

MARCHING TROOPS

Length of a Day's Tramp Depends on the Methods Used.

A HARD WAY AND AN EASY WAY

If the Load the Soldier Carries is Properly Adjusted It Lessens the Amount of Energy He Has to Expend and Increases His Staying Powers.

There are two things, and two things only, which determine the length of a day's march for a soldier. The first is the amount of actual labor or mechanical work done while marching, the second is the degree of even distribution of this labor among the chief muscles used in performing labor. Now labor, or work, is simply the product of the force overcome and the distance through which it is overcome. The forces to be overcome are by no means confined to the weight of the man and his pack. Many other forces are called into play in the course of a day's march.

To illustrate, suppose the marcher has to carry a five pound weight on the end of a five foot stick. Suppose he places this stick across his shoulder with four feet behind him and one foot in front. By the simple exercise of his hand he multiplies the weight of his load by four, he has to pull down, continually, with a force of twenty pounds, and the shoulder must continually push up with a force of twenty five pounds, all on account of that five pound load which is carried on the end of the stick.

Another way in which energy may be wasted is somewhat more subtle, and perhaps a bit harder to understand, but of equal or greater importance. It lies in the principle that work has to be done whenever a mass of any kind is changed in its motion. It takes more energy to start a street car, for instance, than to run it at uniform speed. It takes more energy to make a speed a little faster than to maintain it at the last speed—that is, whenever a body is given an acceleration a new force has to be used. Now, every time a soldier bolts up and down when walking, he has to start the weight of his body, and pack and gun upward and let them down again. To do this uses up more energy than simply to keep them moving up or down. In the one case only the pull of gravity has to be overcome. In the other the inertia of the soldier's head and body. And the faster this is done the more energy is used up per step. Hence it is that a slow walk can be maintained, not merely for a longer time than a fast one, but for a longer distance on a stretch.

Under the principle outlined above would come the loss of energy due to all swinging articles, such as bayonet scabbards, tin cups, tassels, etc. These have to be put in motion, then jerked back and stopped by bodily contact, then put in motion again. All this consumes energy, and work has to be done. Again, any weight on the breast of a soldier or a tight coat or shirt, has to be overcome every time he breathes. And the deeper his chest expansion the more work he has to do with his breast every time he takes a breath. This amounts to an enormous total during a day's march. A loose coat and underclothes will cause him to travel with less expenditure of energy. It must be remembered that this is a natural energy used up, taken from the store of energy available to march with.

Besides the up and down motion of a soldier while marching, he sways from side to side. Every article he is carrying and his own body are thus started and stopped in this swaying direction also. Thus energy is used up. Now the upper part of his body sways further than does the lower part, so if the pack there must be the heavier part of it should be placed just as low down on the trunk as is convenient or comfortable. The heavier articles should also go as close to the back as possible, so as not to increase the leverage on the straps holding the pack to the body.

To sum up then: The gun should be carried with its center of gravity just a wee bit behind the shoulder, so as to balance the weight of the hand and forearm which keep it steady. It is the usual practice, he it said, the pack should be as compact as possible, close fitting to the back, the heavy articles being packed in the lowest available space, no swinging articles should be allowed, not even tassels, the coat across the breast should be loose fitting, and should also be underclothes, a slow gait should be used, as small a rise and fall as possible of the body should be indulged in and as short a sway as possible. To the above may be added that the shoes should not have stiff soles, for every time the sole of a shoe is bent energy is used up.

To decrease the rise and fall of the body in walking the old Indian walk, used by some surveyors is useful. It consists in slightly crooking the forward knee as the foot is shoved forward on to the front foot.—Philadelphia Press.

Lithium a Soft Metal. Lithium is a silver white, very soft metal, which forms the oxide or some other salt on exposure to the air and which decomposes water, forming the hydroxide of lithium. For these reasons metallic lithium does not occur in nature. Compounds are called lithium carbonate, lithium phosphate, lithium silicate, etc. The chemical products derived from lithium minerals have found application in military affairs.

Heaven takes care that no man cures happiness by crime.—Alfred.

A CABINET LADY.

Mrs. Lansing, Wife of the Secretary of State, Is a Favorite.

SMITH COLLEGE GRADUATE.

As the Daughter of General John W. Foster, Former Secretary of State, Mrs. Lansing is a Native and Originator of the "Dry Luncheon."

When her father, General John W. Foster, was secretary of state back in the Harrison administration Mrs. Lansing received the early training that now makes her one of the most popular cabinet ladies at the capital.

