



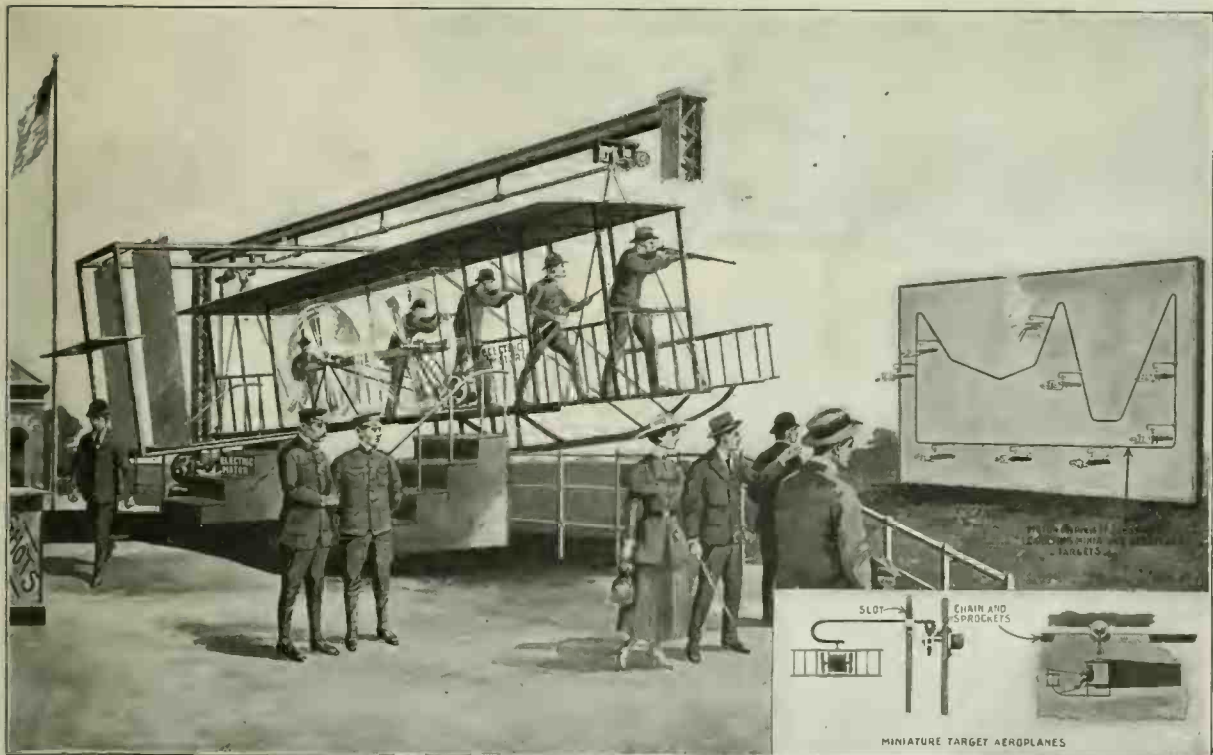
An Electric Aeroplane Shooting Gallery

ALL aboard for the electric aeroplane shooting gallery—three shots for a dime! Right this way, Gents. Wing a "Boche" plane in flight! This may be the speech that greets you in the large amusement parks this summer. We predict it will make a sure-

quired of the marksman to hit the moving target for the reason that the platform on which he stands will be constantly pitching and rolling, and moreover, the captive plane can be made to roll just like a real one, in two directions, i. e., up and down from side to side, and back and forth from front

of the regular army aviator, as there the gunner has the use of a rapid-fire machine gun which fairly sprinkles the air with bullets for a considerable area, and even then the enemy flyers do get away without being hit.

