

CALIFORNIA NATIONAL GUARD AVIATORS EAGLE NATION

BY LOUIS J. STELLMANN.

CALIFORNIA'S National Guard, which had so prominent an assistance for some years after the fire, promises to eclipse all other militia organizations in progressiveness and efficiency. Not only has the N. G. C. demonstrated its practical knowledge of the war game in actual campaign tests, sometimes against picked regiments of the regular Army, but it has outstripped all other military organizations in the country in the latest branches of electrical and aviator science.

The National Guard of San Francisco has the first aeronautical detachment in America, consisting of trained military men who are also aviators and electricians. While the regular Army officers are taking lessons in flying from Curtiss, the Wright brothers and other birdmen, the members of this latest and most progressive militia organization are scouting about San Francisco and contiguous counties in their aeroplanes, making wireless telephone tests and demonstrations which astonish scientists and developing new systems of wireless communication with moveable aerials, such as kites, etc.

This aeronautical detachment is a body of skilled men, including a number of noted aviators such as Eugene Ely, who was one of the first to enlist and who is now in active service on the Mexican border. The squad is now known as the aeronautical detachment of the coast artillery corps, but an effort is being made to have the State create a special signal company and assign it to aeronautical duty. This would assure the young aviators and electrical experimenters a regular fund from the State military appropriation and enable them to carry on their work to much better advantage.

At present the aviation squad is supported largely by private donations, for the small portion of the coast artillery fund allowed the former branch is not enough even to purchase the necessary equipment. As it is, the detachment possesses two flying machines and the latest wrinkles in wireless apparatus, all of which is very expensive.

A young man named John McHenry Jr. belongs the principal credit of organizing the aeronautical detachment. McHenry is a nephew of the late William Keith, California's famous landscape painter, and bears the same relationship to Captain Pond of the United States cruiser Pennsylvania. He is an aviation and wireless enthusiast, and not long ago conceived the idea of having the State militia develop these branches of latter-day science along practical lines and for martial uses.

After some correspondence with the State militia headquarters at Sacramento he discovered that little in the way of financial aid might be expected, and a bill drawn for the purpose of creating a special branch of the militia devoted to aviation and wireless signaling was too late to receive consideration at the hands of the recent Legislature.

SECURES PRIVATE AID.

Nothing daunted, however, McHenry secured the indorsement of Colonel George Schastey, head of the coast artillery corps, and of the militia chiefs, and he enlisted the financial assistance of private parties in his sanguine enterprise. Naturally its progressive character made it a strong appeal, and the ever-lingering war haze helped a little as well; so it was not long before McHenry found himself the commander of the first aeronautical branch of the militia in the United States and the possessor of several thousand dollars to be used in running the detachment and purchasing instruments. Aeronaut Ely, who met McHenry aboard the cruiser Pennsylvania, became an ardent supporter of the ambitious scheme. He not only enlisted in the detachment forthwith, but donated \$1000 as a sort of nest egg.

Being thus propitiously launched, the aeronautical branch of the coast artillery corps thrived and prospered to an amazing degree. A portion of the Pontana home at 825 Francisco street was set aside for a wireless laboratory and R. G. Pontana volunteered as an operator. An aerial was erected nearby, and almost daily experiments are made there in the use of the wireless telephone. Between the National Guard laboratory at Francisco and Hyde streets and a transmitting station at Third and Kearny, in charge of John Dwyer, ordinary conversation is carried on.

The "flying squad" will have at least three aeroplanes at its disposal. One of these, a Farman machine, is now in the hands of J. C. Handy, one of the enlisted professional birdmen. Another has just been received from San Diego, while a third, especially adapted to war uses, the Curtiss military No. 4, is especially adapted to war uses. The third aeroplane, commanded by the National Guard of California detachment, is a forty-foot machine being constructed in Oakland, concerning which little is being said at present, as it is hoped that a number of patentable improvements may be successfully demonstrated by the inventor.

Besides these flying machines and a glider which is now in a hangar on the ocean beach, a two-passenger balloon will soon be added to the equipment. This is to be utilized as an aerial for wireless telegraphy, enabling operators therein to receive messages from practically all over the world. It will also serve as an observatory for photographers and officers.

KITES AS AERIALS.

