

## AGRICULTURAL.

There is nothing that tells so effectually in farm work as steadiness. The greatest tasks are performed by keeping constantly at work.

For fertilizing purposes there is no more valuable form of potash than wood ashes. The plants have digested it once and adapted it to the use of all other plants.

That unsightly excrescence commonly called a wart can be removed by touching it several times a day with castor oil. This is the simplest known remedy.

The following is recommended for lice on cattle: Mix one teaspoonful of ground copperas with the feed of each animal, once in each week or ten days, until the pests disappear.

Keep the calves growing lustily. Teach them to eat oats at an early age. A calf will never get fully over the bad effects of having been stunted and starved through even a comparatively short period of its life.

If fowls are confined it is best to have them in a yard large enough to have the grass grow in it. When yards are trodden or scratched up so as not to allow the grass to grow they will not keep hens healthy and in a laying condition.

It is said that more than half of the cheese now consumed in Great Britain is made in this country and in Canada. The American and Canadian cheese pays its freight to England and then undersells their articles on its solid merits.

There is no doubt that fowls will do some mischief in the garden, and they likewise do some good in destroying insects. At any rate it is best to see whether the mischief is more than the profit from the eggs which would be laid if the birds had full liberty.

A farm horse does the greater portion of his work on a walk. Consequently it is a matter of great importance that his gait should be cultivated. A horse that will walk four miles an hour is worth considerably more than one that will walk but three miles an hour.

When chicks are droopy or weak care is needed to recuperate them, a little more green food and onions should be given them or, if they are too much purged, a little powdered chalk and bone flour in their soft food—one teaspoonful of each to a pint of food is sufficient.

An English authority computes that in the last three or four years more pigs have died in the United States from cholera than have been raised in the British Isles. Wonder if the methods of feeding for some years in vogue in this country have had anything to do with this mortality?

Any domestic animal understands and appreciates kind treatment. It is no use to say they are "only dumb brutes." It is true, they cannot talk, but, like dumb or blind men, their intelligence in other respects is doubled. You can make friends of all your animals if you take the trouble to do so.

Good dairymen are well aware of the importance of pure air in the manufacture of butter and of the fact that slight impurities are readily absorbed and diminish the excellencies of the product. The habit of smoking by the dairymen has been shown to make a decided difference in the flavor of the butter.

For disinfectants about poultry houses and sheds, smoke from a wood fire, says the *Farm and Stockman*, is one of the best; also sulphur. In using the latter, close every opening and chink where air can escape, place a pound or two of brimstone, in small pieces, in an iron pan, and let it gently burn, leaving the house shut up for the day if possible.

Somebody says that ten drops of the oil of turpentine shaken up with a tablespoonful of sweet milk will cure half a dozen chickens of the gapes, each getting an equal part of it, or the same quantity mixed with flour or meal and a small bolus forced down the throat of the chick will do the work promptly. The dose should be repeated several times—say morn, noon and night.

When stock is turned on the pasture and there left all day, the water supply must be looked after. A milch cow must have plenty of water. She can not wait until she is driven up at night. The water is a necessary constituent of the milk, and she must have it during the time the milk is being manufactured. If deprived of water during the warm days her supply of milk will fall off.

Excepting the material of which the cheese is made, there is no ingredient of so much importance in cheese-making as rennet. No matter how excellent the milk may be, if the rennet is not right, excellence in the production of cheese cannot be obtained. Much of the poor cheese is the result of poor rennet, and much cheese made poor by the bad handling of the milk, or from other causes, is made worse by poor rennet.

Oil, says the *American Agriculturist*, is fatal to every insect it touches, and sulphur is very offensive to them. A mixture of four ounces of lard, and one of sulphur, well rubbed together, and with the addition of one ounce of kerosene oil and one drachm of creosote, will be found an excellent remedy against all sorts of insect vermin, while the liberal use of kerosene oil on poultry roosts will free the fowls of their tormentors.