In order to accomplish the desired re-



Shooting Down "Boche" Aeroplanes From a Moving 'Plane, With All the Accompanying Sensations, Is the Latest Amusement Device Perfected by an American Genius. The Movement of the Shooter's 'Plane as Well as That of the Propellers and Targets Is Accomplished by Electric Motors. It Promises to Make a Wonderful Hit With the Public This Summer.

fire hit with the amusement-seeking public men, women and children. This recently patented contrivance is intended to give one all the sensations of actually shooting at a moving target, in this case a miniature aeroplane, from an aeroplane in flight. As the inventor, Mr. Frederic W. Thompson, points out, considerable skill will be re-

quired of the marksman to hit the moving target for the reason that the platform on which he stands will be constantly pitching and rolling, and moreover, the captive plane can be made to roll just like a real one, in two directions, i. e., up and down from side to side, and back and forth from front

sult, use is made of a shooter's stand in the form of an aeroplane, a distant target, and mechanical means holding the shooter's stand suspended in mid-air and imparting a rocking motion thereto. Use is also made of means for detachably suspending the target and carrying it along in an endless

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WIRELESS SALE

On April 6th of last year, when war was declared, we had made preparations to give our patrons wonderful service and had acquired an enormous stock of our most popular wireless instruments below mentioned. We desire to reduce this stock to the extent of \$5,000, still retaining a big reserve when the wireless stations reopen. To accomplish this, we have just slaughtered the prices. Remember that during the past year wireless keys and everything electrical has increased tremendously and it is an absolute certainty that wireless instruments manufactured when the war is over will sell at greatly increased prices. The demand will be so terrific that thousands will have to wait months for their instruments. Many are now getting their stations ready. This is your opportunity. When this stock is adequately reduced no further orders will be accepted and remittance will be returned.

	Regular Price	Special Price
No. 63X01 Sayville Rotary Gap.....	\$12.00	\$7.75
No. A37X88 Type "B" Sayville Rotary Gap.....	12.00	7.75
2 Point Anchor Gap.....	.60	.38
Navy Type Receiving Transformer.....	17.50	13.50
No. 1091 Arlington Transformer.....	7.50	5.75
No. 1092 Arlington Transformer.....	6.50	4.95
No. 7721 Rec. Trans.....	5.75	3.75
Any of the combined Transmitting and Receiving Sets on pages 90 to 95 of catalog 11 (Also listed in earlier editions of catalog) Special discount 20%.		
No. A504 Detector.....	.95	.75
No. A60X12 Detector.....	.55	.35
No. A676 Crystal Detector Stand.....	1.00	.70
No. A7712 Crystal Detector Stand.....	1.75	1.25
No. 40X01 Standard Detector.....	1.25	.85
No. 71X18 Rec. Trans.....	5.25	3.00
No. A7728 Loading Coil.....	2.25	1.50
No. 61X08A Mascot Tuning Coil.....	2.00	1.50
No. 61X10 Tuning Coil.....	3.35	2.75
No. A520 Jr. Loose Coupler.....	3.75	2.55
No. A500 Jr. Detector.....	.75	.50
Parts for No. A7721 Loose Coupler.....	4.00	2.50
Parts for No. 71X18 Loose Coupler.....	3.25	2.50

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attorney for search in the Patent Office for patents of this class. A search of this kind can be made for a few dollars by any reputable patent attorney.

GAS GUN.

(233) H. W. Seeley, Bridgeport, Conn., claims that he has experimented for some time with what he terms a "Gas Gun." The cannon is supposed to be built of brass or steel and is to be fired with gas. Certain other information is given as to how to operate the gun, as well as other various details. He also claims that with such a gun he has hurled objects with considerable force for fairly long distances, but he admits that of necessity he used a very small gun. Our advice is asked.

A. In view of the fact that late advices from Germany thru Swiss sources mention that the famous 74-mile gun which the Germans used in shelling Paris are supposed to be using gas, our correspondent's idea seems feasible. How practical such a device is, is not known to us. Until the German came along no one ever spoke of gas guns, but there is a good chance that there might be something in an idea of this kind. We would advise our correspondent to proceed cautiously, and have a thorough patent search made before applying for patent.

AUDION.

(234) E. F. Johnson, Waseca, Minn., thinks he can use an A. C. current step-down transformer in connection with an Audion. He shows several schemes to be used in connection with the idea.

