

AGRICULTURAL.

The Song of the Mowing Machine.

I rattle among the long green grass,
I chatter amid the clover,
I wander away through the meadows fair—
The bluebird's my fellow-rover—
I play in and out 'mid apple trees,
Neath bowers of golden green,
Oh! there never was song so merry to hear
As the song of the mowing machine.

When the sun hangs low in the burning sky
And the birds are singing of morning,
The tall green grasses all tremble with fear
As they hear my musical warning.
Like conquering host on field of war,
I march through their ranks of green,
Oh! there never was song so merry to hear
As the song of the mowing machine.

I rattle among the long green grass,
I chatter amid the clover,
Lord of the harvest field am I,
The whole broad country over,
In orchard and meadow, on hillside fair
Wherever the grass waves green
You will hear my melodious rattle-ty-bang
The song of the mowing machine.

M. M. LEAVITT.

The Practical Side.

Many farmers have a great deal to say about advice being practical. Call their attention to something in an agricultural journal which, may be, you think is of real value, and often they will turn up their noses at it and say "It isn't practical." In consequence of so much use being made of this word one would naturally think that the general average of farmers are among the most practical men in the world. On the contrary, we believe, measured by good business standards, that no calling furnishes more unpractical men than farming.

Practical means doing things in the best manner and according to the best profit. To be "practical" calls for the putting in practice of sound theories and the use of the most intelligent methods. Is the practice of our Western farmers in wasting the fertility of the soil or in the breeding of their farm animals really and squarely practical?

Take the dairy farmers of any section of the country. Can we believe that the majority of them are governed by sound practical ideas concerning cows when the average yield of milk per cow is only 3,000 pounds a year? If a man is really practical will he not set to work in dead earnest to milk and feed a practical cow? Can men be called practical who have kept a herd of twenty or forty cows for years and yet have never taken pains to know by a simple test which cows were not paying their keep? Would a practical manufacturer allow himself to remain in very expensive ignorance for years concerning some machine, and never show energy sufficient to test it to see if it is not running him in debt? Think of a dairy farmer who pretends to do business for profit; who sneers at the agricultural papers because they are not practical, going along year after year with half the cows in his herd absolutely not paying for the food they eat at market prices. Men who talk so much about other men being practical should first establish clear, well defined standards of what is practical.

The fact is, what is practical with one man may not be with another. Every man gives to himself or to others, according to the size of his measure. Intelligent men put into practice intelligent methods, and they make money by them. Such methods would not be practical for men who don't understand their business well enough to execute them. But the fault is not in the methods but in the men. The method may be highly practical but the farmer, unable, either for lack of means or comprehension, to put it in practice. A good definition of the word practical is that which conduces to profit. If a course of action proves unprofitable through any fault of ours, then it is not practical. Except it may be once in a great while, we learn from it our own deficiencies. It is well to remember that it is never "practical" to measure modern agriculture by obsolete ideas.

The farms of to-day carry more or less machinery. As a rule it is rather poorly cared for. A good farmer who has a good idea about machinery carries with him constantly a strong advantage over his more careless neighbor. One of the most frequent difficulties in the working of power machinery is the accumulation of dirt and gum in the bearings and journals, caused by the use of fat oils for lubrication and infrequent cleansing. The *American Engineer* gives the following directions for cleansing, which are worth remembering.

"For each 1,000 parts by weight of water, take about ten or fifteen parts by weight of caustic soda or 100 parts ordinary soda. Let the solution boil and enter the parts to be cleansed; either boil them in this lye or let them steep in it for some time. All the dirt and old resin is completely dissolved thereby, and it remains only to rinse and dry the parts. The action of the lye is such that it enters into combination with the oil and forms soap, which is readily soluble in water. In order to prevent the hardening of the lubricant on the machinery parts, it is only necessary to add about one-third kerosene. An occasional lubrication with kerosene alone is to be recommended."

Never Sell Cowey Butter.

"I wonder," said a woman lately "if there is anybody from whom I can buy butter that does not taste of the stable? I have had butter from families of the highest reputation for neatness, but it is so cowey I can not use it."

"Ho! ho!" replied another, "you old butter-makers are too critical; you should have more charity. In all the tons on tons of butter you have made, did you never happen to have a mess that tasted of the stable?"

