SELF HELPS for the NEW SOLDIER

By a United States Army Officer

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THE PLATOON.

In the preceding articles on the school of the company, the platoon has purposely been left out of consideration and the attention confined to the squad and company. The reason was that the principles upon which platoon movements are executed are based on those of the squad and company; for the platoon, consisting of from two to four squads, is simply a company on a reduced scale, or a squad on an enlarged scale, and is handled, generally speaking, accordingly. Moreover, when the new soldier, after drill in the school of the squad, is first placed in the school of the company, he is taught the application of his squad movements in company formation, and this supplies the natural connection between squad and company evolutions.

The platoon, as has been said before, is to the company what the company is to the battalion. In a war-strength company there are four platoons, and in either a peace or war strength battalion there are four companies. It is therefore apparent that such movements as "Company right (left)," which are for the purpose of throwing a column of companies into line of the battalion, are simulated with "Platoons right (left)," by turning the platoons on a fixed pivot into a line of the company.

As pointed out in connection with "Company right (left)," the movement is the same in principle as "Squad right (left)"; but since a platoon consists of two, three or four squads (we shall assume hereafter that the platoon is at the war strength of four squads, or 32 men), in such points as the rules vary between squad and company "right," the platoon follows the rules for the company.

The reason for the subdivision of the company into four platoons, instead of two, as formerly, is that modern battle conditions have demonstrated that from twenty to thirty rifles are as many as can be effectively controlled by one leader. The platoon is therefore the fire unit, as we shall see when we take up extended-order drill for the company.

The platoons are commanded as follows: The platoon on the right of the line, by the first lieutenant; the platoon at the left of the line, by the second lieutenant; the platoon at right center, by the first sergeant, and the platoon at left center, by the sergeant next in rank.

Each platoon has a sergeant for guide, and the file closers are distributed according to their posts behind the line of the company. The musicians march as file closers with the first platoon.

The platoons are numbered consecutively from right to left, and these designations do not change. Since the platoon is the fire unit, its usefulness is most apparent in extended order; but it is also frequently employed in marches, on the parade ground, or in the armory. In parades through the streets of a city a company front of 64 men would generally be impossible; also, a company front of 32, or two platoons, is frequently too wide. The column of platoons formation, therefore, of a war strength company would give a front 16 men wide, and this would accommodate itself to streets which were too narrow for the two-platoon front.

Nevertheless, in garrison or ceremonies, the strength of platoons may, if desirable, exceed four squads. That is, under such circumstances, the company might be divided into two platoons of eight squads each.

PLATOON COMMANDS.

When the company is in line, to form columns of platoons, the command is, "Platoons right (left)." This is executed by each platoon as in the school of the company.

The right flank men in the front rank of each platoon face to the right in marching and mark time. The other front rank men oblique to the right, place themselves abreast of the pivot men, and mark time. In the rear rank, the third man from the right in each platoon (followed in column by the second and first) moves straight to the front until in the rear of his front rank man. Then all three face to the right in marching and mark time. The remaining men of the rear rank move straight to the front for four paces, oblique to the right, place themselves abreast of the third man, cover their file leaders and mark time.

Before executing this movement with platoons, the captain makes it a point to see that the guides on the flank toward which the movement is to turn are covering—that is, are in a straight row, so that the pivot men, whose positions are governed by those of the guides, will also be in a straight row, which will bring the platoons into a precise column. This is effected by previously announcing the guide to that flank.

Following the command, "Platoons right (left), MARCH," the concluding command is to the company as a whole—"Forward, MARCH," or "Company, HALT."

Being in columns of platoons, to change direction, the command is, "Column right (left), MARCH." At the preparatory command, the leader of the first platoon turns to the right on a moving pivot; then its leader commands, "Forward, MARCH," at the completion of the turn. Rear platoons march squarely up to the turning point of the leading platoon and turn at the command of their leaders.

When a company is in a column of squads, and it is desired to form a line of platoons, the command "Platoons, column right (left)" is given. This is executed by each platoon as already described for the company. The leading squad of each platoon executes a right turn, and four parallel columns of squads advance in line of platoons.

When the company is in line, to form line of platoons, the command may be either, "Squads right (left), platoons, column right (left), MARCH," or "Platoons right (left) by squads, MARCH." The first command is explained by reference to the preceding paragraph, while the second is executed by each platoon separately as "Right (left) by squads" in the school of the company.

