

# WORSE THAN EARTHQUAKES HURLED BY THIS NEW GUN OF UNCLE SAM'S.



**THE** United States Government has placed an order for the most terrible weapon ever used in warfare. It is the new Gathmann gun, invented by Louis Gathmann, of Chicago. It will be of 18 inches bore and will throw 800 to 900 pounds of gun cotton a distance of five miles.

The performance at Santiago of the dynamite cruiser Vesuvius, where it "couched earthquakes," called attention to the value of guns having great destructive powers shot by shot. The Gathmann gun, according to the tests which have recently been completed at the Sandy Hook proving grounds under the supervision of the Ordnance Bureau, amply justifies the inventor's claims for it. These tests have extended over several years.

This new Gathmann arm, in a word, is a high explosive projectile, with a gun of firing it. It makes possible the use of enormous charges of gun cotton in shells discharged from high power filled cannons of the most modern construction and the longest effective range. It practically converts the modern cannon into a torpedo tube and the modern explosive projectile into an aerial torpedo.

It has long been a dream of artillerymen to use high explosives in projectiles. All attempts to do so have proved abortive or inefficient. Dynamite guns have been comparative failures on account of the low muzzle velocities required by the use of compressed air. The low velocity entails two weaknesses which render the gun useless to a great extent. First, it gives an extremely short range to the gun and makes accuracy of aim impossible.

It can be stated definitely that the Government is satisfied by the tests of the Gathmann gun which have just been completed at Sandy Hook, that these weaknesses and others peculiar to all dynamite guns have been eliminated, and that as a weapon, has been produced whose range and accuracy equal those of any modern high power gun, and whose projectiles carry charges of gun cotton sufficient to destroy by one tremendous explosion a modern war ship and every human life thereon.

The central idea in Mr. Gathmann's invention and the one which has required a long series of most careful experiments, is the use of wet gun cotton in a shell with comparatively thin walls and an open base, to be used in any approved form of rifled gun with either automatic or smokeless powder as the propelling force.

The shells, which will be discharged by

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## The New Gathmann Gun.

By Louis Gathmann, the Inventor.

To the Editor of the Journal:  
 It is well known that, in order to throw torpedoes or explosive projectiles to a great range, it is necessary to use power enough to give said shell a high muzzle velocity. It is also known that the greater the speed to be imparted to said torpedo or explosive projectile the heavier it is necessary to construct the latter, in order that there may be no danger of its fracture in undue time. This is principally of importance where the torpedo or projectile is loaded with large masses of high explosives.

At present all the known systems have this defect, that the greater part of the weight of torpedoes or shells consists of metal, thereby leaving but little room for the high explosives, and necessitating the construction of a heavy piece of ordnance to harmonize with its projectile, so that by the present system such weapons cannot be adapted for light-built cruisers or torpedo boats.

My invention relates to a projectile or aerial torpedo of novel construction, and to a gun, also of novel construction, for throwing the same, the object of the invention being to enable a projectile or torpedo having a shell of a minimum weight and containing a maximum of explosive material to be safely thrown accurately a greater distance than has heretofore been possible.

As my invention relates solely to the throwing of a projectile which is destructive by reason of the explosion occurring upon impact, as distinguished from a projectile which is effective by reason of its powers to penetrate and shatter an object into which it is thrown, I do not necessarily employ as great a muzzle velocity as such solid projectile or explosive shell requires.

One object of my invention, however, is to make possible the throwing of a torpedo or an explosive projectile safely or without danger of premature explosion, and with a greater muzzle velocity, and consequently to a greater distance, than has heretofore been found practicable and safe. The chief fault of projectiles of the common construction is that they require a very heavy shell, and consequently can carry a relatively small amount of explosive material.

First, I provide a gun whose bore at or near the muzzle is of practically the same diameter as the shell, but of greater and preferably of gradually increasing diameter from its contracted portion back to the powder chamber, thus providing an annular space around the shell, into which the pressure generated by the explosion of the expelling charge may pass freely, thus exerting a compressing force upon the shell sufficient to prevent its bulging or jamming under the pressure exerted behind and within it. The gun is preferably rifled throughout, except in the powder chamber, the rifling being of uniform twist, but necessarily, because of the tapering bore, of varying depth.

Second, I provide a torpedo having relatively a much larger amount of explosive material to its total weight than has heretofore been employed with projectiles or spiral ribs registering with the rifling grooves of the gun. I also provide a detonating cartridge located interiorly of the shell of the torpedo, sur-

rounded by the explosive material thereof, and which is adapted, upon the striking of the torpedo against an object, to be exploded and thereby explode the torpedo.

The shell of the torpedo is open at the base, and may be made thin, as above stated, because with my improved gun the pressure of the expelling charge within the torpedo is counterbalanced by the external pressure in the space surrounding the shell; but the detonator is necessarily made with a shell having sufficient strength to withstand the full crushing action of the powder charge.

