PLAY GAME FAIR WITH UNCLE SAM

Show Patriotism by Investing in a Third Liberty Bond or Two.

SECURITY IS BEST IN WORLD

Don't Wait for Somebody Else to Take Your Share of the Greatest Investment Open to a Patriot.

By IRVIN S. COBB.

Speaking of patriotism and our duty to our country—and those are the things of which most of us are speaking these days—why not buy a Third Liberty bond or two?

If ever a thing was well named the Liberty bond is. It stands for liberty—for liberty not only for our own people but for all the peoples of the world—liberty from despotism, from imperialism, from militarism, and, most of all, liberty from Prussianism, which, summed up, is the other three isms rolled into one.

And, likewise, it is a bond—a bond of faith, a bond of honor, a bond of reliability, a bond of security, backed up by the government of the United States of America, its assets, its good name, its credits, its power, and its possessions of whatsoever nature.

Flag Is Worth Defending.

This generation is just now engaging upon the tasks of preserving and perpetuating what our forefathers earned for us. If the heritage they handed down to us was worth taking, it is worth keeping; if the flag they fought under is worth living under, it is worth defending; if the government they established is a government that should endure, if its securities are staple and stable, it is our duty to invest in these securities, to prove the value of our own citizenship to ourselves by the confidence and the trust we show in our own institutions. The Liberty bond issue gives us that chance without entailing the slightest risk upon our part.

When we buy Liberty bonds we are helping our country, helping as righteous a cause as ever sent a nation to battle, and at the same time we are safeguarding our savings and earning a decent rate of interest on our money. We can't lose; we are bound to win. Thieves may break in and moths may corrupt, but a Liberty bond is as solid as Plymouth rock and as honest as the Declaration of Independence. If it goes down, our government goes down with it, and then your money wouldn't do you any good anyway. If you had kept it stored up it would be confiscated by a gentleman in a spiked helmet with spiked mustaches and a spiked way of saying "Verboten" to practically everything you wanted to do.

Backing Is the Best.

As long as the Stars and Stripes float the Liberty bond will be aloft too. The Liberty bond is guaranteed by every inch of our soil, by every shred of our traditions, its promise to pay is predicated on every ship that flies our flag, on every pennyweight of railroad iron in our land, on every peppercorn in our granaries, on every dollar of our circulation, on every rod of navigable river, on every furlong of highway, on every gill of water in every American harbor, on every pebble in the Rocky mountains, on every blade of growing grain, on everything that we, as a people, own and ever have owned and ever shall own. And, while we are on the subject, I might add that it is predicated on something more besides. It is predicated on Bunker Hill; on Independence hall; on the little apple tree at Appomattox; on the cornerstone of a building at Washington, D. C., called the national capitol. A man who wouldn't be satisfied with that collateral wouldn't risk a pewter dime for the hope of eternal salvation.

Don't wait for somebody else to take your share of the best investment that is open to a patriot. Our great Revolutionary granddaddies weren't that sort. Their motto wasn't, "Let George do it." They helped George do it!

Don't sell Uncle Sam short. Don't be a bear on the Old Glory market. Don't make your own country ashamed of you.

Buy a Liberty bond!

Home Defense League.

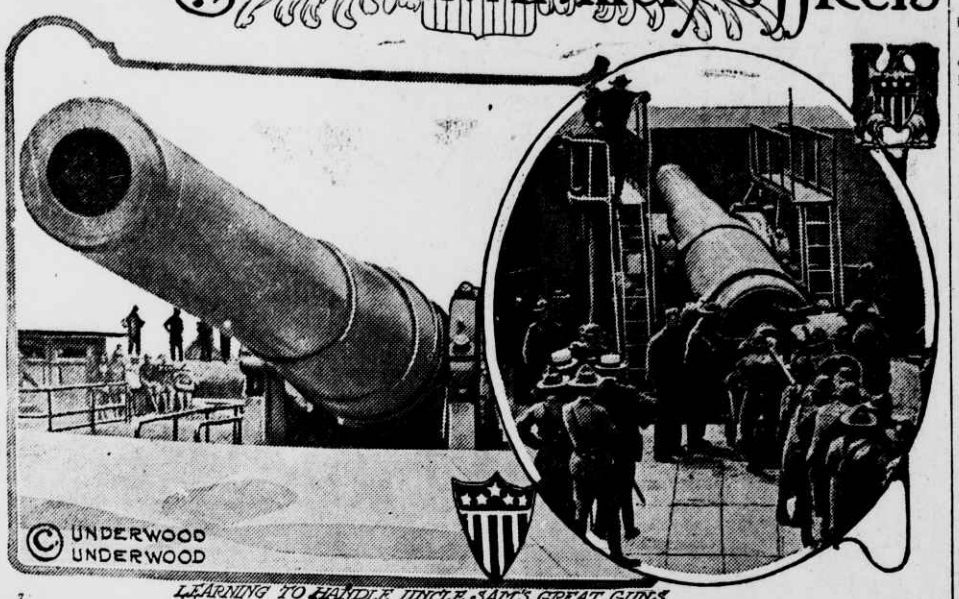
"My wife is the limit," groaned the American businessman, who was dining with a French visitor to this country. "Since the war began it's just one meeting after another—night and day. Tell me, does your wife go in much for club work?"