Mrs. Lansing, then Eleanor Foster, was just making her bow in society



MRS. ROBERT LANSING.

having been graduated from Smith college. Her interest in her mother's duties was sufficient to give her an experience which she is now able to turn to practical advantage.

She is a good conversationalist, quick at repartee and somewhat of a wit. Furthermore, Mrs. Lansing is the youngest woman upon whom the duty of leading the cabinet's social affairs has fallen in many years.

Mrs. Lansing was married to Mr. Lansing in 1880 in the home of her father on I street Washington, where the Fosters lived for many years. The Lansing wedding was attended by a notable gathering, including President Harrison and family, Vice President Morton and his family and other important officials and diplomats.

Mr. Lansing took his bride to a new home in Watertown, N. Y. where they have always lived except for the time spent in Washington.

Recently Mrs. Lansing made a unique affair of a "dry luncheon" given to prominent Washingtonians at which all courses were some form of dried fruits and vegetables that the government is advocating so strongly as food stuffs for the country.

MAKE A "HUSSIF."

Just How to Equip a Sewing Kit For the Sailor Boys.

The Navy League has issued an appeal to women of the country to make 4500 "hussifs" for the marines training for France. They may be turned in to local sections of the Navy League.

"Hussif" is the marines' way of saying "hussies." It means a sewing kit.

The sewing kit wanted by the Navy League is made of cotton khaki, sewed with blue thread, the machine corpus and form 5000. The kit is thirteen inches long and seven and a half inches wide. It has five pockets, three and a half inches deep by two and a half inches wide. A top flap folds over the pockets and covers the contents of the kit. A velveteen twenty inch long bag, sewed on the back of the center pocket, fits the kit. A pair of blunt pointed scissors four inches long. No needle, a thumb as assortment of safety pins, cards holding heavy black and white thread and two safety pins, string with khaki buttons comprise the contents of the kit.

Beef Tea. Perhaps the most frequently advised invalid dish is beef tea, because it stimulates the weakened digestive organs. It is simple to make if one is careful and accurate in its preparation. Take a pound of round steak from which every particle of fat has been removed, cut it into small pieces and put it in a glass jar with a screw top lid. Place jar in a vessel of cold water and allow this to come to a boil slowly. Then simmer for five or six hours. If one has a fireless cooker place jar in aluminum steamer filled with cold water, and after this has been brought to boil gradually set it in cooker with hot plate, disk or radiator. After five or six hours an amber colored sparkling tea will have formed above the meat. The latter may be made into a paste, mixed with a little mustard and onion juice and provide a delicious sandwich filling for the healthy members of the family.

PATRIOTIC MODES.

What War Has Done to Modify Fall Styles For Women.

The government needs all the dark blue and olive drab woolen material it can gather together, and therefore it stands to reason that women shouldn't try to make these colors fashionable at the present moment. There seems no immediate prospect of their doing so. The smartest color today is brown in every possible shade and tone.

Woman's patriotism may have some thing to do with her increasing independence in the matter of clothes. She no longer submits to a complete change in cut and line every six months. It is a fact undeniable that she has demanded plainer and more comfortable clothes—not that Paris has told her to wear this sort; not that the war has put the pall of somberness upon her soul. Her clothes are not somber, nor sad, nor plain. They are simply sensible, and that they will be from now on—or the signs of the times are to be distrusted. This does not mean, as some cynics would have you believe, that woman's clothes will not be beautiful. It means that she refuses absolutely to be a party to any frivolousness deliberately planned by some remote person with an eye only to his own bank account.

The fad for knitting fell upon the country with the advent of the war, and we took it lightly enough to provide ephemeral crocheted bags to hold the summer's sweeter allowances. But now we are looking at the craze more seriously, and bags are being done to match the more elaborate costumes. If knitting must be indulged in at all, times, then certainly it must have its proper setting at all times.

There are knitting bags of the most expensive of materials. A black satin one has a medallion of blue Chinese embroidery applied conspicuously on its side. One of black and gold brocade has its rings wound with gold and silver. A silk one is made from a Polaris blue and white. There are also talismanic ones of velvet and down, and some with bright silver and gold tops for knitting needles, and for their pointed ends and for holding the yarn and for the accessories of knitting.

MILITARY DASH.

The Kind of a Hat That Will Prove a Good Thing.

The French are offering a variety of hats modeled after the ones worn by our soldiers.