It seems strange to me why the various top-knotted breeds of fowls are everlastingly recommended for the farmer; now common sense shows that *hacks* pick 'em up as fast as they digest each meal. The Leghorn is the all-around farm fowl, active and healthy each day of the year; and it is indeed a poor fancier or farmer that cannot make \$1.50 profit a year from each hen. The crested fowls are more subject to cold and roup than the other breeds and are only fit as a "subject of ornament."

The past few years have about demonstrated that tarred paper ranks next to wood as a valuable material for building chicken houses. The silo experience of late years has proved that for wooden silo buildings tarred paper is practically indispensable. The use of tarred paper is becoming so universal that there is hardly a good farm in the country where a roll of it cannot be found. Its use lessens the lumber bills materially. It appears that many thick-nesses of boards are used simply to keep out the air. The tarred paper will do this work equally well.

The Massachusetts *Ploughman* says: Much has been published in regard to the barbarity of the usual mode of washing sheep before shearing. They are timid animals, and particularly fearful of getting into water.

It is very difficult to drive a flock across a stream, and when one does succeed in doing so they invariably jump it. They have an innate dread of wetting even their feet. It is not so with other farm animals. When sheep come to be plunged in by the washers and retain five or ten minutes, what must be their feelings? It must be a shock to the system, and shocks are bad. This heroic treatment is downright cruelty. Washing removes only the loose dirt from the wool, and it is doubtful if that embraces two per cent. of the whole weight of fleece, yet buyers deduct from twenty to thirty per cent. for unwashed wool. Washed or unwashed, it has to be scoured before manufacturing, and hence, why wash at all? Farmers do it simply to save such an outrageous deduction on the price. Three years ago a friend with a flock of sixty sheep did not wash, and said he should not again; but when he sold his wool he was compelled to submit to a discount of twenty per cent., amounting to twenty-five dollars, and now he has returned to the old process. At a wool-buyer's store I have seen unwashed fleeces thrown into the general lot, and it is doubtful if manufacturers make much difference if any. In the absence of desired information as to the true inwardness of this wool-washing business, it must be concluded that somebody is taking advantage of the wool-growers who fail to present washed fleeces. As soon as they can get full price for unwashed wool, minus the weight of dirt washing takes out, just so soon will they be glad to relinquish the unnatural process. It would be well to test one or two fleeces this season by washing after shearing, and then one could know just what shrinkage there is.

What's in a Name? The discovery of the human breath as a poison.

Shortly before his death the late Dr. Kirchoff, of Berlin, related the true story of the discovery of spectrum analysis. He and Bunsen were then professors at Heidelberg, and kept bachelor's quarters in the well-known "Riesenstein." Upon one of their daily promenades Bunsen remarked: "Kirchoff, we must discover something which will be too simple to be true." They returned and went to work. But years passed by before the discovery was effected. Experimenting one day in his laboratory, Kirchoff happened to place a burning lamp in the rays of the sun. A dark place appeared at once. Thinking it an "optical illusion," he repeated the action, only to find the dark ray reappear and give place to the ordinary ray when the lamp was removed. He called Bunsen. The experiment was repeated many times and always with the same result. They could not explain it. Finally, Bunsen proposed that they go home and "think of other things" for a while; possibly some explanation might be reached. They lolled in their cosy chairs, smoking their long-stemmed pipes and talking of the days of their youth and the gossip of the hour. The afternoon had almost passed when Bunsen sprang to his feet with the remark: "Eureka! The flame of the lamp is led by the same stuff which is burning in the sun!" They hurried back to the laboratory, tried a number of experiments, and the great discovery was made.

