

## DESCRIBES NEW MACHINE GUN

Inventor Uses Centrifugal Force Instead of Explosive.

### SAY WEAPON IS NOISELESS

In Test Machine Gun Hurls Balls at Rate of 2,000 a Minute With Terrific Velocity—Will Kill a Man at a Distance of a Mile and a Half—Submitted to the War Department Just Before Armistice Was Signed.

Ever since the publication of a brief dispatch from Washington a few days ago to the effect that the war department was experimenting with a new type of noiseless machine gun that substituted centrifugal force for powder as a propelling power Edward Thomas Moore, an attorney of New York, has been receiving letters from friends asking him if the gun which is being experimented with now isn't the same one that he invented and submitted to the war department a few weeks before the armistice was signed.

To a World reporter Mr. Moore not only admitted that the gun was his invention, but offered to explain its principle. For several years prior to the war Mr. Moore, who lives in Passaic, N. J., was a major and judge advocate in the New Jersey National Guard by appointment of Woodrow Wilson as governor of New Jersey. When the United States entered the war Major Moore was pressed into service by the war department and assigned to New Jersey as inspector of the draft in that state. His invention of the "Moore centrifugal gun," for which he and Saul Slinger of Cedarsburg, L. I., obtained patents, was offered to the war department shortly before the signing of the armistice. The cessation of hostilities delayed experiments with the gun, but Major Moore left the invention with the bureau of standards for further tests.

#### "David Up to Date."

Mr. Moore says that the Biblical story of David slaying Goliath with a stone which he whirled around his head in a sling gave him the idea of applying centrifugal force to the operation of a machine gun. "Bringing David up to date" is the way he described it.

There have been other attempts to invent a centrifugal gun. Mr. Moore does not claim to have originated the idea. He says the French, the Russians and the Japanese have experimented with centrifugal guns from time to time, but were never successful because of their failure to control the dispersion of the bullets. From the tests which Mr. Moore conducted for the war department and those now being conducted, it would seem that Mr. Moore's claim to fame lies in having invented the first practical centrifugal gun.

#### Control of the Bullets.

In the gun which Mr. Moore has invented complete control is obtained over the dispersion of the bullets by a special patented timing device which feeds the balls into the gun barrel at a regular rate and ejects them at regular intervals and from the same opening. According to Mr. Moore, the tests have shown that his gun is capable of firing a ball a mile and a half and killing a man at that distance; also that a ball fired from the muzzle of the gun a short distance away has penetrated seven thicknesses of heavy planking, which he says is one thickness more than a bullet from any army .45 Colt will penetrate.

Centrifugal force is nothing more than the tendency which objects have to fly off in a straight line when rapidly revolved about a fixed center. The most common utilization of centrifugal force is in the modern cream separator.

#### Several Problems.

In seeking to apply centrifugal force to a machine gun, however, Mr. Moore was confronted with several problems. In the first place, in order to get sufficient force to propel a ball 850 feet a second, which is the speed of a bullet from a Colt automatic, several thousand revolutions of the gun barrel a second had to be obtained. This necessitated the construction of a special type of electric motor to provide the requisite revolutions. Then the tensile strength of the metals entering into the composition of the gun, and particularly of the barrel, had to be considered. Mr. Moore's knowledge of electric motors, tensile strength of metals and of ballistics being limited, he consulted experts in those various lines, and assembled the information collected from these various sources before starting to construct the centrifugal gun.

The main parts of the gun as designed by Mr. Moore consist of an upright shaft attached to a powerful electric motor capable of giving it a rotation of 10,000 revolutions a minute. Attached to the shaft, and at right angles to it, is a hollow steel arm eight inches long which serves as the gun barrel. Balls instead of bullets are used, and are half an inch in diameter or .50 caliber.

#### The Timing Device.

In Mr. Moore's opinion the most essential part of the gun is the timing device, which lets the balls into the barrel at just the proper time and interval to insure their emerging from the end of the barrel the instant it reaches the opening in the stationary gun covering or casing which incloses

## SECRET SERVICE JOBS IN DEMAND

More Than 2,000 Applications for Every Vacancy.