Being in column of platoons, to form the company line on the right or left, the command is as follows: "On right (left) into line, MARCH." . . . "Company, HALT!" At the preparatory command, the leader of the first platoon gives "right turn." At "March," the platoon turns to the right on a moving pivot. The command "Halt" is given when the leading platoon has advanced the desired distance. At the "Halt" its leader commands "Right dress." The other platoons march exactly as though they were squads when this order is given to the company in column of squads.

"Platoons, right (left) front into line" is executed as described by squads in the school of the company. The dress for "Platoons, right front into line," would be on the left squad of the left platoon.

EXTENDED ORDER.

The purpose of the close order drill through which we have just been put with the company is threefold: In the first place, it confers the benefits cited at the beginning of this series, namely, discipline and uniformity of movement. In the second place, by pleasing the eye with the movements, it not only teaches with concrete example the fundamentals of military precision, but contributes an important moral element known as esprit de corps. A company which is in the height of drilling or marching together has a vastly better spirit than one which, however well trained as individuals, has been assembled but a short time. The third benefit is a practical or mechanical expression of the second. This is "teamwork."

Teamwork is so important to troops in combat that the infantry drill regulations select this athletic term in preference to the whole military glossary to explain the combination of elements required by a unit for successful action. Teamwork is indispensable, and teamwork can only be learned, to begin with, in close order, just as teamwork with a football squad can be properly learned only by signal practice. But well-developed teamwork is the more indispensable with deployed units because the comparatively wide fronts increase the difficulties of control. This brings us to the consideration of extended order.

Because of the increased difficulties of control, noncommissioned officers are given great latitude in the execution of extended order work. We have already seen, in the article devoted to the corporal, how that individual's importance increased the moment the squad was deployed in line of skirmishers. The success of the whole, in fact, in the word of the regulations, "depends largely upon how well each subordinate co-ordinates his work with the general plan."

In further illumination of this statement, officers and men are instructed that "it is far better to do any intelligent thing consistent with the aggressive execution of the general plan than to search hesitatingly for the ideal. This is the true rule of conduct for subordinates—who are required to act upon their own initiative."

But subordinates are immediately warned that independence must not become license. The subordinate officer should at all times have the general plan of action in mind and cause his own acts to conform thereto. The test is for him to ask himself whether he is reasonably sure that his superior in the given circumstances would issue the identical order. If the order he receives is obviously based upon an incorrect view of the situation, is impossible of execution, or has become impracticable because of changes which have occurred since its promulgation, the subordinate is compelled to use his own judgment and take the responsibility upon himself, if he is unable first to communicate the situation to his superiors.

These instructions are directed to officers primarily, but they are relatively true of the responsibility which devolves upon the squad or platoon leader, and for this reason have their places in the consideration of the company when deployed in line of skirmishers.

Are We Living Too Fast?

Life in the great centers of the United States has gained such impetus that it makes few pauses in its rush toward its own destruction. It hurries us along in its current of excitement, battering us against jagged rocks that jut across it from all angles, poisoning us, polluting our blood with emotions that eat up red corpuscles, and draining our sensibilities of their natural responsiveness.

Waste of physical energy is scarcely worse than waste of mental forces. Life ceases to be enjoyable that moment in which we leave off wondering at it, when it no longer surprises us; when it no longer has unexplored vistas, unexpected romances and adventures, when our jaded palates are calloused beyond the possibility of anticipation.—Exchange

NEW SMUT REMEDY SIMPLE AND SURE

Concentrated Formaldehyde, M. A. C. Specialist Says, Effectively Protects Wheat From Disease.