In carrying out my invention I propose to construct a gun capable of carrying a torpedo charged with several hundred pounds of highly explosive material, say wet gun cotton, for a distance of several miles. I prefer to construct the gun of a calibre proportional to the desired range, and the gun may be made of any well-known materials and disposed in well-known ways, but need not be nearly so heavy as guns adapted to fire solid shot or shells which are effective by penetration.

In fact, it is one of the objects of my invention to construct a gun which will be much lighter than guns of the character last above named, so as to enable the arming of light cruisers, gunboats or torpedo boats, and to make such lighter vessels as efficient as a modern ironclad or battle ship.

*What Would Happen If the New Gathmann Gun Should Throw a Projectile Containing 800 Pounds of Gun Cotton at a War Ship—An Explosion Would Follow Which Would Tear Into Shreds the Heaviest Armor and Would Literally Annihilate the Vessel and Kill All Her Crew Outright.*

Mr. Gathmann's cannon will contain from six to eight hundred pounds of gun cotton, the most terrible explosive known. The detonation of this amount of gun cotton in contact with the armored sides of a modern battle ship would crush in its massive steel shell, no matter what their strength or thickness. One single shot, striking any part of a war ship, would overwhelm in one cataclysm the ship and her crew. The mere shock or concussion of so much high explosive would, by impact of the air, kill, maim or render insensible every soul within several hundred feet.

With time fuses instead of impact detonators, these shells, if exploded in the neighborhood of a ship, would derange every instrument of precision on her, even though the ship herself were not struck by it. Every steam gauge would be broken, every electrical connection shattered, every compass made useless. Exploding nearer, but still not in contact with the target ship, the gun carriages would be torn from their pivots and the ship rendered hors de combat.

Every thickness of armor used by the navy has been shattered in the tests made by Mr. Gathmann at Indian Head, Maryland, and Sandy Hook, during the time the Government has been engaged in experimenting with this new gun.

Judged by these results, one ship, armed with guns throwing shells of this kind, would be equal in effectiveness to a whole fleet of modern war ships equipped with guns of the present type. One cruiser so armed, at the naval battle off Santiago, would have destroyed Cervera's entire squadron with a dozen well-directed shots.

No soul aboard the Spanish ships would have been alive in thirty minutes after the first shot from the Gathmann gun. The beleaguered Spaniards in Morro said that the Vesuvius "couched earthquakes with a bad aim!" This weapon will vomit a volcanic explosion with deadly accuracy.

Aside from its terrible destructiveness, its great economy of ammunition will be commended. There were thousands of shells fired from the American ships under Admiral Schley at Santiago. Hundreds of these were of large calibre, and the ammunition bill of the battle ran up into hundreds of thousands of dollars. Had the Brooklyn or the Oregon been armed with guns throwing Gathmann shells, not one-tenth the cost would have been necessary to blot out every vestige of the Spanish fleet.

With a range of five miles, and a capacity of six to eight hundred pounds of gun cotton to each gun, a battery equipped with Gathmann guns and projectiles would make New York as safe from foreign invasion as an island town. No living soul could approach within harmful distance. Death, swift, sure and terrible, would overwhelm any invader.

Inquiry at the War Department in Washington verified the press reports of an order having been given for an eighteen-inch gun under the Gathmann system. The Ordnance Bureau have perfect confidence in the weapon, as the whole series of experiments and tests have been made under Government supervision. The details of this invention have been kept a close secret. The Sunday Journal presents for the first time accurate and authentic drawings of the gun and the shells.

struct it could be found. The iron work is covered with enamel of a superb, ivory-like quality. Its whiteness is relieved by hand-painted wreaths and vines of pale blue forget-me-nots. This decoration is the most tender and beautiful imaginable.

A small pale blue silk canopy rises high over the head of the bed. The canopy is covered with white mousseline de soie, with insertions of real lace. A deep fall of the same precious material edges it. The canopy is there chiefly for ornament. There is a blue curtain at each side of the bed. Each curtain is held back by the blue silk ribbons.

Now comes a feature which is peculiarly multi-millionaire. Each of the four legs of the bed ends in a big gold claw. This comes just over, and hides the utilitarian casters. The upright bars at each end of the bed are tipped with knobs of solid gold.

Miss Fair, who has hitherto struggled through on a fortune of \$10,000,000, has made herself a most desirable figure in society even with that modest competence. What she will do when she has all her husband's destined wealth, who can say?

She is the younger daughter of the late James G. Fair, the California millionaire, who left a fortune of \$40,000,000. She was christened Virginia, but is known to her family and in society as "Riddle." Her older sister, Tessie, married Hermann Oelrichs, the famous fashionable and strong man. Mrs. Oelrichs is in the innermost circle of the Four Hundred. She is well proportioned, the match between her sister and young Mr. Vanderbilt.

Miss Riddle Fair is reputed to have more dresses for sporting and athletic purposes than any woman in the world. It has been said that she has one hundred of them. They are all marked by perfection of fit and fashion and masculine simplicity of form. They include riding clothes, bicycling clothes, golf clothes, yachting clothes, tennis clothes, shooting clothes, skating clothes and so on an infinitum.