"No, ze club—nevaire," replied his guest. "One time—tree time she have slap me and pull ze hair but, mon Dieu!—ze club—nevaire."—The Gargoyle.

Powderless Gun Deadly.

An American inventive genius has invented a powderless gun which may revolutionize land attacks. The gun, which might be taken for a large grindstone at a short distance, is revolved at great speed by an electric motor, and is capable of firing hundreds of shots a minute. The bullets are carried in small cups, which hold them until the gun reaches the proper position for their discharge by centrifugal force. The weapon is accurate at five miles, is cheap to operate and is noiseless.

Training Modern Artillery Officers



LEARNING TO HANDLE UNCLE SAM'S GREAT GUNS

DOWN at the Coast Artillery school at Fort Monroe, Va., Uncle Sam is turning out the latest pattern of modern heavy artillery officers. The National Guard coast artillery officers and such of the regular establishment as have not yet been through this school have been ordered down in two sections, the first of which already has been graduated.

Upon the Coast Artillery corps has been thrust the burden of handling the heavy ordnance with which the army is equipped, and which in the field will be manipulated by methods more or less resembling the methods already laid down for sea coast ordnance. These methods are far different from those used by the field artillery proper—that is, the light three-inch rifles and 4.7-inch howitzers.

The present-day heavy artillery officer must be a mathematical shark, a railroad engineer and an expert in handling gasoline motors, besides having an intimate knowledge of gunnery, says a writer in the New York Herald. His equipment has changed from the battery commander's ruler of the field artilleryman to a slide rule, a transit and a book of logarithms.

In addition he must understand perfectly the manipulation of heavy masses—termed the art of mechanical maneuvers—for his guns will not be securely emplaced in concrete, but will be exposed to the mercies of the open road, with consequent overturnings and sudden shiftings. He must know how to use tackle of all sorts, and in general know all the tricks of the modern contractor.

The officers who came down to Fort Monroe were nearly all graduates of the National Guard courses prescribed by the war department and were fully competent to handle seacoast ordnance in the forts to which they were assigned. They thought that their knowledge was ample, and it would have been for this work, perhaps, but after a day or so they found out that while this knowledge was essential to them as basic, it was only the beginning.

Gunnery the Big Thing.

The big thing, of course, was gunnery. This included a practical knowledge of ballistics—the science of the movement of bodies through the air. Ballistics is a very exact science, and in these days of precision is absolutely essential for the artilleryman. Reduced to language for the layman, it consists in the knowledge of just how far a given piece of ordnance will hurl its projectile under all conditions.

Very simple, say you. Yes, under standard conditions. Every gun when it is turned out from the maker is known to fire a certain projectile to a certain range at a certain elevation. These data are compiled in tables and are theoretically the same for all guns of the same caliber and model. These tables are known as range tables, and the conditions given for the firing of projectiles for these theoretical ranges are known as range table conditions. Remember this.

Now some of the principal range table conditions or assumptions are that the earth is flat and does not revolve; that the atmospheric conditions are standard; that there is no wind; that the gun and target are on the same level, and that the action of gravity is constant throughout the trajectory.

All well and good. We know that our gun, then, will fire its projectile, let us say 10,000 yards, under range table conditions. In other words, given the above conditions, it will, if properly laid in direction, hit a target 10,000 yards away. But unfortunately for us the earth is not flat, our target is 10,000 yards away, and 200 feet above the level of the gun there is a ten-mile wind blowing straight across the line gun target, the thermometer is up to 85 and the barometer has dropped to 29. Will the projectile hit the target now? Not unless you correct the elevation of the gun for some of these conditions and its laying for the others. How are you going to do it?

