Correspondence

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The Present Status of the North Pole Question

To the Editor of the SCIENTIFIC AMERICAN:

On January 13th, 1916, the Hon. Henry T. Helgesen, of North Dakota, made a speech on the floor of the House of Representatives (published in the *Congressional Record* of same date, pp. 1092-1099), summing up what he has accomplished by much hard work for over a year. Briefly the results of his labors are that the Navy Department (Hydrographic Office) and the Coast and Geodetic Survey have been obliged to repudiate and take off from Government charts all of Admiral Peary's reported discoveries, namely: "Peary Channel" (thereby denying Peary's claim to the insularity of Greenland), "East Greenland Sea," "Crocker Land," "Jessup Land," and the soundings claimed to have been made by Peary in 1909, when he asserts that he reached the North Pole. This ends finally any controversy about the discovery of the North Pole, for Peary's claims are now officially thrown out.

Mr. Helgesen does not, however, touch in any wise on the claims of Dr. Cook. These now stand at present as follows: Cook's claims to have made the first ascent of Mount McKinley have been verified unintentionally and unwillingly by the climbers who followed him up the mountain. Cook's discovery of the non-existence of Crocker Land has been verified by MacMillan. Cook's three other Arctic discoveries, Bradley Land, Cook-Land-Ice, and the endless fields of purple snows at the North Pole, rest now for proof entirely on Cook's own statements and astronomical observations: corroborative geographical evidence can no longer be drawn from Peary's statements since these are now officially declared invalid.

The verification or disproof of Cook's discoveries geographically, however, is only a question of time. Besides the unknown Arctic, there is almost nothing, except part of Antarctica, left in the world to explore. Bradley Land has already appealed to one explorer and the time is perhaps not so far distant when a new expedition will start for its shores. Nevertheless, the fact that Peary was deceived by a mirage into believing that there was a land which he called Crocker Land shows that there is a possibility that Cook also was deceived by a mirage into believing that there is a land which he called Bradley Land. And the further consequence of this is that while the refinding of Bradley Land would absolutely verify Cook, the finding that it was non-existent would not of itself discredit him. And if it should prove to be non-existent, there would still remain Cook-Land-Ice in 87 deg.-88 deg. N., and the endless fields of purple snows beyond 88 deg. N., by which to verify Cook's discovery of the North Pole.

In saying that Bradley Land has already appealed to one explorer, I must tell briefly of an attempt to reach it which was made in 1914 and 1915 by Messrs. Rudolph Franke and Arthur Haack and which failed partly on account of unusual ice conditions. They sailed from Quebec on July 4th, 1914, on the S. S. *Guide*, with the Canadian Arctic explorer and fur trader, Captain J. Bernier, who agreed to leave them at the entrance of Jones Sound. On account of bad ice, they were unable to reach either Etah or Jones Sound. After a summer spent in fighting the ice floes of Baffin Bay, they were finally nipped just south of the entrance of Lancaster Sound and forced to winter there. While out hunting one day, a great blizzard came on in which Mr. Haack was frozen to death. This ended Mr. Franke's hopes of trying to reach Bradley Land and he returned to Quebec with Captain Bernier to find himself a prisoner of war, a unique ending to an Arctic voyage of exploration.

Philadelphia, Penn. EDWIN SWIFT BALCH.

[Editorial comment on this letter appears on p. 295. —ED.]

Battery vs. Magneto Ignition

To the Editor of the SCIENTIFIC AMERICAN:

In the SCIENTIFIC AMERICAN of Jan. 1st, 1916, on page 11 you refer to "The Trend Toward Battery Current Ignition." The statement you make that "with the universal adoption of electric starting and lighting systems has come a marked diminution in the number of firms using high-tension magneto ignition," requires further explanation, as it does not do justice to the magneto.

