are satisfied that there is no one there, in good time the stowaways come from below and begin to inhale the ozone in safety.

When a ship is too far out from land to send a boat ashore the captain is reduced to the necessity of taking all the work he can get out of the stowaways, and he generally does this pretty effectually if there is only a moderate consignment of them. But it is hard for any captain to find work for twenty extra men. When overwhelmed by such a number the smartest are put to work as deck hands, the rest are persuaded to use any but the best Portland cement for the finishing coat, as I have known a failure when this has been done. This is used also for walks and pavements, and quite an amount of it has been laid in my village in the last few years. It would make a splendid feeding floor for hogs. No part of a barn fails as soon as a stable floor and to keep it in good repair if made of planks requires renewal every few years. While the cost of the concrete will be more at first than twice that of planks, in the long run it will be much cheaper. Of course the render will understand that the stable must not be used until it has become perfectly solid.—*Detroit Free Press*.

The North China Herald says the Chinaman is peculiarly distinguished from the European by his absolute nervelessness. The Chinaman, it says, can write all day, work all day, stand in one position all day, weave, beat gold, carve ivory, do infinitely tedious jobs for ever and ever, and discover no more signs of weariness and irritation than if he were a machine. This quality appears early in life. There are no restless, naughty boys in China. They are all appallingly good, and will plod away in school without recesses or recreation of any kind.

FARM AND FIRESIDE.

ITS ESSENTIAL ELEMENTS OF FORCE, EXPRESSION AND ACCOMPLISHMENT.

Growing a boy on the farm is a mighty good foundation preparation of him for any honorable business. An acre of land devoted to small fruits will sometimes give a larger return than five acres devoted to grain.

White oak firkins are recommended as best in which to make cucumber pickles, and next to that stoneware.

All fall-planted trees, vines, etc., must be banked with earth or a shad- ing of straw manure on the approach of winter to prevent heaving.

When a man comes half a mile to borrow a hoe or a fork, you may depend on his coming some day to borrow money, but never coming to pay it back.

OYSTER OMELET: Beat six eggs to a light froth. Add half a cup of cream, salt and pepper. Pour into a frying pan, with a tablespoonful of butter and drop in a dozen large oysters. Fry a light brown. Double over and send to the table immediately.

SARATOGA BROWN BREAD: Two cups Indian meal, three cups flour, or graham meal, one cup molasses, one and one-half pints sour milk, one and one-half teaspoonful soda, one teaspoonful salt. Steam three hours and then brown in the oven.—*Albany Journal*.

TONGUE TOAST: Make some slices of toast, not very thick, browned evenly all over on both sides, and minus crust; butter it slightly; grate with a large grater a liberal supply of cold tongue, and spread it thickly over the toast; lay the slices side by side on a large dish. Serve at breakfast, lunch, or supper.

Bees will come out of their hives on warm days. In so doing they clean the hives and carry out the dead bees. Every day some of the bees die, and advantage is taken of all favorable opportunities by the survivors to put the hive in the best condition for winter. The hives should not be placed in winter quarters until the weather becomes cold.

Raisin Coconut Cake: One cup of sugar, three tablespoonsful of butter, one egg, half a cup of milk, one and a half cups of flour, one teaspoonful of baking powder. For between layers, one cup of raisins seeded and chopped fine, one cup of sugar, half a cup of water boiled to a syrup. Then add raisins, half a cup of coconut, and the white of an egg beaten to a stiff froth.

GOOD STABLE FLOOR.

Concrete the Best, and in the Long Run, the Cheapest Material.

To make a good stable floor there should be an excavation of a foot deep, or if this does not reach a solid foundation dig still deeper and fill the bottom with broken stones or coarse gravel, and pound it down solid, until within ten inches of the level at which the floor is to be finished. In making this fill you should use a level and establish your grade exactly. When the foundation is in and leveled up you are ready for the first coat of concrete which may be made of the common (Louisville) cement. It may be made of coarse gravel with the sand screened out, or of broken stones. I believe the latter is the best but it should be broken small, leaving no pieces larger than two inches square. This is mixed with cement at the rate of a barrel of cement to a perch. Mix it thoroughly so that each separate stone or pebble is coated with the cement and do not make it so wet as to run or be sloppy. Spread this so as to come within two inches of the top and ram it down until perfectly solid. After it is set a little, which will be in a day or so, you are ready for the last coat. This must be made of sharp sand and the best Portland cement, mixed in the proportion of one part of cement to three of sand. Mix the material dry and it is well to screen it, so as to insure that it be thoroughly mixed. Mix up with water into a rather stiff but well-tempered mortar, a small quantity at a time, one man mixing while the other spreads. Lay it down in strips about three feet wide, or as wide as you can easily reach. Make a mark on the wall two inches up or as high as you wish the floor to come and then lay a strip of board of the same thickness to work upon and use a straight edge as you work so as to fill everywhere to the same level. Before the collection is being taken.

Do not glare at the stranger in your pew who has made the mistake of reading from your favorite hymn book. Concede your contempt for the person who puts a meager dime in the collection plate.

Should the church be insufficiently heated put your handkerchief in your mouth. The chattering teeth of a congregation is apt to razzle-dazzle the rector.

Do not dissent from your clergyman's views of things by snorting or indulging in a stentorian "bosch."

"Do not draw funny pictures on the fly leaves of your neighbor's prayer book."

Don't walk up the center aisle on your heels just because your shoes squeak. Let them squeak.

Leave business behind you. Don't insist upon closing up a wheat deal with a business acquaintance who has the pew behind you then and there. If a subscription card is left in your pew don't write a promise to pay fifteen dollars a month for twenty years on it over your enemy's name.

Do not seek to be revenged up a fellow worshiper by kicking his beaver in front of you all the way up the aisle, and to keep fellow-members out of temptation do not place your own silk hat in the aisle where it may be kicked.

Avoid practical jokes. If your pew happens to be near the gas not do not turn off the gas, no matter how facetious you may be.

Worshippers in the gallery should taboo dropping beads or marbles on the heads of old gentlemen without hair.

In singing do not blow on the head of the person who sits in front of you. It may expose him to pneumonia.

It is not proper to put pool checks, buttons or poker chips in the plate.

Be composed if you hear a fire engine going by the church door. Walk out quietly and without excitement. Under no circumstances rush down the aisle yelling fire.—*N. Y. Evening Sun*.

No Use in Waiting.

"Can I see Mr. Haggerty?" inquired a caller at the jail. "Before he was arrested he owed me a little bill that he promised he would pay at this date, and he has always been a man of his word."

"You can see him if you will wait a few minutes," said the turnkey. "His attorney is with him now."

The tailor shook his head and sighed deeply.

"There is no use in my waiting," he said.—*Chicago Tribune*.

The Persian name for Americans is Yango Doo-rye, which means a dweller of the new world.

—*Waldo F. Brown, in Ohio Forum*.

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