First, you must find the force with which your projectile cleaves the air. This is called the ballistic co-efficient, and is reduced by a simple formula to a figure. Knowing the weight of the projectile, its form and its diameter the ballistic co-efficient is easily calculated.

The Air as a Check.

You have now taken the first step. You have the force of projectile to penetrate the atmosphere under standard conditions. But this force varies with the atmosphere. On a heavy, muggy day the atmosphere is dense, and you will be surprised the checking effect it will have on your projectile. By means of elaborate tables one can find just what this effect is, and we apply it to the original formula. Also in the atmospheric factor is included the temperature, for in hot weather our powder charge when ignited exerts more strength in decomposing into gases than it does on a cold day.

So far so good. What about this troublesome wind that is blowing? If it blows against the projectile it checks it; if with it, it helps it along. So we have two varying factors, which the ballistician juggles by utilizing trigonometry until he gets them in terms where he can once more change his ballistic co-efficient, making it larger or smaller as the wind impedes or accelerates the projectile.

Not quite so easy as you thought, is it? But we are not through yet.

We know that under range table conditions our propelling charge has a force that gives the projectile an initial velocity of so many foot seconds, say 2,250. But our powder has been stored in a dugout whose temperature is not normal, so by more figuring we find out just what this real velocity for the day is. Now we can begin to figure what elevation the gun must have to travel that 10,000-yard path to the target.

By dividing our old friend C, as the ballistic co-efficient is termed, by the distance in feet that the projectile must travel, we get a reference number. This number we take with us and bury our noses in more tables until we find opposite this number in a column headed by the muzzle velocity another number. This number, multiplied by C again, gives us the sine of twice the angle of departure. A quick glance into a table of logarithmic sines gives this to us, and dividing by two we have a figure in degrees and minutes that represents the angle which the gun must be elevated from the horizontal to send its projectile 10,000 yards today. Wait a minute. Our target is 200 feet above the level of the gun. Also because of the curvature of the earth this 200 feet height has been reduced somewhat. So once more we delve into mathematics to correct the curvature of the earth and height of site of the target. The result we subtract from the angle found, and this time our gun is ready for business. Is it? No; it is not so easy.

The Influence of the Rifling.

Every rifled piece of ordnance imparts a twist to its projectile, and this twist causes the projectile to deviate from its course. In our service this deviation, called drift, is to the right, and is in ratio with the range. It is constant, therefore, for each range, and we find it very easily, either by mathematic computation or from drift tables. Also we go back to our wind problem and find what effect the wind will have in pushing the projectile from its course, either to the right or left. These two corrections are brought together and determine the amount in degrees and minutes that the muzzle of the gun must be shifted from the target to the right or left in order that the projectile will curve toward its goal. At last we have our gun controlled so that it will hit the target.

Tarry just a moment. A gun, the text books tell us, is the simplest form of gas engine. Did you ever know two gas engines of the same model that acted alike? Neither will two guns of the same model.

The Fifty Per Cent Zone.

If you have an automobile you know that the piston rings wear out, allowing gases to escape, and thus reducing the force with which the piston is forced down. Also the cylinder becomes scored with the same result. Now, if you fire your gun many times the same thing happens. The projectile is the piston and the retaining band of copper the piston ring that seals the bore. If the bore is eroded or if the rotating bands are not perfect a certain escape of gases occurs and the flight of the projectile is consequently affected.

Again, there may be a difference in the weight of powder charges or in the weight of the projectiles, which will give slight variations in the flight of the projectiles. So that the battery commander must know the dispersion of each piece. This he finds out from observation of his shots, and it changes as the gun grows older. By figuring the deviation of a certain group of projectiles from the target, and which are known as trial shots or fire for adjustment, he finds out what is known as the mean error of the gun. This, multiplied by the factor .845, well known to students of probabilities, gives the mean probable error. Multiplying by two, the result in yards is what is known as the 50 per cent zone, within which 50 per cent of his projectiles will fall. This computation is done longitudinally and latitudinally, giving a certain oblong strip. If the center of this strip can be placed on the target by observation of fire the battery commander has done all that he can, and may now open fire for effect. Four times the 50 per cent zone gives the 100 per cent zone, within which practically all his shots will fall.

Knowledge of these zones is all important. By this means he can figure out how near he can come to our own first line trenches without murdering our infantry, and, what is almost as important, when it is necessary to save ammunition he can easily compute how many shots will be necessary to make a certain number of hits on a given target.