### WORK APPEALS TO AMATEURS

"Correspondence School" Sleuths Eager to Show Their Skill—Service Is Recruited From City Detective Forces and None Is Accepted Until He Has by Years of Work Proved His Ability as Crime Investigator.

A place on the United States secret service force is the most sought for position in the United States. More than 2,000 applications are received for every vacancy and every mail brings new requests. Most of these are from "sleuths" who have completed the course of some mail order detective school. No sooner does the average "graduate" get his diploma and star than he sits down and writes to Washington that he is "qualified to do all kinds of detective work" and asks for a government position.

In all such cases the applicant is out a 2-cent stamp, for the detectives in the government services are recruited from the city detective forces and none is accepted until he has proved by years of work his ability as a crime investigator.

The secret service was created in 1864 to trace and arrest counterfeiters of United States currency, principally the old "greenbacks," and detection of makers and circulators of spurious money has always been its chief function. Consequently it has attained a high degree of efficiency in that line, and it has become axiomatic that "no counterfeiter can get away with it."

#### Cleverness Against Cleverness.

But high wages for skilled and unskilled labor do not seem to have appealed to a number of clever men who during the last few months have attempted to beat the high cost of living by making their own money. In consequence the secret service has been unusually active, and five gangs of counterfeiters operating in widely different parts of the country have been rounded up and their plants confiscated by the government agents.

The war laid an extra heavy burden on this branch of the government's machinery, and hardly had the amount of work begun to lessen, when counterfeit bills began to appear in unusual quantities, and the work of the criminals made their detection difficult.

In one instance a group of three men, who had made some very fine plates, were caught before they had put a single piece of faulty paper into circulation, their apprehension being the result of a lucky accident and some clever detective work.

As has been related already in the daily press, a bath in Lake Michigan at Chicago a few weeks ago struck his foot against something sharp, and on investigating found it was a copper plate engraving of a \$10 federal reserve note. He turned it over to the federal authorities, who saw that it was an imperfect plate, but in the light of long experience they guessed that where that plate came from there were others in process of manufacture. With no other clue to work on, they began an investigation and soon arrested three men, who admitted that they had been experimenting with counterfeit plates for several months. Twelve such plates were found in their possession, some of them so well made that bills printed from them would have been very hard of detection.

#### Forge Pay Checks.

More than 100 convictions have resulted from the work of the secret service agents in running down persons who obtained fraudulent possession of government pay checks during the war and cashed them after forging an indorsement. Hundreds of checks also were passed in cases where the blank forms were stolen from the offices of disbursing officers and filled out falsely. Many of these checks were stolen from mail boxes, where they had been left by the postmen for disabled soldiers or dependents of soldiers, but this form of thievery has all but ceased.

Because of the billions of dollars disbursed from Washington and of the inexperience of many disbursing officers who did not safeguard their records properly, the national capital became a rich field for crooks and the secret service found plenty to do right at its doorstep. The latest piece of criminality to engage the attention of the bureau has developed in the bureau of war risk insurance, where a number of disabled soldiers were induced to part with a part of their money due from the government on the ground that by such a method they could get more than the government would otherwise pay them.

Investigation has shown that the soldiers were the only losers, as the employees of the bureau have no power to increase the amount the disabled men are paid. Only minor employees of the bureau have been involved.

The large issues of Liberty bonds have given the secret service added duties in tracing stolen registered bonds. Theft of coupon bonds does not directly concern the bureau any more than the theft of currency, but as registered bonds cannot be transferred or the interest collected without the signing of the rightful owner's name, they come in a different class.

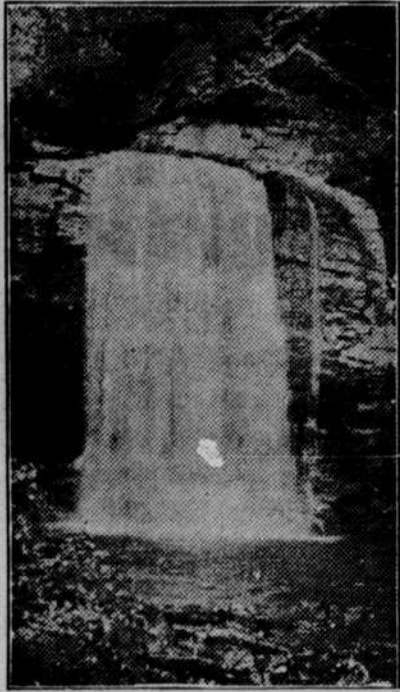
## PROPOSED DEVELOPMENT OF MUCH WATER POWER

Forest Service Receives Applications for More Than Half-Million Horsepower.