Miss Fair has all these severe tailor-made garments, and then—so to the other extreme—she has an equally large and more beautiful collection of garments of the kind not usually seen, trimmed with the costliest of real old lace.

The lingerie in her trousseau is trimmed entirely with real lace. It is all made by hand and every garment is a copy of a model made purposely for Miss Fair.

In many cases the designs were sent here from Paris, but before any garment was finally ordered Miss Fair changed the design herself to suit her own particular fancy.

Though the most elaborate part of her lingerie was made either in Paris or Vienna, yet she has given thousands of dollars' worth of work to an exclusive lingerie establishment here in New York, where thirty-five skilled needlewomen are working constantly on the filmy garments. So busy are they at this establishment that no other orders but Miss Fair's can be filled for the present.

Of course, all Miss Fair's lingerie the most beautiful is the \$10,000 set which she will wear on her wedding day. Each exquisite garment is of the finest imported linen lawn, and is lavishly trimmed with point lace and narrow pink ribbons.

Her wedding petticoat is a billowy mass of white ruffles, striped with insertions of point lace. The money paid for the lace on this one petticoat alone would clothe and feed a whole crowded block full of tenement house children for an entire year through, and give them Summer vacations besides.

The petticoat is made of web-like India lawn, and is trimmed with graduated ruffles. There are four ruffles, and each one is striped with inserted bands of point lace and made gay by dainty little bows of pink ribbon, which, by the way, is Miss Fair's favorite color.

The corset cover which belongs to this same fabulously costly set is cut extremely décolleté. Almost the entire front of the little waist is made of point lace, shaped like a corset, but longer than the usual model, and below the waist line it is cut in pointed tabs, nicely hemstitched. On the shoulders are not little rosettes of delicate pink ribbon.

Miss Fair is often called the most perfectly dressed woman in society. She requires three hours to dress. She is also a splendid dancer, and has mastered such intricate branches as skirt dancing. She loves music, but does not play.

Although Miss Fair is extremely devoted to athletics, she has none of the airs of a horse or masculine woman. She is rather small but her figure is strong and graceful. She has dark blue eyes and fine, abundant brown hair. She is vivacious in speech, in manner and in action.

In her devotion to sports and outdoor life Miss Fair will be thoroughly in sympathy with her husband. They have already acquired as a country house Belvoir, which is on Beacon Hill, Newport. This is near the golf links and the harbor. Both Miss Fair and Mr. Vanderbilt are equally fond of golf and yachting. Their courtship occurred largely on the golf links, while as for yachting Mr. Vanderbilt has been thrown into the water and nearly drowned

several times. He has a fine seventy-footer, the Carnita, and also a half rater.

The young couple will begin their honeymoon abroad and will return in time for the Newport season.

Young Vanderbilt is only twenty-one years of age and is several years younger than his fiancée. His marriage meets with the entire approval of his father and his mother. In this respect he is more lucky than his cousin Cornelius, who also married a pretty girl—Miss Grace Wilson—but angered his father and was cut off with a shilling—or a million.

By marrying early young Willie K. Vanderbilt will avoid this and many other kinds of trouble that lie in wait for a young millionaire. He will inherit the greater part of his father's fortune, which is now estimated at \$150,000,000. He left Harvard this year and while waiting to



LENGTH OF GUN COMPARED TO A MAN.

take his place in the great financial world will study the engineering science.

The wedding has been fixed for April 4. As Miss Fair is a devout Catholic and Mr. Vanderbilt a Protestant, it cannot take place in a church. It will be celebrated by a Catholic priest and dignitary in the house of Mr. and Mrs. Hermann Oelrichs, No. 1 East Fifty-seventh street.

## Pain Is Easier to Bear in the Light Than in the Dark.

ALL who ever suffered from a tooth-ache know to their sorrow that the lessening of the pain is observable only when the light increases as the night grows after sunrise.

A toothache which during the day interfered but little with our enjoyment of life is likely to develop during the hours of darkness into a veritable terror. That therefore, if you have pains in the evening, do not rob yourself of the soothing effects of a lamp. In ninety-nine out of a hundred cases the presence of a light in the sick room alleviates pain.

For the same reasons, do not let your children sleep in the dark if they prefer a light. The denial of a night light has made many a child ill with heart disease. If children refuse to sleep in the dark it may be assumed that there is some physical or mental reason for it which we ought to respect.

From the above rules nervous people are healthiest members of the human family who live in sunlight, well aired rooms, and who move about in the sun as much as about them. I have found that in cases of neuritis, a neutral light in one side of the head, nothing would do but to place the patient in an absolutely dark and still room, if possible at the top of the house. I advise that people suffering from sick headache should interrupt their day's work and take themselves for a quarter of an hour to a darkened room proof against noise.

Nature has put two great remedies in our hands—light and darkness. Sufferers should be in the gas or lamplight, but become in-tense the moment we stretch out in bed, with them.

What darkness and stillness are not conducive to the comfort of sick people. Therefore, I say, if you have pains in the evening, do not rob yourself of the soothing effects of a lamp. In ninety-nine out of a hundred cases the presence of a light in the sick room alleviates pain.

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