

EUROPEAN ARMIES STRUGGLE FOR SUPREMACY IN MILITARY SIGNALING.

Devices That the Next War Will Bring Into Use.

In all European armies now great attention is being paid to the signal corps, and each nation every now and then vaults itself over the others with the announcement of the discovery of some new method of signaling, says the New York Press.

The really reliable systems of military signaling are few, and none of them is exactly new. In our own army the heliograph and the "wig-wag" system of flag signals are most relied upon. The captive balloon at Santiago was only a qualified success, but it has not diminished the ardor with which European powers are seeking to solve the balloon problem. The bravery and the efficient work of the signal service men in the war with Spain received high praise from all the foreign attaches and from our own Government, but Europe seems loath to take up our system of signaling. With every nation on the Continent of Europe military signaling is a military hobby, and each rides its own special hobby hard, and spends great amounts of money on it.

All over Europe experiments are going on constantly in military signaling. Every bright young officer and every crank regards the signal corps as the body which shall make his fame and fortune by utilizing his invention. And it would seem as if every King and Emperor and every field marshal lay awake nights to think up some new invention for that branch of the service.

No matter what branch of the service has to go short on funds in a European army, the signal corps gets what money it wants. That the signal service of an army is of the first importance is not to be denied, and our own corps will compare in efficiency with any in the world. But in Europe the corps is a fact.



WIGWAGGERS OF THE FRENCH PIONEERS.

The German Emperor is credited with having said the other day: "So important will be the part played by military telegraphy in the war of the future that the army having the most efficient system of signaling will hold a trump card which may be of most decisive influence on the conduct and success of the war."

Another German authority says: "Electric telegraphy, with and without wires, is a main branch of the service, and not only with the 'pioneers,' but with every troop, infantry, cavalry, artillery and railroaders. The German army, adhering to its principle of meeting the enemy on the latter's own territory, must needs possess greater alacrity in and better facilities for building electric telegraph lines than the French and Russians, the Austrians and Italians, who might be eager enough to keep war out of their own territory, but who are behind Germany in the rapidity of mobilization."

Neither the German nor the other European armies rely exclusively upon the electrical telegraph, which may fail for various reasons, the principal one being that the ordinary commercial lines, as well as the field lines established in their stead or for the

ments, thus robbing the commanding general of the means for communicating with his subordinate commanders.

The Germans, like other nations, rely largely upon optical methods of signaling. The favorite device of this kind in the German army is the semaphore, which is made more efficient by Redi's system of cones. The semaphore proper is quite an ancient device. It was first introduced by the French in 1794 for conveying intelligence from Paris to the armies on the frontier. As the illustration shows, the German army semaphore is



LIME LIGHT SIGNALS IN THE RUSSIAN ARMY.

similar to our railway signal poles and is worked by arms. There is also a telescope in the top which commands the mast at the next station. The mast can be inserted at any place. As to the cone, each one represents a number, 1, 2, 3 or 4. If 1 and 4 are down, that means 5, and similar additions are made with the other figures.

Signals can also be given without the cone by moving the arms horizontally against the body, or by placing them in any other position agreed upon.

At night lantern slides of various colors are placed in the ends of the cones.

Personally the Kaiser has more faith in the captive balloon than in any other optical means for telegraphing. The German captive balloon is furnished with means for photographing, and the parties in the car communicate with those on the ground by means of the telegraph or telephone. For telegraphing an instrument similar to the Morse apparatus, arranged in compact form, is used. The system is practically that used in this country.

For the signal corps of the German army the brightest men of each battalion and regiment are selected. They are thoroughly drilled in all the manoeuvres connected with the transportation, the erection and operating of the apparatuses. Each German signal station is manned by five privates, a non-commissioned officer and a lieutenant.

In the English army a similar number of signal men are employed with each company, squadron or cavalry and battery. The French employ eight instead of five men; the Russians think four men of each company sufficient for the service.