And what about camouflage? The enemy airplanes are on the alert and all gun positions must be disguised. The battery commander must be a master of camouflage, able to erect shelters and under their cover to build his emplacements, while by the exercise of discipline he restrains his men from making tracks about the positions which will give away to the all-seeing eye of the camera in the air the fact that guns are mounted there.

So that is why the student officers at Fort Monroe blistered their hands and strained their backs erecting camouflages and digging dugouts and bombproofs; that is why they dove and crawled under motortrucks and delved into differentials and gear cases, emerging dirty and grimy, but happy; that is why they toiled for hours at night, working out lengthy problems in trigonometry until angles danced before their eyes when they tried to sleep and endless chains of logarithms curved themselves through their brain cells.

TAKEN FROM EXCHANGES

Owing to difficulties in transportation from India, Great Britain is suffering from shortage of cottonseed, and oil cake for dairy cows is steadily rising in price.

The large sugar estate owned and managed for some years at Calamba by the Dominican friars has been purchased for $1,000,000 for Japanese sugar capitalists. This is the largest project yet undertaken in the island by Japanese business men.

England, accepting men of nineteen to forty-one, inclusive, has 3,000,000 soldiers in the field. Germany, accepting men of eighteen and forty-five, inclusive, has 5,000,000. Germany's permanent disablements are said to be 3,500,000, or at the rate of 1,000,000 a year.

King George rules over more Mohammedans than the sultan of Turkey, over more Jews than there are in Palestine and over more negroes than any other sovereign who is not a native of Africa.

A London cat, officially know as the "King's cat," is the only one in the Kingdom to receive an allowance from the treasury. He inhabits the Record office and 13 cents a week is spent for his meat.

For the unit of woman telephone operators to be sent to France a distinctive uniform is being provided. Salaries range from $60 to $125 a month, with allowance for rations and quarters. Successful applicants must speak both French and English with ease.

IDAHO BUDGET

A boys' and girls' rabbit club is being organized at Collister.

A conference of Christian workers of the Boise valley Friends was held last week at Star.

The village cemetery at Meridian has been cleaned up and put in order by a corps of volunteer workers.

It is now calculated that 80 per cent more farmers of Canyon county are engaged in raising hogs than were engaged in the industry last year.

Owing to the mild winter no natural ice was put up at Meridan and the town will depend on the Boise dealers for artificial ice the coming season.

A. R. Colvard was sentenced to 60 days in jail and was fined $100 by Judge Bryan at Caldwell, of the district court, for unlawful possession of intoxicating liquor.

Leaders in boys' and girls' club work in southwestern Idaho met W. T. McCall, state leader, and his assistant; Miss Z. Fay Fowler, in conference at Boise one day last week.

From Nampa comes word that in the higher-lying orchards at least even the tender apricot and almond blossoms have not taken material damage from the recent cold weather and the later species have not been touched.

With the exception of 17 members, the guardsmen from Sandpoint have been returned home. They were called out early in March for duty in Benewah county, when the I. W. W. attacked the sheriff at St. Maries.

S. J. Jones, who has for several years been the manager of the Mountain States Telephone & Telegraph company for the southern Utah district, has been transferred to Pocatello to take the management of the Pocatello district.

Mrs. W. B. Lyman, chairman of the treasure and trinket fund for Idaho, shipped two barrels of trinkets which had been sent from Idaho club women, to the New York headquarters last week. This fund is used exclusively for the aeroplane service.

From Emmett comes the report that while the damage to the peach crop is severe, still it is estimated that the section will shop 50 cars of peaches, provided no further frosts are experienced, and that apples and prunes, as elsewhere, will make a fair crop.

A lecture on prevention of smut explosions in grain was delivered at Caldwell before an audience of ranchers and threshing machine operators by H. H. Miller of the United States department of agriculture's bureau of chemistry. About 35 attended the lecture.

Palmed to take care of the entire sugar beet crop of 1919 grown in the Malad valley, a $1,400,000 factory is to be erected at Malad. Already, it is said, 4500 acres of beets have been signed up on a seven-year basis, to be handled by the company.

In 1917 an area of 19,000 acres was sown to wheat in Canyon county. This year the area of the crop will be 27,000 acres. The oat crop area was then 2200 acres. This year it is to be 2600 acres. The barley area of last year was 2700 acres. This year it will be 3800 acres.

Settlers living on the Owsley irrigation project have asked the state land board to force the water company to install headgates and weirs on the laterals. The settlers want the work done under the direction of the state engineer at an early date that they may have water taken out this season measured.