## THE HUMAN BREATH A POISON.

At a recent meeting of the Academie des Sciences, Professor Brown-Sequard referred to some experiments he had conducted with a view to determine what, if any, were the toxic effects of the human breath. In condensing the watery vapor coming from the human lungs he obtained a poisonous liquid capable of producing immediate death. This is an alkaloid (organic), and not a microbe or series of microbes, as might have been imagined. He injected this liquid under the skin of a rabbit, and the effect was speedily mortal. The animal died without convulsions; the heart and large vessels were engorged with reddish blood, contrary to what is observed after ordinary death, when the quantity of blood is moderate and of a dark color. In conclusion, this eminent physiologist said that it was fully proved that respired air contained a volatile toxic principle far more dangerous than the carbonic acid, which was also one of its constituents, and that the human breath, as well as that of animals, contained a highly poisonous agent.—[The Medical Press.

## THE HUMAN BREATH A POISON.

Lightning can be seen by reflection a distance of 200 miles. A ray of light travels 11,160,000 miles in a minute, and is no relation to the messenger boy. A Boston man bet \$50 that a barrel filled with gas would weigh more than an empty one. His eyes opened very wide when he saw that it did not weigh as much. The latest thing in envelopes is an article which will turn black, blue and red when any inquisitive person attempts to open it by the use of steam or water. "God has given a wonderful body for noble purposes." That arm with thirty-two curious bones welded by forty-six curious muscles, and all under the brain's telegraphy; three hundred and fifty pounds of blood rushing through the heart every hour, the heart in twenty-four hours beating 100,000 times, during the twenty-four hours overcoming resistance amounting to 224,000,000 pounds of weight, during the same time the lungs taking in fifty-seven hogs-heads of air, and all this mechanism not more mighty than delicate and easily-disturbed and demolished.—[Talmage.

## THRIFT IN STATE OF MAINE.

Albert Pease of Lewiston, Maine, in a letter to the *Maine Farmer* says: I propose to tell a few things that I know in regard to farms in this section. \* \* \* Adjoining the farm on which I live, there is a farm of 50 acres, with some fruit, barn good, house poor but habitable, land good for a small business, that has been urged upon me for \$250. On another side of me a farm of 200 acres, buildings good, land good, with an unusually promising fruit prospect. The owner will sell for a sum that I forbear to name, as his is an exceptional case of discontent. These within three miles of Phillips village, on a good road. Running parallel to the road on which I live, about a mile distant, there is a road leading along a high ridge of excellent land on which there are six farms, with broad fields that are mowed with a machine, good orchards, with good buildings, ample, neat and well kept. I was lately told that all these farms were for sale. Since then one of them has been sold, a farm that ought to carry twelve head of cattle and a hundred sheep, for \$700. The former owner is one of our smartest men, but he was bound to get out, and sold as he did because he could not get more. On the river road, two and a half miles below Phillips village, there is a farm with 100 acres interval with upland, the buildings ample, requiring slight repairs, that a few years ago was bought for \$2,500. A few days ago it was sold for \$1,500. The farm below this, the best intervals farm in the region, a few years ago was rated at \$3,500. I am informed that it can now be bought for \$2,500. Another, an upland farm, five miles from the depot, some 100 acres very good land, not excessively stony, 50 acres that can be plowed in one field, the barn the best and most costly of any in the region, the house as good as the average on the best farms in the State, and an aqueduct bringing water to house and barn, and this can be had for two-thirds the cost of the buildings alone. And these, I think, are a fair average of the quality and prices of farms that are offered for sale, after throwing out a few that are not worked as farms, but are turned out to pasture or forest.

## THRIFT IN STATE OF MAINE.

Commenting on this account the *Moncton, N. B. Times* declares that in no section of the Maritime Provinces is there such a condition of things as is here shown to exist in Maine, the condition of Canadian farmers being favorable by comparison. Instructor—"By the way, Mr. Straddle, which is the more general term, poet or poetess?" Mr. Straddle—"Poet." "Can you give me a reason for it?" "I think so, sir. It is probably because a 'poet is born, not maid.'"