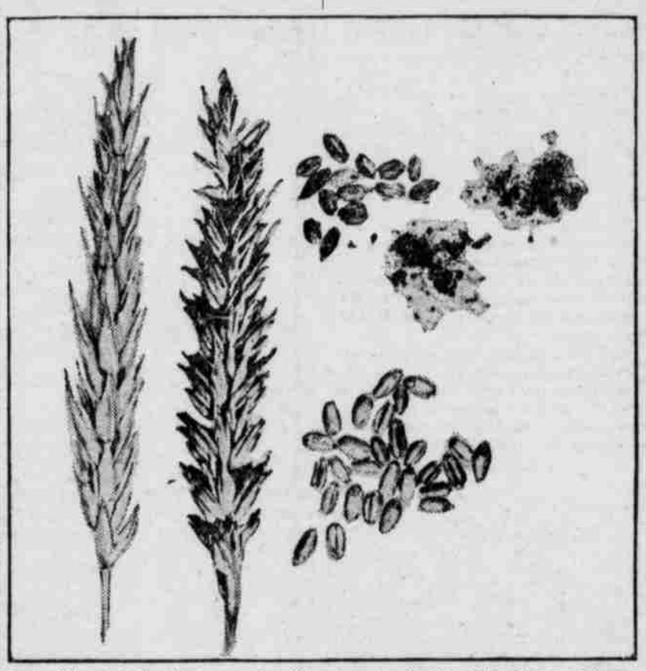
ITEM OF COST IS SLIGHT

Spores Can Be Killed at Expense of Less Than Two Cents Per Bushel of Grain Sprayed.

By DR. G. H. COONS,
Plant Pathologist, Michigan Agricultural College.

East Lansing, Mich.—Practically all Michigan farmers who have ever grown wheat know the meaning and the smell of stinking smut, though their intimacy with it varies with different communities. Kalamazoo county affords an object lesson. In and around Richland, in this county, where there is a community of agricultural live wires, the losses this season from smut were slight, but not a dozen miles away is another group of growers whose grain, when threshed, gave off smut clouds worse than the soot from a factory chimney. The smut losses in the latter instance ran as high as 25 per cent and more of the crop.

Why the difference in the amount of smut damage in two communities?



Clean Wheat at the Left, Smutted Wheat on the Right. This Sort of Thing Cost Michigan $1,500,000 This Year. Formaldehyde Prevents It.

Did Richland farmers possess immune seed? Not at all. The smut had simply been killed through treatment of the seed before planting. In the other district no such precautions were observed.

In Michigan as a whole the losses from smut this season ran all the way from 5 to 60 per cent of the crop in the different districts. If we place the average loss in the state at five per cent of the crop, and it was all of that, it means that smut destroyed at least 700,000 bushels of grain, or enough wheat, if placed in bushel sacks, and arranged in a row, to extend all the way from Kalamazoo to Detroit, or from Saginaw to Muskegon. The financial loss to farmers was at least $1,500,000. This sort of thing, particularly when the world is begging for every possible kernel of wheat produced, should be guarded against.

Smut isn't an unavoidable trouble. There was a time when treating seed for smut was somewhat of a tiresome and laborious process, but it is no longer so. Heretofore most farmers who have been disinfecting their seed wheat used the dilute formaldehyde method, but now there is a way of making the job even simpler. This new smut remedy is known as the "concentrated formaldehyde method," first devised by Cornell university.

With this treatment the formaldehyde is used just as it comes from the drug store, that is, without being diluted. The seed wheat is simply spread in a long heap on the barn floor. Then one man sprays the grain with the concentrated formaldehyde while another shovels it over, turning it from one pile into another just as you would cement. The spraying can be done with a small hand atomizer of pint or quart size. One pint of formaldehyde is used for 50 bushels of grain. Where smaller quantities than 50 bushels are planted, correspondingly smaller amounts of formaldehyde are used—a half pint for 25 bushels, or a quarter of a pint for ten bushels.

After the grain is thoroughly sprayed, it should be covered with blankets or canvas for four hours—no longer—and then spread out thinly for an airing. After this the grain is ready for planting.

Last fall, under the direction of County Agent Smith, a number of farmers in Kent county tried out the new method. They secured perfect stands and perfect smut control at a cost of not more than two cents a bushel.

Of course the man who doesn't care to use the concentrated formaldehyde remedy can still do the job in the old way by using dilute of formaldehyde. The difference between the new way and the old is simply this—in one case the pure, concentrated formaldehyde is used just as it comes from the drug store; in the old method the diluted solution is employed. By using the concentrated formaldehyde all the bother of splashing around in a lot of water and waiting for the grain to dry afterwards is done away with. It is the formaldehyde that kills the smut in both methods.