The French army employs as optical telegraph flags and lanterns. The flags are worked according to the naval code and Morse alphabet. French signalers are said to be able to execute 120 movements per minute. To signal the dot of the Morse alphabet the French hold up one flag. Two flags represent the dash of the Morse alphabet. After each letter there is a

the flag being held over the head of the signal man. If the telegram is finished the signal man repeats the last word three times. If the receiver doesn't understand the operator he raises a flag with his right hand to his head. Of course, flag signals can only be used in daytime.

At night the lantern is employed when search and flash lights are not available.

Signal lanterns are handled after the fashion of the flags, dots being marked by opening and shutting the slide respectively. A dash is marked by exposing the flame four times longer than in case of a dot. Thus dispatches of twenty words can be forwarded in a minute.

The Austrians follow the French method of signaling in all but the size and form of flags. To the standard colors of black, white, red, blue and yellow they add green. Green plays also a part in the Italian flag signals. The English largely employ the

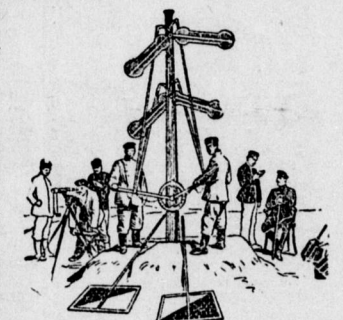


LIME LIGHT SIGNALS IN THE RUSSIAN ARMY.

heliograph. By means of the heliograph trained signal men can communicate with each other at a distance of fifty miles, whether they have a telescope or not. General Roberts once sent 1200 telegrams by heliograph in a single day. That was in Egypt, where the sun is very strong.

The English mode of signaling by flags differs from the French in minor details, which are kept secret. But this secrecy doesn't amount to much, considering that the Britishers, like other nations, use the Morse alphabet.

The Russians have adopted the French lantern system for distances from one to two miles. These lanterns are constructed on the lines of bicycle lamps, having a bulls-eye lens, and being fed by oil. On long distances the Russians use lime light apparatuses constructed as follows: There



SEMAPHORE APPARATUS IN USE IN THE PRUSSIAN ARMY.

are two tanks filled with oxygen and hydrogen respectively. The hydrogen is lit and, the oxygen gas mingling with it, produces a colorless flame. A lime block placed in the flame is rendered incandescent and its light, reflected from a mirror, is sent forward. The mirror is a powerful parabolic, resembling in shape the end of an egg. The concave portion is the reflector. This apparatus is so contrived that the beam light can be sent in all directions. The telegraphing is effected in the same way as the telegraphing with lanterns by the French.

All the apparatuses described are, if possible, set up on natural or artificial elevations. The signal officers must also be careful to find a suitable background for their operations, so that the signals from the other side can be readily interpreted. There is, however, one great drawback to all these systems. As all armies use as a basis for their systems the Morse alphabet, friend and enemy alike are capable of reading the messages sent out.

Moose and Caribou Cemeteries.

The Forest and Stream contains the following contribution from a Quebec correspondent concerning the habit moose and caribou have of going to the same place, season after season, to shed their antlers:

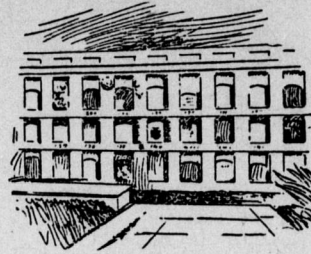
"The idea of the animals seeking a definite place for this purpose was quite new to me, but lately the efficient Superintendent of Game and Fisheries at Quebec, L. Z. Joncas, Esq., has told me that they do frequent such places, and that this habit was quite well known to him. He knew of many and mentioned several places where horns could almost certainly be found at any time. And not only do they go to shed their horns, but they go there to die. These places are known as cemeteries, and whole skeletons are occasionally found. This, however, would be rare, as the bones would usually be torn apart and scattered by bears and other carnivores.

"Mr. Joncas instanced the case of a gentleman going to a certain region for geological exploration, who asked for a permit to shoot a moose out of season in order to get a good pair of antlers. He was told that by diverging a little from his route he might reach a place where he would find plenty of them. He did so and secured five excellent specimens."