## HOW TO GROW TOMATOES IN PERFECTION.

Because the generous nature of the tomato yields bountifully with seemingly little care, the general impression prevails that the plant requires but little attention. This is a sad mistake, for there is not a vegetable in the garden that is so gross a feeder, nor one that so readily pays for all the food and care given as the tomato. To grow to its greatest perfection, the hills should be dug out to the depth of two and a half feet; at the bottom there should be a half bushel of well-rotted manure; above this let the soil be an equal mixture of loam and manure thoroughly mixed. The hills should be at least six feet apart. Let the situation be open, warm, airy. When the fruit begins to set, mulch with clean straw or very small brush. Under these conditions six plants will furnish sufficient tomatoes for a family of twelve persons. Whatever variety may be planted in this manner, the result will show specimens for size, smoothness, and esculent properties, unknown to the variety when grown in the ordinary manner.

## NOTES.

Elizabeth Mallet established in London in 1702 the first daily newspaper printed in the world.

It is said to be English to never wash strawberries, but to roll them carefully in a towel until "the grit" disappears.

Mlle. Helene Laroche, a Paris ballet girl, recently drew 200,000 francs in a lottery, and donated it to an orphan asylum.

Miss Budrose (getting vaccinated)—Do you think it will take, Dr. Montague? Dr. Montague (gallantly) If it doesn't take on such an arm, my dear Miss Violet, I shall have but little respect for vaccine hereafter.

The editor's wife—"Charles, I have just read that M. Gregoki, the editor of the *Athens Gazette*, writes three columns of editorials every day of his life. Isn't that astonishing?" The editor—"Not at all, my love. I frequently write four columns a day." The editor's wife—"Ha, yes, Charles, but M. Gregoki writes in Greek. Think how difficult that must be!"

## DO MONKEYS THROW STONES?

A scientific traveller in India was cautioned not to go near a certain landslip on the shore of a lake, as the monkeys would throw stones at him. This advice, naturally enough, only made him the more desirous to visit the spot. As he approached the landslip, I saw a number of brown monkeys rush to the sides and across the top of the slip, and presently pieces of loosened stone came tumbling down where I stood. I fully satisfied myself that this was not merely accidental, for I distinctly saw one monkey industriously, with both fore-paws and with obvious malice *preparans*, pushing the loose shingles off the rock.

I then tried the effect of throwing stones at them, and this made them quite angry, and the number of fragments which they set rolling was speedily doubled.

This, though it does not amount to the actual throwing of objects by monkeys as a means of offence, comes very near to the same thing, and makes me think that there may be truth in the stories of their throwing fruit at people from trees.

At all events, the general statement that the act of throwing things is never performed by any animal except man is certainly not correct, as I have myself seen recently captured elephants project branches of trees with the design of hitting persons out of their reach.

## A PERPETUAL RAILWAY PASS.

A most singular case came before Judge Allen of the Supreme Court, Boston, for decision. It appears that in 1836, when the Boston and Providence Railroad Company was chartered, Mr. John C. Dodge, of Attleborough, conveyed a portion of his land in consideration that he and his family should ride free over the railroad as long as the land was used for railroad purposes. A granddaughter of Mr. Dodge claims that she is entitled to the privileges named in the deed, and that the word family meant "descendants" of the grantor. The railroad company demurred on the ground that the remedy of the plaintiff, if any, is at law, and not in equity. Judge Allen overruled the demurrer, and expressed an opinion that under the deed the Boston and Providence Railroad Company would be required to carry free the descendants of Mr. Dodge for all time.

## HE THOUGHT HE COULD.

Her Parent—"Do you think, Mr. Filkins, that you can support my daughter in the style to which she is accustomed?" Bright Young Man—"I think I could if you would let us board with you."

## INFATUATION.

And tosses what the baby says  
And plays wand laughs, and crows  
What is he trying to say with its tasseled toes?  
As he talks in his earnest, tell  
Come put your ear close, say?  
What does the baby say?  
All day long the bright little elf,  
With his cheeks like a full-blown rose,  
Chatters, and laughs, and talks to himself  
In a language that no one knows.  
Does he speak in Turkish, to match his fez  
Or in the language of Hindoostan?  
Who can tell what the baby says?  
Well, his mother thinks she can.

