

mainland, to the south are the chains of large islands between Nanaimo and Victoria, (Gabriola, Galiano, Valdes and Salt Spring,) and the innumerable smaller ones, and in the distance the straits of Juan de Fuca, while to the West one looks over other mountains of the Vancouver Range. Thus Benson commands a view some two hundred miles long by a hundred miles wide, in an extremely picturesque country.

## THE HORSE.

### Wonderful War Horses.

It is wonderful how the horse will adapt itself to circumstances and work with almost human intelligence. Our English correspondent has sent us an interesting clipping which we reproduce in these columns.

If war has no other virtue, it cements the friendship of men and horses.

There are many English gunners—and if gunners, much more cavalrymen—whose greatest ambition is to bring a favorite horse or two safe through the war and home again, and they expect to succeed. In spite of the terrible waste of horses by sudden death and by disease, a notable number are as fit now as when they started on the campaign.

They came down from Mons in the retreat, unsaddled or unharnessed for innumerable hours, and capriciously fed; but they played a lively part in the advance to the Aisne, accompanied the British army in its rapid movement to Belgium, and are now in perfect condition and cleverer than any horse is supposed to be. They exhibit an intelligent vigor which is the daily admiration of their masters.

These old horses are as valuable as experienced soldiers. They have nothing to learn about war, and can teach any new driver a good deal.

For example, many of these animals know with mathematical exactness the proper interval of one gun from another. To swing the gun round at the due distance is now ingrained as an instinct and performed with the regularity of a ploughing horse when he turns at the headland of the field. If the driver, less skillful or wise in the art, attempts to bring one gun too near its neighbor, the horse takes the matter into his own hands with an Olympian disregard for bit or whip. They will not disobey the regulation for anyone. One may hope with the gunner, who has learnt and suffered and won with his horses, that they will one day walk with their quiet confidence into the seagoing horsebox and recross the Channel to the end of a peaceful life in British barracks. They would certainly never wish to retire from the army.

After a certain length and closeness of association between men and horses the distinction of genus tends to disappear. The experiences are too similar in many ways. The fodder comes up along with the food. It is as carefully selected and its distribution is as precisely arranged. When the men have leisure to shave the horses also are better groomed; and when the men have time to polish belt or buttons the harness becomes resplendent. It is said of some cavalry horses—and no doubt the artillery horse knows as much—that they welcome days of advance as surely as an old hunter sniffs the coming of a hunting morning.