Kites as portable aerials have already been successfully tried. Several weeks ago Chief Operator Pontana and others flew a trio of six-foot box kites from Twin Peaks and caught Honolulu very clearly. The kites used in this experiment were of the collapsible type, easily transported and capable of carrying about 1500 feet of aluminum wire aloft. Though the demonstration was largely experimental, results were very encouraging. Not only was Honolulu clearly heard, but communication was established with all the Pacific Coast stations, including Bremerton, San Diego, Los Angeles, Santa Barbara and intermediate points.

The next experiment of similar nature will be made with a set of balloons of the seven-foot, triangular, man-carrying variety. These, containing a portable generator and complete wireless telegraph plant, and also a powerful searchlight for night flash signaling. Besides there will be

FLYING SQUAD
OF STATE MILITIA
IS FIRST OF KIND
AND HAS DONE NOTABLE WORK
WITH BIPLANES, KITES
AND WIRELESS TELEPHONE



LIEUT. JOHN H. McHENRY JR.
ORGANIZER AND
COMMANDER OF THE
AERONAUTICAL DETACHMENT

additional "rolling stock" including four motorcycles for the signal squad. This squad will signal with the wig-wag flags, with the semaphore system used exclusively in the Navy, the Ardois system, searchlight communication and the heliograph. There are four of these present, expert electricians, telegraph and telephone operators and linemen.

Of the thirty-two men in the aeronautical detachment, three are professional aviators. They are Eugene B. Ely of international fame, George H. Loane, who made some fine demonstrations at the recent Tanforan tournament, and J. C. Handy, a well-known birdman. They compose what is known as the flying detail, and some great work is expected of them. Of course, Ely will not be able to be here much of the time, but he will prove a valuable member nevertheless and far from a passive one. The other three, being on the ground, will carry on most of the aviator experiments, and some remarkable records are expected when active operations begin.

After the flying detail come the eight skilled mechanics, who will have plenty of work cut out for them in constructing and repairing the apparatus of various sorts. A complete shop is maintained in Oakland, at Eighth and Center streets, where machines may be built, assembled or put in condition by the mechanical force.

R. G. Pontana is chief of the wireless operators. Though quite a young man, he is an expert and a daring experimenter along new lines. His three assistants are also skilled men.

OTHER DIVISIONS.

There are, as well, two photographers and two topographers. The former will make birdseye views from balloons and aeroplanes and the latter construct maps from these photographs. It may not be among the most romantic features of military life, is a very important and essential phase of the work.

There are three divisions of the aeronautical detachment under the present system. They consist of the aeroplane detail, composed of aviators and mechanics; the signal detail, composed of wireless operators, signal men, electricians and repair men, and the

aviator detail, composed of aviators and mechanics.

AVIATOR GEORGE H. LOANE
IN HIS SIX-FOOT WIRELESS
EQUIPPED BIPLANE



HIGH POWER WIRELESS LABORATORY AT FRANCISCO
AND HYDE STS. R. G. PONTANA CHIEF OPERATOR, AT KEY,
LIEUT. McHENRY, JR. AT LEFT

filled radiator and filled gasoline tank is 210 pounds. One revolution sends the machine ahead seven feet, giving it a pitch speed of 8400 feet per minute.

The most remarkable feature of this machine, however, is that the wire bracing has been constructed with the special aim of serving as an aerial for a miniature wireless plant carried by the aviator. This device has been de-

tion and workings of an airship. In drill work it will be taken apart and put together, and its modus operandi may thus become thoroughly familiar to beginners before they essay to leave the safety of terra firma for the perils of the air.

Of the two automobiles, one will carry a portable wireless plant and other signaling apparatus, while the other will be utilized as a moving repair shop, equipped with all needful machinery and placed in charge of expert mechanics.