If there is any doubt at all about the way to apply either treatment, the thing to do is to get in touch with your county agent, or write direct to the Michigan Agricultural college. But regardless of whether you prefer the new method or the old, one of them should be used. It is the duty of every farmer now to insure his wheat crop. No matter how clean the seed may be, and no matter how highly recommended it comes from the seedman, treatment is the only sure means of safety.

NO LETUP IN EDUCATION

Colleges Will Open as Usual, Despite War and Its Handicaps.

East Lansing, Mich.—Despite the announcement of radical changes made by a number of Eastern educational institutions under the spell of the new conditions brought on by the war, Michigan will, during the coming year, continue its educational work as usual. At least this is the announcement coming from the Michigan Agricultural college, and there are signs that other of the state's schools of higher learning will follow M. A. C.'s lead.

Some of the seaboard schools will open on October 1, or even later in the fall, and close earlier in the spring, but at M. A. C. the term will begin on September 24 in all four divisions of the college—engineering, agricultural, home economics and veterinary medicine.

"There is at present no reason why our schools should begin making changes," said President Kedzie in a recent public statement. "If it becomes necessary, decisions to shorten courses and terms can be arrived at over night and put into effect almost as quickly. We propose to proceed as we would normally until it becomes apparent that changes must be made."

Recent inquiries made by M. A. C. indicate that practically all M. A. C. students who weren't called out for military duty will be continued at the college, so that boys desiring to acquire military training along with their regular work in agricultural studies will be given an opportunity to do so.

IMPROVED POULTRY HOUSE

Right Interior Arrangements Help Welfare of Chickens.

By C. H. BURGESS,
Dept. of Poultry Husbandry, Michigan Agricultural College.

East Lansing, Mich.—Attention to the interior arrangement of poultry houses is not out of place, and mention of a few points which we have found to be of practical value in our work, therefore, may be worth while:

Drinking fountains or vessels should be at least 20 inches above the floor. This will prevent the water from becoming contaminated with straw and litter. If a mash hopper is used—plans for a good one may be had from the Michigan Agricultural college on application—it should be hung on the wall and should be so constructed that the fowls cannot scratch or scatter the feed.

Allow one nest to every six or seven birds. For Leghorns give them nests 10 by 10 inches in size, and larger birds 12 by 12 inches. Place roosts from 24 inches to 30 inches above the floor and allow an 8-inch space per hen. No dropping board need be used. Box the front of the roosting quarters in such a way that the litter cannot be scratched into the droppings. Whitewash the interior of the house once a year and use kerosene oil upon the roosts once or twice a month during the summer to prevent mites.

MEN HAVE QUEER AVERSIONS

Cases Have Been Related of Some Who Would Faint at the Mere Sight of Roses.

A case is related of a monk who would faint on seeing a rose and who never quitted his cell at the monastery while that flower was blooming. Another authority tells us of how Vincent, the great painter, would swoon upon going suddenly into a room where roses were blooming, says London Tit-Bits.

Valtaid tells us of an army officer who was frequently thrown into violent convulsions by coming in contact with the little flower known as the pink, while the same authority also tells of the case of a lady who, if present when linseed was being boiled for any purpose, would be seized with violent fits of coughing, swelling of the face, and partial loss of reason for the ensuing 24 hours.

Writing of these peculiar antipathies and aversions, Montague remarks that he has known men of undoubted courage who would much rather face a shower of cannon balls than look at an apple. In Zimmermann's writings there is an account of a lady who could not bear to touch either silk or satin, and would almost faint if by accident she should happen to touch the velvety skin of a peach.

Would Conserve Garbage.

The latest campaign to be launched by the department of agriculture is one for the conservation of garbage. Conservation campaigns have been cutting down the contents of the garbage pail as far as possible, but there will always be a source of fats and fertilizer material, both of which are sorely needed all over the world. The department hopes to induce every city of any size to install a reduction plant to recover these materials from the garbage. An average load of garbage contains 2 per cent of grease and 20 per cent of tankage, which latter is a valuable fertilizer. The food conservation campaign, however, is showing its results in a reduction of the amount of fatty material in the garbage.

Gas Fires New Gun.