CEMETERIES IN CUBA.

There is a Question as to Who Now Controls Them.

In most of the cities and towns of Cuba there is a contest pending over the control of the cemeteries. During the Spanish regime the burial places were managed and controlled by the authorities of the church. The fees



OVENS FOR CORPSES IN A CUBAN CEMETERY.

from the cemeteries formed a considerable item in the revenues of each parish church. It cost all the way from seventy cents to \$70 to secure funeral services and a burial in these consecrated grounds. Plots of ground were assigned to such families as desired them on annual ground rent terms, or else "ovens" in the cemetery walls, capable of containing a corpse, were assigned upon an annual rental fee. If the rent was not paid within five days of the expiration of any year the corpse was dragged out and the remains, bones and ashes, thrown upon the "bone pile."

In the cemetery at Havana when the Americans took possession of the city the dump pile contained literally millions of bones, and thousands of whitened skulls. The American authorities have ordered these horrible stacks of bones buried, and this particular "sight" can no longer be seen in the island. Paupers have been buried with the slightest of earth covering.

Some of the cemeteries are distinguished by beautiful tombs and pieces of memorial statuary, imported from abroad and erected by the richer families of the communities. Under the new order of affairs the city governments are claiming the cemeteries as municipal property and the church authorities are tenaciously pressing their title to them as the property of the church. In Cienfuegos the commanding general has allowed the city authorities to take charge of the cemetery and reform the past abuses. General Brooke, Governor of the island, has notified both parties to the controversy—the church on the one hand and the city governments on the other—to submit their claims and proof in each case, and the decision will then be finally rendered as to which is the owner of the cemeteries and entitled to control them.

Volapuk is Vanishing.

In the later part of the seventies a German linguist, Johann Schleyer, was at work on a world language—an artificial language made out of the principal languages of the earth. In 1879 he issued a grammar and vocabulary of the language to which he gave the name of Volapuk. Volapuk consisted of 14,000 words, of which about 1300 are root words, a third being taken from the English, one-fourth from the Romance, a fifth from the German and the remainder from other languages. Its grammar was its chief advantage, being very simple and regular throughout, was designed to be a useful commercial language. Its introduction marked the beginning of a craze. Ten years after the language was presented to the public there were no less than twenty-three publications appearing in this tongue. In America a paper published exclusively in this new language was established and 5000 copies of "Handbook of Volapuk" were sold. But the



FATHER JOHANN SCHLEYER. (The inventor of Volapuk.)

fad is dying out rather rapidly, though the activity of some of its friends, especially in the Volapuk academy in Russia, show no signs of decreasing. The obstacles in the way of its becoming a world language are numerous. It is not at all adapted to those who speak the Polish and Hungarian languages for instance; its great defect was its inability to render the idiomatic expressions of the various living languages; while the idea of inducing a billion and a half of human beings to give up their mother tongue for an artificial language is hardly conceivable at this day.

The English Language in Cuba.

Here is an advertisement that appeared the other day in a Havana paper: "This is without doubt one of the factories of first class and of the most universal credit, and we affirm that no other has this credit with more merits, by the goodness intelligence and care employed in the preparation and perfectionment of his productions."—New York Tribune.

HINTS FOR HOUSEWIVES.

Excellent Floor Coverings.

Colonial rugs are an excellent floor covering. They are much more durable than the jute rugs of Japanese design and are less expensive than the Smyrna rug. They come in large carpet sizes, in small mats, hall strips, and the usual variety dimensions. The colorings are good, chiefly in negative tones, and the designs unobtrusive.

Ironing Embroidery.

The ironing process for all kinds of embroidery is much alike. The table should be covered with a thick, soft flannel and a very smooth sheet, to admit of the embroidery sinking in it, so as to preserve it from unsightly flattening. When there is much shrinking it is a good plan to begin by pinning the article by its edges to the ironing blanket wrong side up always. Cover all embroidered parts with a soft handkerchief and iron quickly from the centre outward, to press the wrinkles toward the edges, where they are most easily disposed of. When the article feels dry on the wrong side, if it is linen or cotton, turn it and iron the plain surface, taking care that the iron does not touch the embroidery to mark or spoil it.