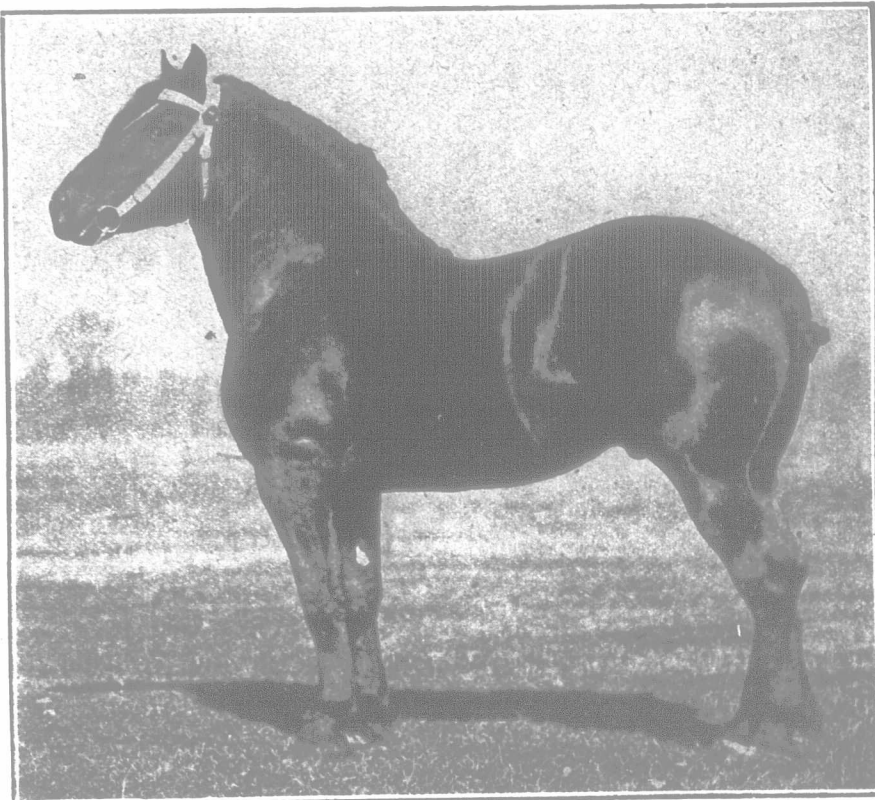
The whole organization of the daily life of the horses is singularly human. The system of base and clearing hospitals is at least as well and carefully done by the Veterinary Corps as by the work of the R. A. M. C. and the Red Cross, and the surgery has been wonderful. The old idea that a wounded horse is as good as a dead horse is now quite finally exploded. They recover both health and—may one say?—normal very readily. Some of the old stagers are almost as capable of telling the "vets." where to probe as of instructing young gunners in the geometries of gun emplacement. Of course most breakages are beyond remedy, but the cures among horses operated upon almost on the field of battle are amazing. However, the greatest admirer of the horse must confess to one failing which is not cured by experience in battle. The horse does not stand pain well. A great proportion of both cavalry and artillery horses have learnt to endure shell fire scornfully and without wincing. The pick of those wise old horses are not more affected by the explosion of a "Jack Johnson" in their neighborhood than by the grateful thunder of their own guns which they know to be controlled by their own dear gunners.

But the horse, especially the better-bred animal, is after all more highly strung than any domestic and most wild animals. There are things he cannot endure with patience. When he is struck by bullet or shrapnel or shell the unseemly injury usually fills him with a nameless terror, and his restraint is apt to vanish into sheer panic. Of course, horse differs from horse as man from man. Some are brave like the Turcos, if only they may move quickly. Others

have the courage of "cold blood," with which our Allies endow the British, and will scarcely cock an ear at a neighboring detonation which may be heard twenty miles off. But in bulk the horses that have lived through the terrors of the retreat and covered without failing the northern journey have learnt war only less intelligently than their masters. They are old campaigners, who increase in physical fitness with the march of hardships, and are not to be intimidated by common things.

On the whole the horses enjoy a better time than their masters. Some quite charming winter quarters have been built for them, and are being built, in the neighborhood of the British lines where they approach the Flemish and French boundaries. The people of the country are very good and generous on their behalf in supplying any gaps there may be in the commissariat; and in a comparatively static part of the campaign the work has not been heavy.

In the science of war as of peace every effort has been made to supplant the horse by mechanical power. The Germans have gone a long way in the endeavor. They can now trundle their guns behind tractors and even upon tractors through lanes and roads that much resemble fields. But ploughland defies them, and still the horses are needed at the end of the journey to swing the guns into place over the tith or among the trees, or into the queer corners where guns must now be put to avoid detection. The rejoicing of a British gunner—a real lover of his animals—at this victory of the horse over the motor in this department reminded me of the boast of a certain old countryman who was called in with his scythe to mow round the corners and tree trunks which defied the machines. "They can't do without me yet," he used to say.



Lenoir.

Champion Percheron stallion at the Guelph Winter Fair, 1914. Exhibited by Hodgkinson & Tisdale, Beaverton, Ont.

Unhappily one may not altogether rejoice with him. The horses are brave and clever and faithful, wonderfully docile in the art of war, admirable friends as always. But in spite of all that can be done for them they suffer immeasurably. They suffer only less than men suffer in this mad and cruel duel of destructive chemistry and mechanics against living flesh.