"Never," said she. "We did not make that kind; and there is no excuse for making it. But if we had made it we would not have sold it, and least of all to our neighbors."

We never undertook the impossible. In a dairy of fifty or more cows of course we had several milkers and were subject to frequent changes of men. Reasonable precautions were made to have everything as clean as practicable in the stables, and then the men were given to understand that if by accident anything unclean got into the milk they could report it and put the milk into the vat of skim-milk for feeding calves and swine, but under no circumstances must it go into the dairy-house, and every pail of milk was carefully inspected to know that none came in. Lenient, fair treatment made the men careful and faithful, and by that simple means we lost little milk and no butter.

"Now, about selling butter of quality," she continued, "almost the only case I re-

member will illustrate our method: A mess was over-churned (by horse power) during a very busy time in haying. We never made any better butter except that the texture or grain was injured. We might possibly have put it on our regular market without serious detriment to reputation, but preferred not to take the risk, for we were getting a good deal more than the general price for our butter. We accordingly consigned it, unbranded, to a commission house to be disposed of on its merits. We always sold our butter, to the very last lot we made, to one of the most careful and discriminating firms in the trade for retailing over their own counters; and we had only a single complaint. One lot was criticised as too highly colored, but when informed that it was naturally colored only we got from the firm a most graceful apology and appreciable compliment. We always acted upon the theory that selling unsatisfactory butter would injure us a good deal more than the purchaser, and we would rather have given it away than have the name of selling it. Now, how about this faulty butter I have just bought? I took it, without having seen it, on the strength of representation by the producer that it was good and nice. I presume their butter is generally good and frequently nice, but this one experience will suffice to set me against it, and I shall have to be very hard pressed before I venture to try it again."—O. S. Bliss.

Insect Friends and Enemies.

An entomologist in a recent bulletin says that it is not easy in the brief space of a newspaper article to give instructions which would enable a beginner to distinguish between the insects injurious to vegetation and those which are beneficial by destroying other insects, but we can give a few general rules. Those which resemble wasps and bees, with four wings (*Hymenoptera*), are nearly all beneficial in some way. A few exceptions, like the saw fly, are not plenty enough to do much damage. The small amount of injury done by sucking the juices of ripe fruit is more than overbalanced by the many favors they do the gardener. The butterflies and moths (*Lepidoptera*) are nearly all injurious to our plants, either in that form or in the caterpillar, which hatches from their eggs, and from which they are transformed. Diptera or common two-winged flies are nearly all pests, although one or two species, which resemble bees or wasps, excepting in the number of wings, live by destroying other insects. The cabbage, onion and turnip flies all resemble the house fly in form and somewhat in color. The beetles (*Coleoptera*) with stiff wing cases are about equally divided between the injurious and the beneficial in number of species. But the injurious are usually most abundant in number of individuals, and most of them, like the Colorado beetle, the striped squash beetle, the rose bug (which is not a bug at all, but a beetle), the curculio and other weevils, and the June beetle, from whose eggs come the white grub so troublesome in meadows, are sufficiently well-known to most of the farmers. Some of the ground beetles with small copper-colored dots, the spotted lady, and the brilliant colored tiger beetle are the farmer's friends, assisting in the destruction of other insects. The true bugs and lice (*Hemiptera* or half-winged) contain only a few species beneficial to the farmer, but like the beetles, those injurious to plants have made themselves well known, as squash bugs, chinch bug, plant lice, etc. If in any doubt about the character of a bug it is better to let it live, as it cannot be doing much injury, and may be one of those that lives upon other harmful insects. Crickets, grasshoppers, and locusts (*Orthoptera* or straight-winged) are all injurious, and when in great numbers can do much damage, though to the credit of the cricket, immortalized by Dickens, it seldom exists in sufficient numbers to prove a pest. Of the *Neuroptera* or lace wings all are beneficial, excepting the white ant, which sometimes becomes a pest in the greenhouse. The dragonfly or darning-needle is a determined foe to other insects.

Warm Water.

With butter at 20 cents per pound, skimmed milk at 25 cents per cwt., corn fodder at \$5.00 per ton and a cost of \$15 for warming water 120 days for 40 cows, the results at the Wisconsin experiment station show a profit of \$26.40 in 1889 and a loss of \$5.98 in 1890, leaving as an average for the two years \$10.21 on a herd of 40 cows.