The Value of Experience.

It is curious what discomforts households endure through the want of a trifle of common knowledge. A young matron, who has been a housekeeper for three years, has had during that time but one cook. Lately, on getting a new one, she was surprised to find that broiling steak when properly managed need not mean filling the house with the smell of burning fat. The new cook resorted to the simple and well-known expedient of opening the dampers of the range when she put the broiler on, sending, by this means, all the fumes up the chimney. "Just fancy," commented the astonished housekeeper, "that for three years, owing to my inexperience and my cook's ignorance, we have been almost daily choked out and smoked out!" It is happenings like this that make advocates of a course in domestic science at the women's colleges.—New York Post.

Care of the Refrigerator.

The ice box should not be entrusted to the care of the cook, but should be looked after by the housewife herself. Cooks are not supposed to be sufficiently well informed to know, for instance, that a deadly poison is engendered by putrefied milk, and a small quantity spilled in the ice box and merely wiped up may mean cholera morbus and perhaps death to some member of the family. Spoiled meats and vegetables breed the germs of typhoid and many other deadly diseases, and a careless or hurried servant is liable to overlook the timely removal of such offensive and dangerous agents. The flavor and healthfulness of milk and butter are destroyed by any bad odor of the ice box, and become utterly unfit for use. To keep the ice box in a sanitary condition it should be entirely emptied of its contents every day in warm weather and thoroughly cleansed. To cleanse, wash every portion of it, top, bottom, sides and shelves—being careful of the crevices—with hot water and soap; then wipe over quickly with strong soda water boiling hot. Wipe carefully, leave open to cool and air, replace ice and close up to get cold before rearranging contents. This should be done with judgment, putting in only such things as will not keep elsewhere, and reserving the lower shelf for milk and butter, the meats, fruits and odorless vegetables being put upon the upper shelf. The waste of ice from this method is small compared to the waste in health caused by the abuse of this household luxury.—New York Journal.

Recipes.

Cabbage Salad—Cut out the stalks and ribs from a tender, white cabbage and cut the thinnest leaves into narrow strips. Pour a mayonnaise dressing over the cabbage and serve.

Cream Puffs—Melt a half-cupful of hot water, and while boiling, beat in one cupful of flour, then remove from the fire and cool. When cold, stir in three unbeaten eggs, one at a time. Drop quickly on tins and bake twenty-five minutes in a moderate oven.

Lemon Syrup—Put two cupfuls of sugar, one-half cupful of water and a few thin parings of the outside of lemon peel into a saucepan on the fire; stir until the sugar is all dissolved, and then let it boil, without again touching it, for twelve minutes; add the juice of half a lemon.

Cucumber Sandwiches—Select a cucumber that is small and thin, that there may be no large seeds. Peel and slice as thinly as possible into ice water and let stand ten minutes. Drain very dry and place between thin slices of bread which have been spread with mayonnaise dressing.

Rice Slices—The day previous cook tender three-quarters of a tea-cupful of rice, in half milk and water (in all one pint), to which a half-teaspoonful of salt has been added. Put to cool in deep dish. In the morning slice and dip in egg and brown on the griddle. This makes a very nice breakfast dish in the spring.

Congeaed Pudding—Half box of gelatine soaked in half cupful of water. Scald quart of milk; in this put three-fourths of a cupful of sugar, one-third cake of chocolate broken up. Stir in gelatine. When chocolate and gelatine have dissolved set aside to cool. When slightly hard stir in a handful of raisins. Many gellatines will harden in warm weather without the use of ice. Place the bowl in a deep one of cold water. All these recipes have been tried and found decisions.

A TEMPERANCE COLUMN.

THE DRINK EVIL MADE MANIFEST IN MANY WAYS.