A. We think it is impossible to use A. C. current in connection with such a sensitive device as an Audion, as we are almost certain that a loud hum will result in the telephone receivers, and we doubt if the same can be overcome entirely to make the operation of the instrument suitable. Furthermore, no matter what arrangement is used in connection with the transformer, the constantly changing potential of the line is certain to interfere with the operation of the Audion. Everytime somebody down the line turns on a number of lights there is a disturbance along the entire circuit, which will certainly manifest itself in the Audion.

AN ELECTRIC AEROPLANE SHOOTING GALLERY.

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pathway, the target being preferably in the form of a miniature aeroplane as here illustrated.

In the front portion of the gallery there is arranged a shooter's stand and in the rear are traveling targets adapted to be shot at by the shooters or gunmen standing on the stand. The shooter's stand is preferably in the form of an aeroplane suspended in mid-air and adapted to rock from side to side. The lower wing of the stand forms a floor for the shooters to stand on and a set of steps lead to the end portions of this floor so that the shooters can board the "aeroplane" readily.

Various mechanical means may be employed for suspending the shooter's stand and for imparting a rocking thereto, for instance, as shown in the drawings, the floor on which the marksmen stand is hung at its ends on upwardly extending rods, connected at their upper ends with the cranks attached to crank shafts journaled in suitable bearings arranged on brackets and attached to an overhead beam extending along the ceiling of the gallery. The crank shafts are provided with bevel gear wheels meshing with a second set of bevel gear wheels secured on a shaft driven by an electric motor. When the motor is run-

ning then a rotary motion is transmitted by the gearing described to the shaft and cranks, whereby a rotary motion is given the links and imparting a sidewise rocking motion to the shooter's stand, as will be readily understood by reference to the illustration.

The rear of the suspended stand is provided with propellers driven by a sprocket wheel and sprocket chain mechanism from an electric motor mounted on the floor, and the propellers are preferably inclosed in a wire netting protector. When the motor is running a rotary motion is thus given to the propellers, whereby an air current is induced in a lengthwise direction, producing a very realistic aeroplane effect to the shooters standing on the floor as well as to the onlookers in front of the shooting gallery.

Each of the miniature aeroplane targets is provided on top with an eye detachably engaging the return bent end of a holder, in the form of a rod provided with a flanged wheel, traveling in an endless slot formed in the target background extending across the gallery in the rear of the targets. The rear end of each holder is attached to an endless traveling sprocket chain passing around a series of sprocket wheels located in such a position as to guide the sprocket chain along the slot as is readily understood. A suitable electric driving motor is connected with one of the sprocket chain shafts to impart a traveling motion to the chain and targets.

As the marksmen hit the aeroplane targets they can thus be easily replaced by an attendant located at one side of the target rack, as they are only hooked on any of the slowly moving shafts.

To give a truly realistic effect to the whole affair the inventor mentions that a moving cloud panorama can be flashed on the target board, so that the resemblance to the "real thing" will be greatly heightened thereby. Also it is not necessary to have the shooting gallery in the open; it can be very effectively placed in an enclosure so that a moving earth panorama can be projected on the floor between the plane and the target.

A 100-MILE ELECTRO-MAGNETIC GUN.

(Continued from page 81)

has a possible range of 90 to 100 miles when properly designed and elevated to a maximum range angle of 45 degrees. The principle of the electro-magnetic gun is best understood by reference to the line drawing here shown. Prof. Kristian Birke-land, inventor of the gigantic solenoid gun mentioned, his patent being dated March 15, 1914, tried out a simple experiment to prove that his design was feasible and practical. This experiment was made with a single magnetic solenoid or coil weighing about 24 lbs., and having the dimensions given in sketch. Here is what he found: With a current of 230 amperes sent thru the solenoid, the iron rod was sucked in and propelled with a magnetic pull of 170 lbs. The heat generated in the coil at the end of one second was not so great but that the solenoid would have safely withstood ten times as heavy a current for one-tenth second, in which event the force acting upon the rod would be about 1700 lbs. per square inch. If instead of an iron rod a body made up of coils thru which a current is past is made use of, the magnetic suction of the solenoid may be vastly increased, points out Prof. Birke-land.

As an introductory explanation reference may be made in this connection to one of (Continued on page 134)

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