ODDS AND ENDS.

Births exceed the deaths by three every minute.

Berlin, with 1,315,000 people, has only 26,800 dwellings.

A sewing machine works twelve times as fast as the hand.

Doctors say that the left leg is usually stronger than the right.

The people of the United States spent \$600,000,000 in tobacco in 1890.

There is a horse car line in Mexico which is seventy-two miles in length.

For stings or bites from any kind of insect apply dampened salt, bound tightly over the spot. It will relieve and usually cure quickly.

A Philadelphian, recently deceased, left \$10,000 to be used to keep a lamp perpetually burning in his memory on an Episcopal church altar.

An appliance has been patented by three Buchanan (Mich.) young men whereby the pneumatic tire on a bicycle is kept inflated by the weight of the rider.

At Munich there is a hospital which is entirely supported by the sale of old steel pen-nibs, collected from all parts of Germany. They are made into watch springs, knives and razors.

A mathematician has computed the movements of a rider's feet while operating a bicycle, and has demonstrated that it requires less exertion to travel fifteen miles on a bicycle than to walk three miles.

Boston's new temperance law is rather peculiar. It permits any man to get tight twice a year without punishment, but if he is arrested for drunkenness the third time his sentence is imprisonment for a year.

The Milan Museum has a remarkable clock, made entirely of bread-crumbs. A poor Italian workman made it. Every day he set aside a portion of his modest meal in order to carry out his curious project. The bread-crumbs are hardened by the addition of salt.

NOTES ON SCIENCE AND INDUSTRY.

At one of the locomotive manufacturing establishments in Philadelphia—the shops covering an area of 337 by 156 feet—there are in operation two immense travelling cranes worked by electricity, being the largest pair of cranes in the world, but one crane, that in the gun works at the arsenal in Washington, excelling either of these in power. Each of the cranes is twenty-eight feet span, and fitted with two trolleys capable respectively of lifting fifty tons, thus giving to each crane a power of 100 tons; the electric power is furnished by two 100-horse power generators, driven by Westinghouse compound engines. The shops turn out an average of 500 locomotives a year, and two men, by means of these cranes, can handle the entire output, the adjustment of the cranes being such that they can be raised or lowered at will so short a distance as a half an inch, and they can lift one engine completely over another. In the boiler and electric houses there are four smaller cranes, stationary, with a capacity of 6,000 pounds each, possessing the same character as to nice adjustment and ready response to the touch of wheel or lever as the more elaborate ones. This arrangement of wheels is simple—the lowest lowers, the highest lifts, and the central fixes.

A paper on the superior value of cork coverings for steam pipes and as a protection of water service pipes from frost has recently been published by a French engineer. According to this paper, one variety of these coverings which is found to be very efficient consists of pieces of cork, shaped to fit the different sizes of pipes, with radial joints, similar to the staves of a barrel, which are placed around the pipe and for the time bound to the pipe by strings. After the pipe so covered has been used with steam for some time and the cork been sufficiently dried, the crevices are filled in and the string replaced by wire—ribbons being also covered in the same manner—and after the covering is finally fixed, the pores and crevices are closed by a coat of paint or lime wash. In another arrangement, as proposed, rectangular blocks of cork, about one and a fourth inch wide, and varying in thickness from one-fourth of an inch for small pipes to five-eighths of an inch for pipes from four inches in diameter and upward, and cemented to strips of cloth by an India rubber solution, are used; the bands are lapped spirally around the pipes and elbows, and covered by another band of waterproofed canvas lapped in the same manner, so as to cover the joints of the cork bands, the whole being afterward covered by a thick coating of paint or tar.

The assertion is made by workers in ornamental wood that yellow pine, hard finished in oils, is the rival in beauty of appearance of any wood that grows, not excepting the costliest of the well-known hard species, it being susceptible of receiving and maintaining as high a degree of polish as any known wood, while, when impregnated with oil, it is well nigh indestructible. In such a condition it is found, in fact, to possess the valuable property of being impervious even to hot grease and other substances that leave an ineffaceable stain upon such a great variety of woods, including white pine, maple, &c. The yellow pine characterized by the valuable quality referred to is the long-leaf pine, or *pinus australis* in technical classification, and which grows so abundantly in parts of the South; and, as trees are found in this species having a curled grain somewhat similar to that of "curly maple," no other wood it is asserted, is capable of being fashioned into more beautiful work for cabinet purposes.