Sprinkling the streets was begun at Payette on the 16th. The work will be done this year with a truck. The truck will be run in two shifts of 10 and nine hours each. The contract price for the work is $360 per month, as against $450 for the same work, done by teams, last year.

A call for 12,000 men skilled in many different kinds of work was received last week by the adjutant general's office. The call will be transmitted to the several county boards of the state. The artisans are wanted for war work. Only men of draft age will be taken at this time.

Efforts to secure a reduction of two-fifths from present freight rates, in order that several hundred cars of choice potatoes held up last winter by the car shortage may be put on the market and thereby supplant wheat products is asked by a Caldwell merchant in a petition sent to Washington.

Lewis R. Holton, superintendent for the state of Washington of the Anti-Saloon league, who has been touring north Idaho, is now ready for a tour of the southern part of the state in the interest of the league.

G. W. Flemmons, a merchant of Claytonia, accidentally backed his car off the Snake river ferry near that place. He narrowly escaped drowning, being able to save his life only because of being an unusually good swimmer.

Lemhi county went "over the top" on her quota of Liberty Bonds in the first week of the drive.

Although authorized to make an advance of nearly 50 cents per ton, Idaho coal dealers have decided not to take such action for the present, as they desire to do everything possible to encourage the storage of coal during the next few weeks.

If negotiations now being carried on by Harvey Allred, state director of farm markets, with the United States war department reach a successful conclusion, all of the bean and hay crop and a substantial part of the potato crop of Idaho may be sold direct to the government.

WAR PROPHECY COMES TRUE

Russian Banker's Prediction Seven Years Ago Provided for Famine and the Bankruptcy of Nations.

Only seven years ago M. Bloch, the great Russian banker, wrote: "That is the future of war—not fighting, but famine; not the slaying of men, but the bankruptcy of nations, and the breaking up of the whole social organization of the nations."

The future of war, as written about by M. Bloch seven years ago, is the present of war today, observes Vernon Kellogg in the Atlantic. Not that fighting and the slaying of men are lessened. Only the Napoleonic and the Thirty Years' wars approach today's war in the terrible losses of human life; and too great a drain on the human life of any one or several of the nations engaged may be the deciding factor in the war's conclusion. But on the whole, and as matters stand today, that part of M. Bloch's prophecy referring to the predominant influence of the food problem in modern war is thoroughly borne out by the facts. Despite the fearful and fatal struggling of an incredible number of men, consuming inconceivable quantities of munitions, and using such amazing methods of fighting as are beyond even the fantastic imaginings of the romancers of a decade ago, the national and international phases of the food and general economic problem are the predominant features of the war situation today.

ELBA'S SUPPLY OF IRON ORE

Mines Have Attached a New Importance to the Island—Napoleon Was Held Prisoner There.

The Island of Elba, celebrated as the place where Napoleon was imprisoned in 1814, has since Italy's entrance into this war attracted much attention as the location of valuable iron mines, writes a correspondent.

In view of the scarcity of iron mines in Italy and the difficulty of transporting ore or pigs from the United States for use in the munition factories the mines of Elba have given a new importance to the island. Travelers on the Genoa-Rome Express, which skirts the seashore of the mainland, permitting a view on a clear day of the blue island rising out of the water six miles distant, think rather of the tall foundry stacks in the foreground at Piombino than of the great soldier of other wars.

In the days before the war this express stopped at Campiglia to put off tourists for Piombino and Elba. Today it stops to put off business men, skilled iron workers, Italian soldiers and their Austrian prisoners interned on the island. The side track at Campiglia has been enlarged since the war, too, for the purpose of handling the large quantity of iron freight brought over from Elba. Napoleon's name has almost been forgotten on the island, so busy are the inhabitants with war work. "How can I get to the Villa San Martino?" a visitor arriving on the stone wharf of the harbor inquired of a workman. The workman looked at the visitor blankly, when the visitor added: "You know, the place where Napoleon used to live." The man shook his head. "I'm a newcomer here. Never heard of the place."

Conjugal Felicity.

"My wife and I never argue, so we get along beautifully." "How do you manage it?" "When anything goes wrong I always figure that it was my fault and she never disagrees with me."—Boston Transcript.

Soldiers' Superstition.

Cavalrymen have a superstition of their own. A mounted man firmly believes that he will come through the deadliest charge unscathed if he carries on his person the tooth of a war horse, the only condition being that the horse itself has, at some time, been through a charge unhurt.

Unremitting Industry.

Don't set too much store by unremitting industry. The ant has been working steadily for 6,000 years and is still an ant.—Capper's Weekly.