The Reasons Why in Spite of the Violent Opposition of the Hindus, the Rum Traffic Goes on Increasing in India—Club Life Under Ideal Conditions.

Dr. Francis E. Clark, President of the Christian Endeavor Union, in his "Travels in India," deals forcibly with the liquor problem in that country. It is a fact that hardly requires mentioning that after Christians with the Bible came to India, professing Christians with whisky, gin and rum followed, and despite the violent opposition of the Hindus, the most temperate people on earth, the traffic in rum has gone on increasing. Dr. Clark in this volume, gives one anecdote, as follows:

In a Hindoo club in the environs of Madras the conversation turned on the temperance question, and I was obliged to blurt in good earnest for the branch of the Aryan race which represented before my brothers of another branch. In the most perfect English—pronunciation, inflection, modulation, the best Bostonese—they complained pathetically and bitterly of the evils of intemperance which the Government had forced upon them.

"We Brahmans are teetotalers by religion, custom, birth and tradition," said one; "but the Government under which we live is forcing the liquor curses upon us against our will. Even when we struggle to free ourselves, it is no use. Our rulers think more of revenue than they do of our souls and bodies, and would send us all to perdition for the sake of raising the taxes more easily. We are trying to get a law passed to prohibit the sale of liquor in any district where three-fourths of the people of the district or city ward petition against it. But even that the officials will not allow, and our country will be cursed by liquor, we fear, in spite of all."

"But what happens," said I, "when a Brahman drinks intoxicating liquor?" "He is excommunicated at once," was the prompt reply, "if it is known. No Brahman drinks intoxicants except in a secret room, and that is a riotous proceeding."

"But do you mean to say that no liquors or wines are sold or drunk in your club?" I inquired again. "That is just what we mean," they replied. "No drop of liquor ever has been sold, or ever shall be sold, so long as we are in control. In fact, the question that is agitating the club now is whether bottled lemonade and soda-water shall be sold, and after a warm discussion it has been decided by a large majority in the negative. We do not wish to see a drop of liquor of any kind. Soda is associated with whisky and brandy, and we will not have the taint of a saloon about our club. Coffee and tea are good enough for us."

When I said good-by to my hospitable temperance hosts, they asked me to write a sentiment in their club book. My sentiment was, "I rejoice that there is one club on the face of the earth where liquor is not sold, one clubhouse that does not reek with the fumes of wine and tobacco."

The Making of a Man.

I want to tell you a true story to-day about a young man who became famous. Like many another poor fellow, he was a slave of the fearful habit of drink. This is the story:

One day when a rich and talented young lady of Richmond, Va., was out driving, she came upon a young man who lay beside the road, drunk. Moved by pity, she alighted from her carriage and placed her handkerchief over the young man's face, then continued her ride.

Some days later the young man called to see her, and said, "I am ashamed to look you in the face. I am the man you so kindly cared for the other day. I found your name on the handkerchief, and have come to thank you for your kindness. I have signed the pledge. With my hand on my mother's Bible, I have sworn, God being my helper, that I will never drink another drop of intoxicating liquor."

He kept his word. He was a natural genius. He was a young man of rare talents, and it was not long before he became widely known as a brilliant writer. His name was William Wirt. He became the Attorney-General of the United States, and was once nominated for the Presidency.

This little act gave to America one of her greatest lawyers.—Christian Inquirer.

A Significant Fact.

What a measure of significant meaning lies in the fact of all so often a times of emergency and peril, as in the case of riots and other public disturbances, one of the first acts of the authorities is to order the closing of all the saloons. This has been done repeatedly in the mining regions in recent years without riotous proceedings were on foot, and a similar measure has been adopted at various times by our military commanders in Cuban cities. But if the saloon fills such a necessary place in the life of the world as some would have us believe, if it is, on the whole, an institution that ought to be licensed and tolerated generally, why should its influence be so feared and dreaded in times of public peril? If it has an inherent and legitimate place in the natural order of things, why should its operations be suspended at any time or anywhere? If the saloon works any good in times of peace, why not in times of war? We pause for a reply.