A short time ago a boiler was constructed in Manchester, Eng., with a view to testing the practice advised by some, in case of shortness of water being discovered, of turning on the feed water—a somewhat startling method of procedure according to some. In these tests the furnaces were bared of water by opening the blow-off cock and allowing the water to escape while good bright fires were burning, which could not fail to over-heat the plates. When sufficiently heated to melt disks of lead, tin, and zinc, the feed was suddenly turned on through special pipes, which injected the water directly on to the heated plates, but in no case, as is often assumed, was this followed by a sudden generation of steam at an excessive pressure, but in one case actually a reduction of pressure took place. The one mishap which took place proved, it seems, to have been due to the feed not having been turned on soon enough. Again, the hogging upward of the flue tubes, which was accurately ascertained by means of rods, was in some cases found to be as much as one-half inch. The inadvisability of hurrying fires when raising steam was demonstrated as beyond question.

A machine for cutting shingles has been devised. As described, the cedar bolts are steamed five hours, then run through a trimmer, after which they go to the cutting knife, a heavy knife running 170 strokes a minute, the shingles being cut off with ease at this rate, coming from the machine almost too rapidly, in fact, to be counted. They are hot and steaming and cut smooth, and are afterward treated the same as other shingles. It is claimed that the steaming drives out all sap and prevents all liability of warpings, there is also no sawdust, hence no waste. The highest cut made in a ten hours' run is stated at ninety-six thousand.

Two Strong Men.

The muscular power of Augustus the Strong, Elector of Saxony, was wonderful, and many are the tales told of his strength. On one occasion he unexpectedly met his match in the person of a blacksmith.

He entered a blacksmith's shop to have his horse shod. To show his attendants how strong he was, picking up several horse-shoes, he broke one after the other, asking the blacksmith whether he had no better. When it came to paying the bill the Elector Augustus threw a silver dollar on the anvil. It was a very thick coin. The blacksmith took it up and with his fingers broke it in halves, saying, "Pardon me; but I have given you a good horse-shoe, and I want a good coin in return." Another silver dollar was given him, but he broke that and five or six others, when the humiliated prince put an end to the performance by giving the blacksmith a louis d'or (worth about \$5) and pacified him by saying, "The dollars were probably made of bad metal but this gold piece, I hope, is good."

Measures for the relief of the distressed districts of Russia include the building of canals, barracks, railroads, the paving of streets and planting of forests.

HUNTED BY WILD DOGS.

Stirring Adventure of Two Young Hunters in Newfoundland.

THEIR HAIRBREADTH ESCAPES.

A Run Through the Snow With a Pack of Sixty Famed Brutes Close at Their Heels—Saved By Cool Nerves.

One March morning two boys, Arthur and Fred Harley, the one about sixteen and the other 18 years old, were spending a few weeks in a settlement on the northeast coast of Newfoundland, shooting the northern bird known as the great salt water duck. The coast, about twenty miles or so away from the settlement, was said to be haunted by wild dogs; indeed, these animals had sometimes actually dashed through the village in their search for food, frightening the inhabitants, old and young. Once they seized a little boy not far from his home and tore him to pieces, so that every one living there was in mortal dread of the vicious creatures.

The two boys set out early in the morning, their intention being to shoot seals in a cove about ten miles distant. They took with them each a heavy gun, a pair of snow-shoes, a pair of skates and enough provisions for the day. Their course lay across a stretch of bleak barrens covered with snow, over which one could not pass without snow-shoes, as the crust was thin and brittle; and as a long chain of ponds and lakes stretched along in the same direction for twenty or thirty miles, they brought along their skates.

It was a clear, crisp morning, and two hours' travel, now on snow-shoes, and then upon skates, brought them to the cove. There were several seals bobbing up and down in the clear water and they shot three or four, but the wind having veered so as to blow off land, they could not obtain their prizes, and so left the place and set out across Island Head, about five miles further on because they knew that in the shelter of this cape there was a bight where they could always find bottle-nose divers and big salt water duck.

IN A PREDICAMENT.