In a new gun the propelling agent is compressed carbon dioxide. The carbon dioxide is contained in a small case that fits into the gunstock, and that holds enough gas for from 100 to 800 shots. Pulling the trigger releases the requisite amount of the gas to propel the shot from the barrel. With small shot the gun has a range of about 80 feet; with bullets a range of about 130 feet.

Her Testimonial.

A bride who was deserted a fortnight after her marriage has exhibited a letter from her husband, explaining that he married her to escape the army and has now joined the army to escape her.—Providence Journal.

Growth of United States.

During the 50 years from 1850 to 1900, the United States increased in area from 2,997,119 square miles to 3,026,789; in population, from 23,191,876 to 75,994,575; in farms and farm property, from $3,967,343,580 to $30,430,901,164; in manufacturing establishments, from 123,025 to 207,514; in value of manufactured products, from $1,019,106,616 to $11,406,926,701; in number of depositors in savings banks from 251,364 to 6,107,033; in miles of railway operated from 9,021 to 194,262.

The Dog Forgot.

Victim—Confound your dog, madam! It's nearly bitten a piece out of my leg.

Owner (distressed)—I am truly sorry, sir. Naughty little Daphne! After all my efforts to make Wednesday your meatless day.—Punch.

Window Garden.

"Got a back yard?"

"Nope. I live in a flat."

"Doing your bit?"

"Yes. I'm raising a couple of onions in a tomato can."

DETROIT MARKETS.

CATTLE—Best Steers	$10.00	@10.50
Mixed Steers	7.50	@ 9.00
Light Butchers	7.00	@ 8.00
Best Cows	7.50	@ 8.00
Common Cows	5.50	@ 6.00
Best Heavy Bulls	7.50	@ 8.00
Stock Bulls	5.50	@ 6.00
CALVES—Best	15.50	@16.00
Common	8.00	@12.00
HOGS—Best	17.00	@17.50
Pigs	15.00	@16.00
SHEEP—Common	5.00	@ 7.00
Fair to good	7.00	@ 8.25
LAMBS—Best	15.00	@15.25
Light to common	11.00	@13.00
DRESSED CALVES	.19	@ .20
Fancy	.21	@ .22
LIVE POULTRY—(Lb.)		
Broilers	.27	@ .28
No. 1 Hens	.25	@ .26
Ducks	.20	@ .21
Spring Ducks	.23	@ .24
Geese	.16	@ .17
Spring Geese	.18	
Turkeys	.24	@ .25
CLOVER SEED	12.00	
TIMOTHY SEED	3.90	
WHEAT	2.10	@ 2.15
CORN	1.94	@ 1.95
OATS	.55	@ .57
RYE	1.75	
BEANS	7.25	
HAY—No. 1 Tim	16.50	@17.00
Light Mixed	15.50	@16.00
No. 1 Clover	13.00	@13.50
STRAW	9.50	@11.00
POTATOES—(Bu.)	1.75	
BUTTER—Creamery	.38	@ .40
EGGS	.35	@ .37

ACCOMMODATING QUALITIES OF CURRANT

Until one has become fully acquainted with this small but profitable fruit, by growing and marketing it each season, he will not discover the accommodating qualities it has.

The bush is unusually healthy. Borers bother occasionally, but the currant worm is the worst pest. That comes from a fly, and beginning down at the lower branches strips the whole bush of foliage. Spray with white hellebore in a paris green solution, touching the underside of the leaves.

The best thing about the currant is that there is no rush nor hurrying it off for market, for if it is kept in a cool place for four or five days no harm is done; that is, if the fruit has been carefully picked and handled.

It is nice work to neither mash, pinch or strip them from the stem, but that is the only way to make a sure thing from currant picking.

Put them at once in berry boxes. For private customers, pack in crates. For a distant market send in five or eight pound baskets.

Prices of good currants are apt to vary. Currants keep on bearing for years if the wood is cut away.

CURRANTS CONTINUE BEARING SUCH FRUIT FOR YEARS.

AVOID BIG LOSS TO MELONS IN TRANSIT

Sulphate-Starch Paste Has Been Found to Prevent Trouble Called Stem-End Rot.

(From the United States Department of Agriculture.)

The application of a copper sulphate-starch paste or bordeaux paste to the freshly cut stems of watermelons has been found to prevent the stem-end rot that has caused heavy losses to melons in transit in previous years.