## A FINANCIAL OPERATION.

A newly arrived immigrant from Ireland had saved enough money to buy a good silver watch, but had not acquired sufficient dexterity to take care of it. He let it fall one day, and damaged it so seriously that it would not run. Therefore, he took the watch to a jeweller, and asked him how much it would cost to have it repaired.

The jeweller put his glass on his eye, looked into the interior of the watch some seconds, turned it over several times and said: "It'll cost you five dollars to put it in order."

"Five dollars! An' sure, I haven't a dollar."

"Then you can't get it repaired."

Pat scratched his head a while in perplexity as to how he was to obtain the means. Suddenly he exclaimed: "Arrah! I have it. I'll shtep over to the pawnbroker's wid the watch, and lave it wid him for the money to pay the repair. Hold on to yerself—I'll be back to yez directly."

## CHEST MEASUREMENT FOR RECRUITS.

As the result of many years' experience the recruiting office of the United States army have adopted this method of chest measurement, which may be of advantage to amateur athletes who find the circumference of their chests varying through inaccurate measurement. Strip to the waist. Hold your arms above your head, the tips of your fingers touching. Have the measurer put a tape around your chest under the armpits. In all and exhale naturally. Let your arms fall easily by your side. The tape will slip down to the maximum girth of the chest. This is the mean chest. Exhale all you can, still keeping your arms by your side. This is minimum chest. Inhale and inflate all you can, in the same position. This is the maximum chest. The difference between the maximum and minimum chests is called the mobility. A mobility of over three inches in a man of medium height is considered good, below two and one-half inches it is poor. Artificial movements of the arms or muscles interfere with proper measurement.—[New York Sun.

## SPURGEON AND THE BAPTISTS.

It is not true, as has been stated, that Mr. Spurgeon has returned to the Baptist Union. His brother, Mr. James Spurgeon, has, but he himself stands sternly out against any such idea. In his June "Sword and Trowel" Mr. S. says:—"I am not careful to criticise the action of a body from which I am now finally divided. My course has been made clear by what has been done. I was afraid from the beginning that the reform of the Baptist Union was hopeless, and therefore I resigned. I am far more sure of it now, and should never under any probable circumstances dream of returning. Those who think it right to remain in such a fellowship will do so, but there are a few others who will judge differently and will act upon their convictions. At any rate, whether any others do so or not, I have felt the power of the text, 'Come out from among them and be ye separate,' and have quitted both union and association once for all."

## PAPER BOTTLES.

One of the most interesting of the many uses to which paper has been put is the manufacture of paper bottles. We have long had paper boxes, barrels and car wheels, and more recently paper pails, wash-basins, and other vessels; but now comes a further evolution of paper in the shape of paper bottles, which are already quite extensively used for containing such substances as ink, bluing, shoe dressing, glue, etc., and would seem to be equally well adapted for containing a large variety of articles. They are made by rolling glued sheets into long cylinders, which are then cut into suitable lengths, tops and bottoms are fitted in, the inside coated with a waterproof compound, and all this done by machinery almost as quickly as one can count.—[Pall Mall Gazette.

## A VERY SINGULAR COUNTRY.

First U. S. Man—Ever been to Canada?

Second U. S. Man—No; have you?

"Yes; it is a very singular country. Snows 200 days in the year."

"What do the people do the other 165 days?"

"They sit around with their ear muffs on, and wonder how long it will be before it snows again. It's not much of a country for picnics, lightning rod men and rasing honey."—Texas Siftings.