They used their snow-shoes for only a short part of this tramp as long stretches of smooth, steel-blue ice lay across almost to the cove. As they drew near the place they took off their skates, hung them across their shoulders and approached noiselessly, for the ducks are very wary. A thin screen of scrub fir and spruce hid their approach, and through this they crept on hands and knees to get full view of the bight; but instead of seeing clusters of sea birds as they expected in the calm water between the ice and shore the whole beach seemed to be moving, and Arthur whispered to his younger brother, while clutching his arm:—

"The wild dogs! I wonder if they have seen us?" But very clearly they had, for the off wind had carried their scent to the keen noses of the pack, and immediately the whole herd turned in the direction of the boys, their noses thrust in the air sniffing. There were probably about sixty of them, all long, lean, brutes, with shaggy hair, sharp noses, rather short ears and shy, skulking eyes. For a few seconds they ran back and forth on the beach, their heads now turned down, but constantly keeping their eyes upon Arthur and Fred, who began to retreat back into the bushes.

As they neared this shelter they saw about a dozen of the dogs, some of which were large, and evidently the leaders, make up the bank, followed by the rest in a compact body. Then from all their throats came sharp, crying noises, somewhat like the barking of a dog and the yelping of a wolf combined; the tumult rose and fell, the leaders commencing the cry and all the rest following.

It was very plain that the pack was famishing with hunger, for the snow in all the region for a hundred square miles about was very deep, and the reindeer, hares, and rabbits had gone further south, where they could find food. The brothers made sure their guns were ready, and Arthur, laying his hands on Fred's shoulder, said:—

"Now, these brutes are going to attack us; be careful about your aim. Fire when I fire, for we must not let them get too close. We can get four from our two charges; you fire at the right and I will take the left. If we can keep them scared off till we can get up to the ice we can easily escape on our skates." They both turned, stood, and faced the oncoming pack, but as soon as the ugly animals saw them they stopped coming directly forward and spread out to the right and to the left, then moved onward with the intention of surrounding them.

Seeing their move, the boys ran as fast as they could up the slope, but they had no sooner started than the most unearthly cries arose everywhere in the air from the pursuing herd, and every dog started in pursuit at a long, loping gallop. They soon got ahead of the fugitives, and there the two stood in the snow surrounded by creeping, half-crouching beasts, who seemed afraid to rush upon them directly, but tried to approach them by stealth, with their lolling tongues and hungry eyes, whenever their backs were turned.

SURROUNDED BY THE DOGS.

"They are now within range, Fred," said Arthur; "you take these two big fellows there," pointing in front, "I will take two on this side." Both at once presented; taking sure aim; then there was a simultaneous report, then two other shots, one a little after the other, and four of the mongrels sprawled upon the snow. One of them only was dead, for the other three rose, and with piercing howls and yelps went backward to the rear of the pursuing party.

The boys immediately threw out the old cartridges and put fresh ones into their double-barreled guns, then dashed onward, for the circle of dogs had widened as the beasts took fright at the report of the guns. They succeeded during the panic in making a headway of a couple of hundred yards and broke through the circle; then they wondered why their pursuers all crowded together about the body of their dead comrade, but they soon saw that the famishing creatures had begun to devour it. Only eight or ten of them, however, could feast at the same time, and after much yelping, biting and jumping, those who were not engaged in eating again started off in pursuit.

They are growing bolder and bolder, not galloping away so far ahead as they did at first, but coming directly for the two young hunters, and they approached them somewhat in the manner of a fawning tame dog who is afraid to approach his master; walk-

ing in a crouching manner with fore legs thrust far out, and muzzle down. They never looked steadily at their intended victims, but thrust their heads forward to side, as if trying to reach them unawares.

The cartridges in the boys' guns were loaded with seal shot, and would carry effectively sixty yards, so as soon as the more daring ones came within range four more shots rang out over the snow. This time two of the animals lay dead, and one of the others went hobbling and howling away, Fred having missed with one of his barrels. The whole hungry tribe at once formed in two divisions around their dead comrades, and, as before, began feasting. Then the boys discovered, with great consternation, that they had no more shells loaded with seal shot, so they were obliged to put in those having small duck shot, which would be almost useless fired into the tough hides of these animals.