This treatment was recommended in Farmers' Bulletin No. 821 recently issued, and has been demonstrated at loading stations by agents of the United States department of agriculture.

The treated melons have been practically free from stem-end rot, whereas shipments sent from infected districts without treatment have given much trouble. In one case, two cars arrived in a Northwestern city on the same day. One, untreated in a ventilated car, had 25 per cent of decay, while the other, which had been treated, although in an ordinary, unventilated box car, had only 2 per cent of decay.

Several large shippers are now insisting that this treatment be given all melons they buy, and it appears likely that the department's method of control will quickly come into general use. The results secured in Florida and south Georgia justify the adoption of the treatment in districts now shipping.

Detailed directions are to be found in Farmers' Bulletin No. 821, sent free upon application to the department of agriculture.

SUMMER CULTIVATION OF ORCHARD NEEDED

Three Methods That May Be Practiced Are Explained by Kansas College Expert.

Summer cultivation of the orchard is necessary if a profit is to be made, in the opinion of F. S. Merrill, assistant professor of horticulture in the Kansas State Agricultural college.

"Three methods may be practiced in the cultivation of an orchard," said Professor Merrill. "The first of these is the sod mulch system. This is practiced on bottom land or land high in fertility. Orchards on fertile land are likely to produce a heavy growth of wood, which prevents the formation of fruit buds. In order to overcome this a grass crop should be sowed in the orchard. The grass crop is mowed when necessary and allowed to remain on the ground.

"The second method, often used, consists of sowing a grass crop in the orchard and harvesting the hay. This system is injurious to the trees and reduces the size and value of the fruit.

"Where the topography and slope of the land will permit, clean cultivation is advisable. It kills the weeds and conserves the moisture. Orchards cultivated in this manner will produce larger fruit than under other systems of cultivation.

Clean cultivation will keep down insect pests by destroying their hibernating places and food supply. The buffalo tree hopper is less injurious in clean, cultivated orchards, because it removes their food supply."

PLAN FOR RENEWING WORN-OUT PASTURES

Sweet Clover Is Valuable Soil Renovator and Makes Excellent Forage for Stock.

(From the United States Department of Agriculture.)

"Grow sweet clover" is the answer for poor soil or worn-out pastures which no longer support live stock profitably, according to investigators of the United States department of agriculture, who have found that thousands of acres of sweet clover are furnishing annually abundant pasturage for all kinds of stock on soil where other crops made but little growth.

In many portions of the middle West sweet clover bids fair to solve serious pasturage problems, according to Farmers' Bulletin 820, "Sweet Clover: Utilization," just issued. Native pastures which no longer provided more than a scant living for a mature steer on four or five acres, when properly seeded to sweet clover, will produce sufficient forage to carry at least one animal to the acre throughout the season. Dairy cattle, horses, sheep and hogs all do well on sweet clover. Land which is too rough or too depleted for cultivation or permanent pastures which have become thin and weedy may be improved greatly by drilling in, after disking a few pounds of sweet clover seed per acre. Not only will the sweet clover add considerably to the quality and quantity of the pasturage, but the growth of the grasses will be improved by the addition of large quantities of humus and nitrogen to the soil.

Sweet clover has proved to be an excellent pasturage crop on many of the best farms in the North Central states. In this part of the country it is often seeded alone and pastured from the middle or the latter part of June until frost.

KEEP BEST ANIMALS FOR MEAT PURPOSES

Big Mistake to Send Breeding Stock to Butcher on Account of High-Priced Feed.

(By R. H. WILLIAMS, Animal Husbandman, Arizona Agricultural Experiment Station.)

Owing to the high price of feeds, scarcity of labor and the unusually high prices ruling for meat animals, there is a tendency to send some of the best breeding stock to the butcher. This is a big mistake, for it is certain that the best animals should be maintained. This is the time, however, to inspect the flocks, herds and studs and eliminate all inferior or ordinary individuals. On the other hand, stockmen would do well to maintain all their superior breeding stock for they are certain to be needed in the future. There is a growing tendency to decrease the number of livestock in the country. This portends meat shortage unless public-spirited stockmen or those gifted with long vision check the present movement. There is no doubt that many farmers will be discouraged with the live stock business and sell their animals outright. Something should be done to remind the farmers that all these animals are needed and the best should be retained for future use.