The Secret Drinker.

The secret drinker is no doubt injured in the same way as others, and his foolish efforts to conceal this act intensifies the injury, which after a time breaks out in some unexpected form, ending fatally. The sudden, unexpected death of persons previously supposed to be well, has in many cases revealed the fact of secret spirit drinking of many years' duration, with destruction of vitality and general desecration. Life insurance companies are often aware of this fact, and appeal for help, but it is exceedingly difficult to convict or prove secret drinking in a man with a large insurance, and more difficult after death to bring out this fact. The law in these cases will seldom allow presumptive evidence; it must be direct and positive of the use of spirits. Unmistakable insanity is present in some cases, seen in the usual cunning and wise calculation to procure profits and conceal its effects.—Christian Work.

Notes of the Crusade.

The saloon bird may be known by its nest and nestlings.

It is reported that more than 2000 saloons have been established in Cuba since the close of the war.

Tolstoy, we are told, is a teetotaler and a vegetarian. He never takes tea, coffee, butter, eggs, milk, cheese or sugar.

There were 79,955 convictions of men and 30,784 convictions of women for drunkenness in England and Wales last year.

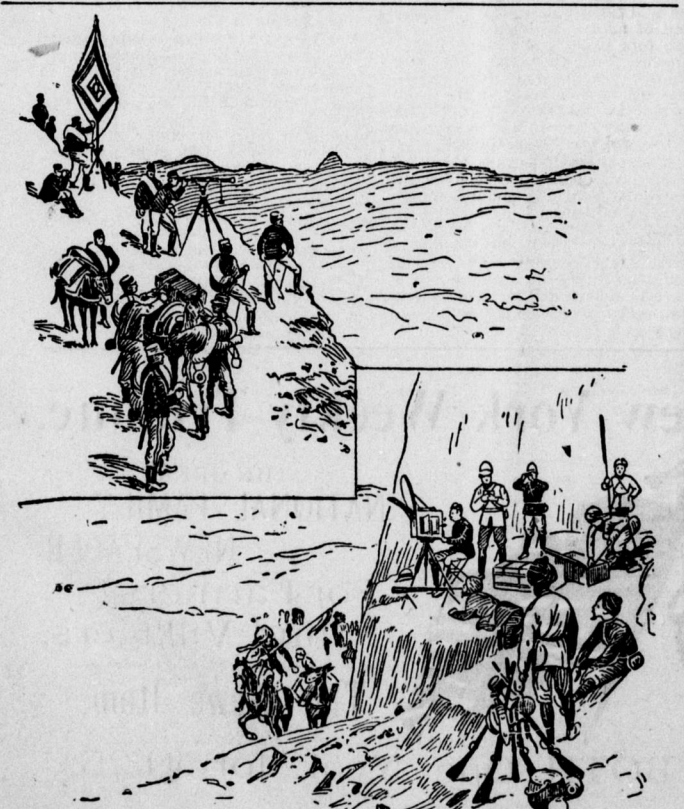
The German Association Against the Abuse of Spirituous Drinks has issued a circular to the students of Germany asking that the compulsion in the corps and vereins to drink beer be done away with.

The principles of teetotalism appear to be making way steadily in Scotland, notwithstanding the enormous waste of expenditure which still goes on in intoxicating drinks among the working classes.

The woman who does not understand the art of making over her last year's bonnet should never marry a drunkard to reform him.

Frances E. Willard made herself popular by doing unpopular things, and she made unpopular things popular because she did them.

It has been judicially decided in Georgia that saloons may not legally open their doors after the polls are closed on election day.



THE UPPER PICTURE REPRESENTS FLAG SIGNALING BY AUSTRIAN MOUNTAIN ARTILLERY. THE LOWER PICTURE REPRESENTS THE BRITISH ARMY IN INDIA USING THE HELIOGRAPH.

purpose of supplementing them, may be destroyed by the enemy or the ele-

short pause, after each word a longer pause, the latter being accentuated by