THE "BOOKIE"

have such an adaptation in knitted velvet, with a big brass button and a buckle substitute for the army band and emblem. Schoolgirls will adopt this idea.

BEAUTY HINTS.

How to Take Care of Your Complexion After Motoring.

Either hot or cold water applied to the complexion directly after a long automobile ride may do harm to the skin. And water need not be expected to take out the grime that hours of the facing wind and dust have driven into the pores. A vigorous scrubbing at the journey's end will only make the complexion burning sensitive for hours thereafter. Prefer the hot water bath for an hour and apply, when you come in from your ride, some good cold cream, preferably if thickly over the face, around the ears and on the neck. Then rub it off with a soft cloth and powder lightly with talcum. The cool, fresh feeling will be very different from the stuff hot sensation following a soap and water scrubbing. Before starting out on a motor trip protect the complexion by rubbing in a little vanishing or greaseless cream. A harmless lotion for the purpose may be made at home, using an ounce of precipitated chalk, an ounce of glycerin and about a cupful of water. Shake thoroughly before using.

To Pick Up Broken Glass.

To pick up broken glass, which may be in very small pieces, wet a piece of absorbent cotton. Even the tiniest bits of glass will adhere to wet cotton. The cotton may then be put in the fire and there is no danger of getting particles of glass in your hands.

Packing Overshoes For Travel.

The best way to pack rubber overshoes when traveling is to put them on a pair of shoes. They will then take up practically no space and will not be crushed out of shape.

A Story of The Sea

By DONALD CHAMBERLIN

Jim Mulford and I were engineers on a tramp steamer. One morning when I was sitting in the engine room waiting to relieve him he told me this story:

In 1892 while in the Java sea, having quarreled with my captain, I left the ship at Borneo. I found an Englishman who wanted to take a tug to Hongkong and agreed to go with him, we two being the sole crew. The tug proved to be a tub, and we soon found something the matter with the connections between the firebox and boiler. We lay to, put out the fires, then cleaned out the firebox, which it was necessary to enter.

While I was hunting for the trouble with a lighted candle the Englishman was keeping watch on deck. Presently he called for me to come up and showed me a suspicious looking craft on the starboard quarter. She didn't appear to be a tug, set low in the water and appeared to have no special purpose. "She's a pirate," he said.

"Nonsense," I replied. "There are no pirates nowadays." "Don't you believe it. These waters are full of them. They're not the best thing they used to be. They're robbers and murderers in a small way, but they're pirates all the same."

While we were talking the craft veered and came toward us. "What could we do? There was no fire in the box, and if there were we couldn't make more than six knots an hour, while the pirates, if they were such, could make ten or twelve. Of course we were nothing of a prize, but there was no expectation that we would escape with our lives anyway. We cast a wistful glance at one of the Annam islands, not more than five miles away on the port side.

"I'll tell you what we'll do," I said. "We can't swim ashore, but we'll make believe we've tried. There's a chance for us here. We can get into the firebox, and if they don't happen to open the door they won't know we're about. What do you say?"

"One chance in a thousand, but we'll take it. There's nothing else to do." Well, we waited till we were satisfied there was murder aboard the coming craft, then went down, set into the firebox and pulled the door to. The hatch came down with a click.

Then for the first time I remembered there was no means of opening the door from within and we must meet death in one of two forms.

It wasn't long before we heard voices, then a bump, then the sound of people jumping on to the deck. That was a perfect label of a boat, that neither of us understood. Then I heard a quick step coming down, and in another minute the furnace door was thrown open.

Instinctively we crouched on either side of the opening. After a hasty glance the door was closed with a bang. It had been opened to see if the fire was out. I had counted on not being discovered. I had supposed that if they opened the door they would surely see us.

The jamming on deck was kept by and I was sure a promise of a lot of dark skinned devils were debating what to do. Presently two voices rose above the rest in hot dispute, and there was a pistol shot. After that one of the two voices was alone heard, and I made up my mind that the leader had asserted his authority and would settle the matter to suit himself. Some one went down into the hold, and in a moment I heard the banging of an anchor. The tug was being scuttled. The man below came upstairs, the foot steps above grew less frequent, they ceased altogether. The pirates had departed and left us to sink slowly to the bottom.

There was one chance. Perhaps the latch on the firebox door hadn't fallen. I gave the door a push, but it didn't budge. That settled the matter. We were fastened in, and within an hour all would be over. I can't conceive of taking out the grime that hours of the facing wind and dust have driven into the pores. A vigorous scrubbing at the journey's end will only make the complexion burning sensitive for hours thereafter.