Already applications for more than one-half million horsepower have been filed with the forest service of the United States department of agriculture in connection with the water-power bill signed by the president on June 11.

The increasing costs of fuel and the difficulties of its transportation have put a premium on water power, say forest service experts. It is expected that the legislation will mark the beginning of a new era in power development in the United States. Big developments are to be undertaken in the near future in the East, South and West.

The act applies to all power sites on public lands and reservations and on the navigable waters of the United



Looking Glass Falls, Pisgah National Forest.

States, including international boundary waters. Its administration is charged to a commission comprising the secretaries of war, interior and agriculture. Full details of the act, such as license, rates and service, may be had upon application to any of the departments named.

### MAKES "SWISS" CHEESE

Finds a Way to Fill United States Product Full of Holes.

"Swiss" cheese—the kind full of holes—long a luxury on American tables, is soon to become a commonplace commodity. The holes, the distinguishing mark of real "Swiss" cheese, can now be made by a new culture discovered by W. U. Welmar, a cheese specialist of Sugar Creek, O.

Since the manufacture of "Swiss" cheese began in this country no dairyman or farmer has been able to produce the holes in quantity and size displayed by the imported from the continent. Long have scientists cudged their brains in an effort to discover the secret.

Welmar, who makes no pretensions to scientific achievement, has agreed to demonstrate to cheese makers, farmers, and dairymen of Tuscarawas county how to produce the long sought "holes" by means of a new culture. Through Welmar's process American made "Swiss" cheese can be made so closely resemble the imported article that the ordinary person cannot distinguish the difference. The new culture, Welmar says, can be used successfully by any dairyman or cheese maker.

### DEER KILLS SNAKE

Tramples Life From Big Reptile in Little Time.

A combat between a buck deer and a five-foot blacksnake was witnessed in a field about a mile and a half west of Youngdale, Pa., by Emmanuel Arnold, who had been fishing in McElhattan run for trout and was walking to Lock Haven via Castanea.

The fight was of short duration, for the deer trampled the life out of the big snake in a few seconds.

Arnold saw the buck and a doe in a field near a woods, and the next instant the buck leaped in the air four times in succession and came down with his feet close together. As he started toward the field to make an investigation the deer ran into the woods and disappeared. On reaching the spot where the animal had been standing Arnold was surprised to see a large blacksnake crushed and mangled by the sharp-pointed hoofs of the deer, which were bunched together each time the deer landed on the reptile.

#### Canada Second in Motor Industry.

Canada is now the second nation in the world in the manufacture and the per capita ownership of automobiles. The United States outranks her, where statistics show one person out of 15 owns a car, while in Canada there is one car for every 23 persons.

#### More Soldier Dead Returned to U. S.

The bodies of 837 American dead, consigned direct to the homes of their parents reached New York city from Antwerp, Belgium, aboard the transport Mercury. The bodies were received with military honor by regular army men.

## Cabin Lure

By GENEVIEVE ULMAR

(© 1920, Western Newspaper Union.)

"Once get out in the Ventura district, Dale, and you'll never go anywhere else. Once a man gets the cabin fever among those royal old hills, he is enchanted for life."

"Why do you call it 'cabin fever,' Merton?" inquired Alvin Dale.

"Because it applies specifically. There is everything in the section except oil. Once there was a rush on prospects in that line, but it turned out that every strike was a shallow surface well. Inside of a year there wasn't a driller or a derrick left in the district. They did leave cabins, however. Here and there along a trail for a hundred miles in the center of the grandest hunting and fishing district in the world, every few miles you'll find a fair to indifferent cabin, but offering a shelter far superior to a flimsy tent."

"Abandoned, I suppose."

"Permanently, and you take your pick and house yourself and no questions asked."