While loading they ran with the speed of deer and they had now reached the top of the slope; here the snow was soft and deep, so they lost a couple of minutes in binding their snow shoes to their feet. When they were ready to start about two-thirds of the pack had again surrounded them and began to close upon them from every point. They were in terror of letting the dogs get too near to them and yet did not want to fire with their small shot at too far a range, so they waited until five or six of their assailants had reached within twenty or thirty paces, then crack, crack, crack, went the guns again.

A couple of the dogs fell, but got to their feet again almost instantly, and limped off from the attack, but the noise of the guns created temporary confusion, and enabled the boys while loading afresh to get out of the deadly circle and on a couple of hundred yards more toward the ice. The whole herd once again joined in full chase, and just as Arthur and Fred got to the edge of the lake and were about putting on their skates, the snarling crowd were within fifteen paces. They fired full into the faces of the leaders, emptying four barrels; then hastily finished fastening their skates; but this time the enraged mongrels did not hesitate long after the shots, but bounded forward and reached the edge of the blue ice just as the boys were ready to strike off.

Arthur was the first on the ice, but as Fred was sliding down the bank a huge dog bounded forward and fastened its teeth in his shoulder. There was not a minute to lose, for all the rest had reached the brink crying and howling, so Arthur raised his gun and struck the assailant with the stock, a great swinging blow upon the head which sent him stunned and sprawling upon the ice. Away then the two went as if their feet had wings, their trusty steel skates fairly singing over the smooth, hard, blue ice.

After they had got well started and had swung fully a hundred yards away from shore they turned and saw some of the disappointed pack tumbling and scrambling along the ice at a safe distance behind them. The remainder raced with might and main along the bank but they could not keep up with the two expert and muscular young Northern skaters. Their cries were now those of baffled rage, and the sound echoed everywhere among the hills, but the two young sportsmen felt little concern, for a shining stretch of ice fully four miles long lay before them.

When they reached the end of it, which did not take them a great many minutes, there were nowhere to be seen any of the wild dogs nor a cry to be heard. Then they fastened on their snow-shoes, ran quickly over the crust till they reached the next chain of lakes, and got home safely. The story of their adventure filled the settlement with wonder for many a day, and the boys were applauded as a pair of true heroes.

EDMUND COLLINS.

Why Telegraph Wires are Underground in China.

"A superstitious reverence for the dead accomplished years ago in China something that regard for the comfort and safety of the living, even when aided by judicial mandates and radical municipal methods, has been only partially able to accomplish in this country," said a telegraph lineman who was in the employ of the company that established the first telegraph line in China.

"The telegraph wires are placed underground there, and if the company had not so disposed of them there would have been no telegraph lines in China to day. Dead ancestors are held in peculiar reverence in that curious country, and the casting of a shadow upon the grave of an ancestor is looked upon by the Chinese as an insult not to be borne, and it is always resented with impetuous rage. Now there are no cemeteries or general burying grounds in China, but every family's ancestors, particularly in the rural districts, are buried on the family premises. Consequently every yard or garden is a receptacle of ancestral remains, and as China is thickly populated, the revered bones of dead and gone Monogolian progenitors may be found resting beneath every few rods of earth. When the telegraph company went to work to put up the poles on which to hang its wires, the workmen were embarrassed every little while by wrathful Chinamen, who would rush angrily upon certain poles and chop them to the ground, and warn the workmen, with much furious chatter, that they would put them up again at their peril. The cause of this interference was unknown to the workmen, who were at last forced to discontinue the work and explanation was demanded by the authorities. Then it was learned that the poles that were cut down had cast a shadow some time during the day on the graves of revered ancestors of Chinamen, and the insult could be wiped out in no other way but by summarily removing the poles. It was found that this superstition was too sacred a one among Chinese to be overcome by persuasion or bribery, and at last the telegraph company, as a matter of economy and self-protection, laid their wires beneath the surface, where they have been ever since."

The Duke of Wellington in a debate in the House of Commons stated that two Irish clergymen had been murdered. A noble lord exclaimed—"No, no—one." Whereupon the Duke rejoined—"I am mistaken, I am sorry for it."

"The happiest moment of a man's life," he said tenderly, "is when he knows he has won a girl's heart." "Is it?" she shyly asked. "Yes," he replied; "now, tell me what is the happiest moment in a woman's life?" She blushed and hung her head. "Tell me," he whispered. "You won't think me too bold?" "Certainly not," "When she's asked to name the day."