It is confidently expected that the military aeroplanes just completed in the Oakland shop will make aeronautical history under the operation of Aviator George H. Loane. This machine is of the Curtiss type except that it is what aviators term "headless," the elevator being in the rear instead of in front. It also differs from the Curtiss machine in having a Farman landing device or chassis. The engine is an eight-cylinder MacDermott of eighty horse-power with unusually liberal bearings. The weight of the complete power plant, including the propeller,

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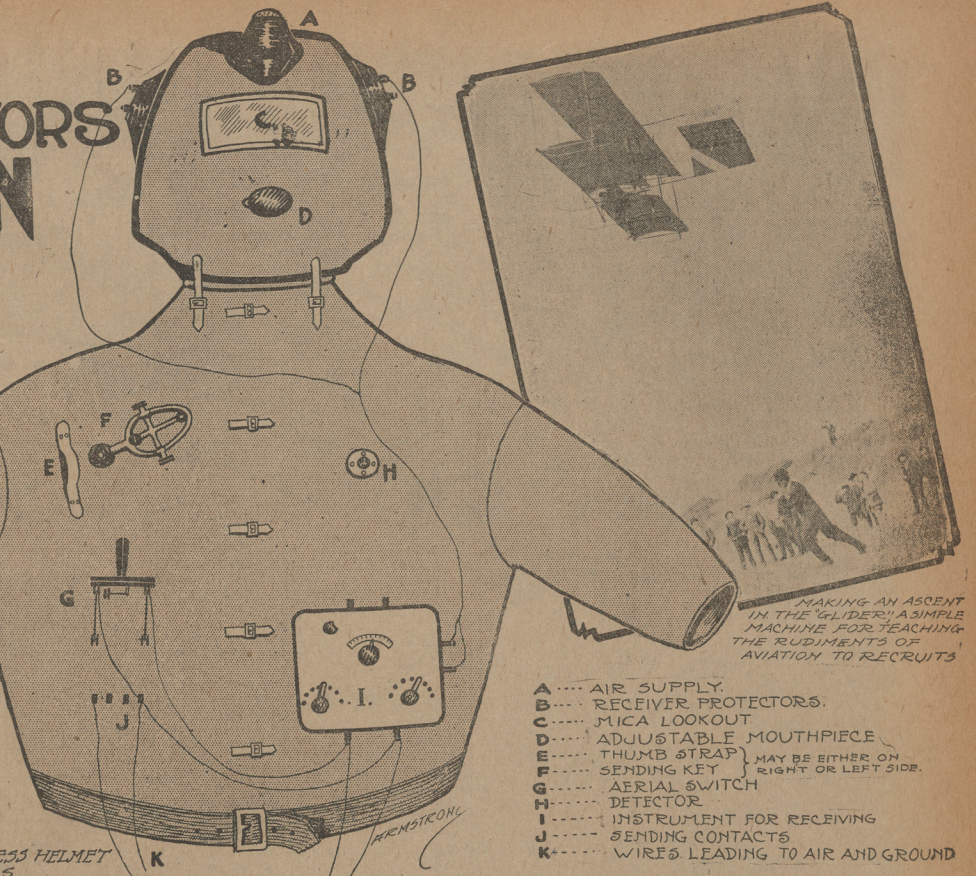
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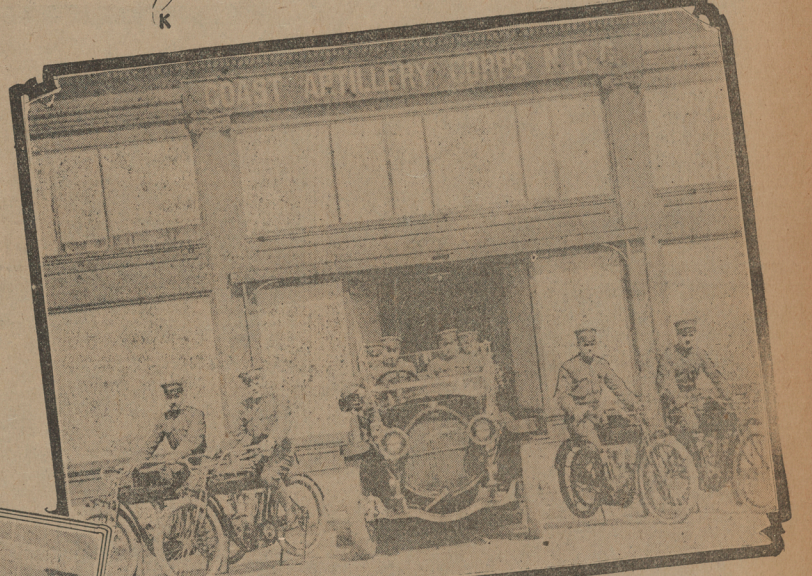
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SKETCH OF WIRELESS HELMET
WORN BY AVIATORS
OF AERONAUTICAL DETACHMENT N.G.C.