### Rations for Fattening Horses.

After the fall work is done and before the spring sales are consummated it is not a bad plan at all to add a couple of hundred pounds to the horse or horses intended for sale. The buyer is not wise to look very far for a thickly-fleshed horse unless he be well muscled on the limbs and other places which indicate that the fattening process has been going on while the animal was worked or exercised. However, the most highly-finished offerings are not hard for it is detrimental to successful fattening to allow the horse to move about to any appreciable extent. They should be kept quiet, comfortable and isolated from any influences of a disturbing nature. This is the feeder's business, and it remains with the ultimate purchaser of the animal to see that it is in shape to meet his requirements.

It is generally understood that it is safer to purchase any animal when in medium flesh rather than in a highly-fitted condition, for, under the

latter circumstances, defects will stand out more conspicuously. In spite of this generally appreciated axiom buyers will bid for flesh, and it has been demonstrated several times this season that it does not pay to offer unfitted animals at auction sales. Bidders will run up an animal which is slick and well-covered and allow a better animal with more desirable conformation, though poorly fleshed, to be knocked down at bargain prices. The sagacious seller will then prepare his offering to suit the buying public, and will not be prejudiced by what he knows the buyer should have.

Experiment stations in this country have not devoted as much time to investigation work with horses as with other lines of stock, yet some institutions have arrived at results, and practical men have invaded the experimental field much to their own advantage as well as to the profit of the people at large.

It is agreed that the horse should be kept very quiet, and in this connection single tie stalls have given better results than box stalls. As for the roughage clover hay is superior to timothy, especially when corn is an important part of the ration fed. Bran does not prove to be a desirable constant factor when fed in conjunction with clover, the combination being too laxative. A ration having a nutritive ratio made up of one part of protein to eight parts of carbohydrates and fats has proven most economical and profitable.

A few years ago the University of Illinois undertook some experimental work which included three groups of horses. The different groups received different rations made up as follows: Lot 1—corn, bran, oil meal, clover hay; lot 2—corn, oats, bran, oil meal, clover hay; lot 3—corn, oats, bran, oil meal, timothy hay. Results from this test prompted them to say, "From these results we must conclude that so far as gains are concerned a mixed grain ration of corn and oats is superior to a straight corn ration when fed in conjunction with clover hay; and clover hay is much more valuable than timothy hay when fed in conjunction with corn and oats."

In another experiment two groups of horses were put under test to ascertain the merits of exercise or quietness. Horses that were walked 2.8 miles daily for 84 days made an average daily gain of 2 pounds, while those not exercised gained 2.49 pounds per day. Heavy horses will often stock in the legs when not given exercise, but under such circumstances the run of a box stall and laxative foods will correct the trouble. At a time of high-priced feeding stuffs, such as we are experiencing at present, it is necessary to count the cost of all fodders. At time of writing, oats are quoted

at outside points at \$1.41 per cwt. At the same time corn is quoted at \$1.35 per cwt. wholesales. Oats are richer than corn in protein, while corn excels in carbohydrates to the extent of approximately 16 per cent. Along with clover hay it might be wise to purchase even a quantity of corn and substitute a portion of the oat allowance with that fattening food. One is not obliged to keep the percentage of protein so high with fattening animals as with dairy cattle, and it is much easier in consequence to compound a suitable ration. There is a "something" about oats, however, that is meant for horses, and no feeder should neglect its importance. Where corn is plentiful 12 parts of corn to four parts of oats along with clover hay is a suitable ration, but with timothy hay 1 part of oil meal should be added. Roots could be fed sparingly to good advantage.

On full feed horses weighing around 1,500 pounds will consume 18 to 20 pounds of grain and 12 to 14 pounds of hay per day. The custom is sometimes followed to give this in five feeds, but it is usually dispensed at three feeding periods. The hay is given in equal quantities night and morning. The animals receive water first thing in the morning. They are then given their grain, which is followed with hay. This is repeated at noon and in the evening, only at noon no hay is given.

Idleness without exercise is not conducive to strength and vigor, but where rounds are desired the method of quietness must be adopted.