While it may be true that the number of makers using battery igniton has increased, it is by no means true that the number of cars so equipped has increased. I call your attention to the fact that out of 176 cars listed in the show issue of *Motor Age* of Dec. 30th, 62 of these, or 35 per cent, were magneto equipped. By far the largest number of cars are actually magneto equipped. High priced cars are practically all magneto equipped and nearly all foreign made cars use magneto equipment. Battery ignition has practically nothing to recommend it except cheapness. It is true that for a while the manufacturers of eight and twelve cylinder engines had difficulty in securing suitable magnetos, but this has recently been eliminated. Both eight and twelve cylinder magnetos of high efficiency are now procurable and a standard product with one of the largest American manufacturers of magnetos.

There are many objections to making the ignition on an automobile dependent upon the starting and lighting battery. It is seldom that this battery is at its maximum efficiency, not because of anything inherently wrong with the charging outfit provided, but usually due to a lack of care on the part of the average user. It may be true that the varying conditions of a battery does not affect the ignition, this is claimed by some makers of battery ignition, but there is one thing certain that a car with battery ignition will not run when the battery is dead and such cases are only too frequent. The complication of battery ignition, the timer mechanism often being a part of the lighting and starting dynamo, is well known, and while many attempts have been made to remove this complication, it still exists to a large extent. The many wires and connections sometimes requiring thermostatic switches for cutting off the current in case the ignition switch is left "on" with the engine at rest, and the fact that these systems are but slightly understood by the average repair man, all tend to make the battery ignition system secondary in efficiency and desirability from a standpoint of the average car user. The original high tension magneto was rather complicated and difficult to repair. This does not hold good with the modern types wherein the windings are removable, the breaker points stationary, and all parts easily accessible for inspection and repair by anybody. The fact that magnetos are used on practically all high grade cars, all aeroplanes, and exclusively for racing, should be sufficient evidence that they are considered by those who know to be far superior to battery ignition in any form; the main reason for the use of other forms of equipment is cheapness.

Sumter, S. C. H. R. VAN DEVENTER.

Pistol vs. Bayonet

To the Editor of the SCIENTIFIC AMERICAN:

Mr. Crossman's timely and interesting article on the bayonet causes the question to arise: whether in many cases, weapons specially adapted to certain conditions, weapons which might be transported in motor trucks, and served out on occasion to troops trained in their application, would not greatly increase the effectiveness of our Army.

If bewildering speed was an essential in the invasion of Belgium and France, it would be of still greater importance in a campaign conducted with the objective of conquering a considerable area in the United States. It seems unlikely that the initial expeditionary force would include sufficient heavy ordnance for trench blasting operations on an extensive scale; as its disembarkation and transport, together with millions of rounds of ammunition, would occasion serious delay. It seems probable that the invading infantry would be pushed forward to the limit of endurance, and then be dashed against our thin defensive line in a terrific drive. If this premise be correct what arm in the hands of intrenched defenders, or reserves, will be most effective upon the mass formation of the enemy, when rifles are empty, and the time too short to insert another clip?

At this juncture I believe 2,000 riot guns per mile would smother 20,000 bayonets. I once witnessed a test of one of these weapons, a short barrel cylinder bore automatic shot gun, capable of delivering 50 to 60 buck shot in an almost continuous cone of fire. It would be a tremendously effective weapon for close combat, and spare magazine cylinders could be devised, for quick loading. In the hands of cavalry trained to use it from the saddle it would be far superior to saber or lance in a melee.

Now as to the application of another weapon, let us assume that our forces are on the offensive, they are within a few feet of bayonet contact with their opponents, they are about to fight with a general purpose weapon—the bayonet—which, as Mr. Crossman aptly states, is inferior to the weapons of antiquity; under these conditions, both sides being armed with weapons of equal inefficiency, if an attacker succeeds in "putting out" a defender, he has done about all that may be reasonably expected of him. Furthermore we are credibly informed that among trench labyrinths, entanglements, etc., the bayonet, because of its unwieldiness, is often discarded for the knife or bludgeon, therebe retrograding to caveman efficiency.

If the individual infantryman in the attack, carried his rifle slung on his back and was provided with two heavy calibre automatic pistols, and had been trained in their use—a two-handed gun fighter—we might reasonably expect him to place five or six of his opponents hors de combat, as many a frontiersman could have done with his old forty-five Colts.