- A..... AIR SUPPLY.
- B..... RECEIVER PROTECTORS.
- C..... MICA LOOKOUT
- D..... ADJUSTABLE MOUTHPIECE
- E..... THUMB STRAP
- F..... SENDING KEY
- G..... AERIAL SWITCH
- H..... DETECTOR
- I..... INSTRUMENT FOR RECEIVING
- J..... SENDING CONTACTS
- K..... WIRES LEADING TO AIR AND GROUND



AUTOMOBILE EQUIPPED
WITH PORTABLE WIRELESS
OUTFIT, AND MOTOR CYCLE SQUAD
OF AERONAUTICAL DETACHMENT



COL. SCHASTEY HEAD OF COAST ARTILLERY CORPS,
DIRECTING A WIRELESS TELEPHONE TEST
AT THE N.G.C. ARMORY ON VAN NESS AVE.

This obstacle has been overcome by Pontana in his device, which will be given a practical test by the aeronautical detachment in the near future. The Pontana apparatus is simple and extremely light, weighing less than six pounds. It consists of a helmet very much like that used by divers, which slips over the head and shoulders of the aviator, cutting off all sound but that made by the instruments. At each ear will be placed a wireless receiver of high sensitivity.

Sending apparatus is also provided by an inconspicuously arranged set of minute instruments located over the chest of the operator. Close to the right armpit is a strap through which the thumb may be placed, and within reach of the fingers is a small key. Opposite it is an automatic switch, while below the key is a detector, and opposite it again are the condenser and tuning coil. Wireless experts and aeronauts are looking forward to the

testing of this apparatus with great interest.

The Curtiss No. 4 military biplane just received from San Diego by the aeronautical detachment is also especially adapted for wireless communication with the ground. It is heavier than the stock machine of this type, and so constructed that it will be easy to take it apart and reassemble it for transportation purposes. It is an eight-cylinder machine of sixty horse-power, and carries two passengers.

A number of sites have been offered the aeronautical detachment for flying drills, including one at San Jose, but none has yet been definitely decided upon as the official drill ground. It is likely, moreover, that flights will be made at a number of points on the coast and inland, so that the varying land and ocean breezes may be studied in their relation to man-flying.

Lieutenant McHenry has been selected to be a good organizer and disciplinarian, for the detachment he com-

mands is effective not only because of individual merit, but because of the excellent "team work" as well. He has established a precedent which other militia corps will probably be quick to follow, and not only the regular Army, but the militia world at large, will keep an interested eye on the California National Guard boys, who have already proved most emphatically that they are not "tin soldiers" nor standard bearers of the "milk-white flag."

In fact, the aeronautical detachment and the attention it has received from all quarters has given a decided impetus to the National Guard movement in California. Other militia branches have been spurred into a desire to do equally effective and progressive work along other lines.

The Four Maries

"Last night the Queen had four Maries, This night she'll have but three: There was Mary Beaton, and Mary Seton, An' Mary Carmichael, an' Me."

THIS quartet of Maries was chosen for her as playmates by the Queen Mother when Mary was quite a child. The historical attributes the choice, as regarding the names, to the fact that in the Gospels four Maries are often associated with the mother Jesus, and that the names of the four Maries all went with the future Queen to France in those happy early days before the little princess had begun to stretch themselves by her side. They returned with her to Scotland in 1561, and with her till near the tragic close at Fotheringhay. All were daughters of the Scottish aristocracy, and it is interesting to add that it was a Mary—Mary Livingston—who arranged the midnight flight of Mary Beaton after the murder of Rizzio at Holyrood.

MOST VALUABLE OF METALS. In a laboratory in Paris, after twelve months' labor, the chemists have succeeded in producing nearly two grammes of radium, or, to be precise, the weight is 1.92 grammes. But the value of this tiny parcel of the new metal is so an inverse ratio to its weight by many and many a geometrical progression. The value of radium is, it is said, 400,000 francs the gramme, so the whole parcel is worth 768,000 francs, or, say, \$20,720.