Lisle Merton was, like Dale, a young man of fortune and leisure and an authority on places and travel. Dale started the next day on his thousand-mile trip. A settlement named Eden Point was his rail connection. Then twenty miles by wagon and as much more by canoe, and he found himself late one afternoon in front of a plain board structure with three rooms.

"It's about the choice of the houses," advised his guide, "right on the stream and that's a big advantage, for nearly every day some kind of craft passes up or down stream and they will do any errands you may have at the settlement."

"That will be just the thing," commented Dale.

"Another thing," continued the guide, "back a bit from the river there are several families living, so you won't be lonesome."

Dale had bought a folding cot, an old stove, some camp stools and a fair array of pots, pans and crockery. It was a pleasing novelty and something of a delight to make amateur housekeeping arrangements. Bedroom, dining room and kitchen swept and furnished, he lit a lamp and sat down to write some letters, feeling quite at home and comfortable.

"Saw your light and wondered who my next neighbor could be," spoke a hearty voice, and at the threshold stood a bronzed, bearded man, the typical frontiersman in dress and speech. "You look as if your needs are all nicely provided for," added the visitor as he glanced about him.

"We have butter and eggs and always a friendly helping hand when you happen to need it. I'm Aaron Burt; lived here for ten years."

"With your family?" said Dale, simply to keep up the conversation.

"Only a niece, Ada Revere. She has been here a month and going to stay two more. I hope we get better acquainted."

"It will not be my fault, if we don't," said Dale. He was pleased at the thought of neighbors, more so especially as the niece might be a young lady. He found her so, and beautiful, intelligent, refined. It was the next day that he came upon her in the woods with her uncle. An introduction followed and after that almost every other day Dale spent an hour or two at the Burt cabin. He learned that Mr. Burt owned considerable land in the district and was experimenting along the line of promoting a plan to get the oil from shale. His niece was unpretentious, friendly and charming.

It was natural and inevitable that these two young souls should discover a mutual attraction. Then there transpired a series of incidents that brought about a definite climax. Mr. Burt came over to Dale's cabin one morning riding one horse and leading another.

"I need your help, Dale," he spoke quite excitedly. "Some one broke into the house while we were passing the night with a neighbor. We suspect two fellows we noticed hanging around yesterday. They are on foot. They have taken about all Ada possessed and we must get after them."

They came upon the thieves ten miles away. The latter had seen them coming and had scurried for a belt of dense timber, leaving a suitcase they had been rifling behind them. Burt tossed over its contents.

"They haven't taken anything but a trinket or two," he reported. "We won't risk a fight following them further," and Dale, staring hard at an array of clothing fit for a princess, began to realize that Miss Ada Reeves must belong to a family of some consequence.

Ada was delighted to recover her property and Dale's co-operation in securing it drew them still closer together. One day Burt met Dale, quite serious looking.

"Young man," he spoke, "I've got eyes to notice that you and Ada are headed for a deep dive into love. I don't know how that will suit her folks. They're proud and rich and pretty high up. I should have told you that before."

"It was not necessary," replied Dale with a cheery laugh. "I won't boast because I own two banks and come from one of the oldest families in my native city. I think I can qualify up to the standard of Ada's family. It is too late to discuss that, however, for I just kissed your charming niece and placed an engagement ring upon her finger."

**A Perfect Woman.**  
The measurements and description of the perfect woman, as approved by a New York sculptor, follow: Height, 5 feet 7 inches; weight, 147 pounds; wrist, 6 1/2 inches; bust 36 inches; waist, 24 1/2 inches; hips, 42 inches; thigh, 22 inches; knee, 17 inches; calf, 15 inches; ankle, 8 inches; size of glove, 6 3/4; size of shoe, 3 3/4; color of hair, chestnut brown; color of eyes, hazel.

**Sell Historic Banner in London.**  
At a sale of antiques recently in London, colors carried at the battle of Culloden in 1746 were sold to a Glasgow purchaser for £750 (\$3,750). The colors were borne by Sir James Kinloch's battalion—the Second—of Lord Ogilvy's regiment, and is believed to be the only banner carried off by the young pretender's defeated army. All the colors taken in the battle were burned at Edinburgh.—London Times.

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