Katonah, N. Y. GEORGE HALL.

Trieste

To the Editor of the SCIENTIFIC AMERICAN:

As a constant reader of your highly esteemed publication and one who, through long years, has come to value the scientific importance of the articles published in the SCIENTIFIC AMERICAN, I have been following with a keen interest the series of letters written by your military expert in connection with the Strategic Moves of the War in Europe.

And while all along sincerely appreciating the earnest endeavor on the part of your war correspondent to do full justice to both sides, it was not without some regret that in reading through his letter of the 24th November (which has only now come to hand) I came upon a statement made perhaps inadvertently but which, as not being in accordance with the strict historical facts, I see myself prompted to correct so as to prevent any misconception on the part of your American readers as to the motives which have led Italy to enlist on the side of the Entente.

For if, with reference to the city of Trieste, your military expert at the conclusion of his letter, holds out the hope that "the Italians will . . . bring again under Italian rule their citizens who for years have been looking forward to the day when they should again be living under the flag of King Humbert (sic!) . . ." he appears to labor under the impression as though that portion of the Austrian Empire originally was Italian territory and that all the Italians are now driving at is merely to get back their own. Now any such statement made in good earnest would be a flagrant contortion of historical truth, and I must ask you to allow me to point out that Trieste never did form a portion of the Kingdom of Italy, as a simple reference to any standard encyclopædia will immediately corroborate.

Trieste (the Roman "Tergeste") was originally settled by various Latin colonists and from having formed a portion of the vast Roman Empire fell, in the course of time, under the sway of the Habsburgs, and has continued to constitute an indivisible portion of the Habsburg Monarchy from the year 1382 onwards to this present hour, with the sole exception of two short intervals; namely, from 1797 to 1805 and from 1809 to 1814, when it was under *French* rule. But it *never was* under Italian predominance, and, please God, it *never shall* be.

Your war correspondent being a military gentleman and therefore not easily daunted, even by facts, I apprehend that he may come forward and tell me that *prior* to 1382 Trieste was held by the Venetians. This is, of course, not denied, but to my mind this would as little justify any present claims made by Italy, as if Spain were suddenly to reclaim Florida or the Netherlands, Manhattan Island.

It is also true that the majority of the inhabitants of Trieste, as of all the Austrian Coast Land, consider the Italian language as their mother-tongue: this, however, has absolutely no bearing upon the question, but merely confirms, what I have already pointed out, that this section of Europe was settled by colonists coming from the opposite shores of the Adriatic and this long before the present Kingdom of Italy was ever dreamt of. In fact, if similarity of speech were to decide the point under discussion, then with equal justice France might to-day lay claim to the Province of Quebec and the Kaiser be entitled to call on Uncle Sam to immediately yield up—Milwaukee to the German Empire.

I shall be glad if you will give publicity to this letter for the sake of historical truth, and thanking you in anticipation for any courtesy shown, I am,

ARTHUR LINDENSTEAD.

1. Karlsplatz 3, Vienna, Austria.

Paper as Fuel

To the Editor of the SCIENTIFIC AMERICAN:

I notice in a paragraph on page 10 of the January 22d issue some news of the paper fuel now used in Italy. It is somewhat incorrect and vague. To begin with, the rolls of newspapers, after being cut into small cylinders, are boiled for about 10 minutes in a solution of paraffin and naphtha which gives them their burning qualities.

They are only used by soldiers which have been on duty (sentinel, etc.), and have not been able to partake of their food with the rest, as the food reaches the trenches in a hot state and remains so for quite a while as it is carried in boxes similar to the fireless cookers.

The soldiers do not care for this paper fuel, as it makes a very sooty flame, and never use it in camp (that is, when they are enjoying their 15-day rest) because they don't need to then. The many committees that sprang up for the manufacturing of these "Scaldaranei," as they are called, are little by little quitting, having seen the little utility of their work.

CHARLES I. WHARTON.

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