Prefer the hot water bath for an hour and apply, when you come in from your ride, some good cold cream, preferably if thickly over the face, around the ears and on the neck. Then rub it off with a soft cloth and powder lightly with talcum. The cool, fresh feeling will be very different from the stuff hot sensation following a soap and water scrubbing. Before starting out on a motor trip protect the complexion by rubbing in a little vanishing or greaseless cream. A harmless lotion for the purpose may be made at home, using an ounce of precipitated chalk, an ounce of glycerin and about a cupful of water. Shake thoroughly before using.

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Life of the Wasps. There isn't a male wasp in existence when winter ends. Late in the preceding fall the wasps mate. The coming cold weather kills every worker and male, while Mrs. Wasp hies herself to a convenient place and hibernates, ready to come forth in the spring and lay eggs to replenish the race.

Queer.

"There is something queer about that man."

"Why?"

"He was hurt in an automobile accident, and he actually admitted that it was his own fault."—Detroit Free Press.

Not Encouraging.

"She seems to look upon my proposal as a sort of flapjack."

"How so?"

"Says she'll turn it over in her mind."—Kansas City Journal.

OUR LIBERTY BELL.

A Victim of Old Age Disease and Its Triple Meltings.

Metals, just like people, are subject to the wearing effects of time. And they also have diseases that destroy their vitality. A combination of both is responsible for the great crack in the famous Liberty bell, which recently has shown a tendency to spread.

The bell was made in England by one Thomas A. Lester and shipped to Philadelphia in 1752. When tested with a hammer it cracked at the first stroke. The metal was recast and 10 per cent of copper added. This addition did not have good effects, seeming to spoil the bell's tone. So it was remelted a second time and tin put in with the copper to restore the sound.

Although details are somewhat hazy, it is certain that facilities in the colonies for handling such a quantity of metal were not very good. The bell weighed about 2000 pounds, and it is estimated that twenty to twenty-five of the largest crucibles in America were required for the purpose.

At all events, the bell was finally cast a third time and accepted. But it did not cool evenly and was immediately subject to shrinkage strain. These strains had about the same effect as a piece of cloth were gripped in a person's two hands and torn down the middle. This pressure ultimately caused the big crack which is such a familiar characteristic of the bell and which now promises to become even larger.

Another point against the bell was the triple meltings. Metal loses something of its vitality every time that it goes through the crucible. Nothing that undergoes the "making over" process is quite as good as before, and the Liberty bell had been made and remelted three times before it pealed forth the message of freedom—Los Angeles Times.

DIET FOR NEPHRITIS.

Proper Food For Those Afflicted With Inflamed Kidneys.

In nephritis or inflammation of the kidneys diet is a very important part of the treatment. The diet is planned to reduce the tax on the kidney to the lowest terms. Beverages and fluid foods are limited, no salt is added to food, certain vegetables which contain much salt are avoided and meat is cut out entirely.

Dr. Arthur F. Chase, professor of medicine, and Dr. Anton R. Rose, associate in pathological chemistry in the New York Post Graduate Medical School and hospital, give in the Journal of the American Medical Association a study of diet for nephritic sufferers.

The general plan of the dietary is as follows: "A warm cooked cereal, generally farinaceous served with milk, is given for breakfast. This is sometimes replaced by oatmeal or a baked banana, and toast and a citrus fruit are occasionally added.

The noon meal consists of a plain soup made from milk, flour and butter, given mainly to supply an agreeable hot dish, though it is also utilized as a medium for introducing variety by adding celery, asparagus or spinach, a main dish consisting of baked potato, now and then replaced by a baked half ripe banana and steamed rice; a liberal portion of green vegetable and a lettuce salad with oil dressing, flavored with lemon or vinegar.

The evening meal is composed of such articles as ripe bananas, rice pudding, cornstarch blanc-mange, steamed fruit with baked bananas and steamed rice. Milk and cocoa in limited quantities are served as beverage."

From this general outline it is not difficult to construct twenty different menus that will contain great variety.

Significant Shakes.

As the thimble of a dyslex person fold beneath the fingers, so the handwriting begins to disintegrate when the intellectual faculties and physical vigor are on the wane. Observations of this kind are possible, for there is no outward sign for each separate nerve degeneration. The use of drugs and stimulants can be easily discovered, for each one of these positions has its particular quiver or irregularity.—Industrial Management.

Photographs on War Plans.

In certain conditions of flight it is often hard for an aviator to use a pencil and paper. To obviate this difficulty the military airplane now frequently carries a photograph, with a speaking tube running to the mouth of the observer, so that by talking into the machine at any time during the flight he can record his observations, and still have his hands free for his field glass or his sketching pencil.—London Tit-Bits.

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FOR YOUNG FOLKS

Sleepy Time Story About a Very Disagreeable Fairy.

AN OLD WOMAN AND HER WAND

What Happened to a Handsome Young Prince Who Plucked a Flower in the Forest—Insect Guardians of a Tree. Breaking the Fairy Spell.

I think, said Uncle Ben to Little Ned, and Polly Ann, that I will tell you the legend of

THE HAZEL TREE.

Once upon a time there were a king and a queen named Heron and his wife had a little son, whom they decided to call Hazel. The king sent out invitations to all the good fairies to attend the christening, because they thought that each of them would give to the baby a different gift. One fairy, who was called Spite, was not invited, because they thought that she might harm him.

On the great day Spite came also. After all the good fairies had bestowed their gifts Spite stepped up to Hazel and prophesied that a misfortune would come upon him when he was eighteen years of age.

All went well until Hazel's eighteenth birthday, when he went out for a walk in a forest. After he had been walking for some time he saw a beautiful blue flower. He stooped down to pick it, but it turned into a little evil looking old woman. Hazel tried to run away, but he stumbled. When he arose the old woman, who was the fairy Spite, waved her wand over him. He felt his feet sink deeper and deeper into the earth. He became very tall, and branches with leaves began to grow out of his head, arms and shoulders. He became the hazel tree.

As the prince did not return, his parents set out with several servants to search the forest. But they never found their son. One day a woodcutter tried to chop down the tree, but a swarm of wasps settled on him and nearly stung him to death.

Several years had passed, and Juliana's kingdom had been invaded by his enemies, and he, with Queen Helena and their daughter, Mary, had been taken prisoner. One day in every year the fairies lose their power, and it was on this particular day that Juliana's enemies decided to burn Helena and Mary together.

As Spite could have no power over the hazel tree this day, it was that very tree that the cruel soldiers cut down and chopped into pieces, where they placed, with some straw, where the two women were to be burned.

After they had bound them together and placed the fagots and straw around them they set fire to it, but soon as this was done there was an explosion, and Prince Hazel rose out of the mist. Then all the fagots turned into soldiers. They unbound Helena and Mary, who were unharmed. Later the enemies were driven out of the land, and all lived happily ever after.

Names of the Planets.

Mr. Elison Hawkes in a little book about the stars tells how you can easily remember the names of the planets in the proper order, beginning with the one that is nearest to the sun. He has made a sentence the words of which begin with the same letters as the names of the planets in this order: **M**ercury, **V**enus, **E**arth, **M**ars, **J**upiter, **S**aturn, **U**ranus, **N**eptune.

Across the Bay.

Nautical scouts become fairly proficient boatmen, because much of their training is aboard ship or in plying the oar on the small craft that join the

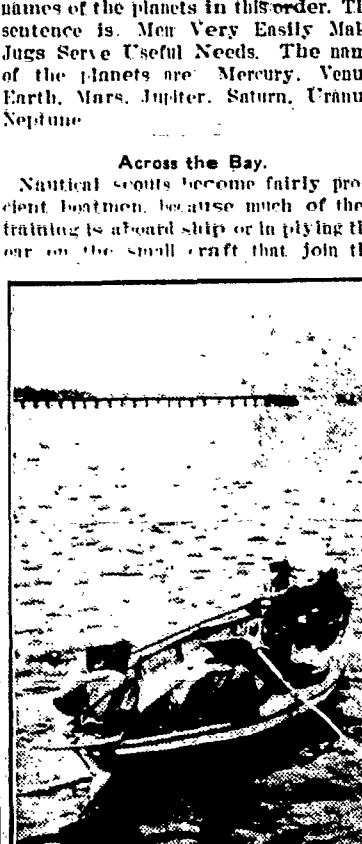


Photo by American Press Association

ROWING THE BOAT.

shore with the vessel anchored in deep water. Rowing is said by prominent athletes to be one of the most healthful of all the sports. Certainly it affords great pleasure to the nautical scouts. Boys who have been on the water the past summer show the beneficial effects of life on the ocean wave.

The Baby.

A baby does a lot of things Big people cannot do. He puts his toes between his teeth As well as in his shoe.