## THE C. P. R. SHOPS IN HOCHELAGA.

The Canadian Pacific Railway Company are about to extend their works in Hochelaga, Montreal, by the addition of a large passenger car shop, wood machinery shop, blacksmith and machine shop, and storeroom and foundry, the cost to be about \$300,000. The new works when completed will give employment to one thousand additional hands. Plans are ready and the works will proceed at once. The contract for the works in connection with the C.P.R.'s east end entrance to Toronto will be given out to day.

## UNITED KINGDOM'S MEAT SUPPLY.

There was imported into the United Kingdom for the week ended June 2 the following life animals and dead meat:  
Oxen bulls, cows and calves, 13,383 sheep and lambs, 22,380; swine, 843 cwt.; bacon, 39,845 cwt.; beef, salted and fresh, 12,778 cwt.; hams, 16,225 cwt.; meat, unenumerated, salted and fresh, 395 cwt.; meat preserved, 2,820 cwt.; mutton fresh, 8,565 cwt.; pork, salted (not hams) and fresh, 4,602 cwt.

## THE PHONOGRAPH.

### Edison's Latest Invention Tells Its Own Story in England.

A London cablegram says: Colonel G. E. Gouraud, writing from Little Clenlo, Upper Norwood, S. E., says: "At two o'clock this afternoon at the above address, I had the honor to receive from Edison his first perfected phonograph, which on the authority of Edison's own statement, in his own public voice communicated to me by the phonograph itself, is the first instrument of his life that has been seen outside his laboratory, and that has left his hands, and is consequently the first to reach this country."

"At 2.05 o'clock, precisely, my family and I were playing at once the unprecedented and astounding experience of listening to Edison's own familiar and unmistakable tones here in England—more than 3,000 miles from the place where he had spoken and exactly ten days after the voice having meanwhile voyaged across the Atlantic ocean. His first phonogram, as Edison puts it, tells me, among other things of interest, that this instrument contains many modifications of that which was shown at the Electrical Club in New York a few weeks ago and so widely reported by the press in several long phonographic communications to me, no single word of which had to be repeated in order to be clearly and easily understood by every person present, including my child, seven years old. Edison mentions that he will send me phonograms by every mail leaving New York, and requests me to correspond exclusively through the medium of the phonograph, humorously remarking in this connection upon the advantage he will himself derive from the substitution of phonograms for the style of writing not always too legible.

"Edison has sent, for our amusement, numerous musical records of great interest and beauty, pianoforte, cornet and other instruments, songs, duets, etc., many of which, he tells me, have been frequently repeated several hundred times together our experiences of to-day apply in so delightful and unusual, not to mention supernatural, that it would be difficult to realize that we have not been dreaming, and so interesting withal as to make it our duty, as it has a pleasure, to communicate the above to your widely read paper, which I have frequently observed chronicle the works of the author of the unparalleled triumph of mind over matter. All honor to Edison."

Col. Gouraud adds the following postscript, which will be interesting to all that the above communication is spoken by me into the phonograph and written from phonograph dictation by a member of my family, who had, of course, no previous experience with the instrument."

## 72,000 MADE EVERY DAY.

East Work in a Clothing Factory—H. A. These Useful Articles are Turned Out.

"One cent." "Yes, sir. We are paid one cent for packing a box of five gross of clothes-pins," said one of the packers to a reporter for the *Mail and Express* recently.

"An expert can pack 100 boxes in a day of ten hours. Sharp work, that, handling 72,000 pins a day."

Clothes pins are made in the lumber regions. They are usually made of white ash, sometimes of beech, black and white birch and maple. The wood is taken to the factory in logs and cut into lengths of thirty-one inches by circular saws. These lengths are then cut into blocks and the blocks again cut into sticks. The sticks are placed under another saw and cut into the required lengths. Next the turner takes a hand at them, and from there they go to the slotting machine. They are placed in troughs by the operator, the machine picking them up and slotting them. They are then placed in a revolving piler drier, going thence to the polishing cylinder and then to the packer. Each pin passes through eight hands. A single plant consists of broad saw, gang-splitter, gang-chunker, turning-lathe, drying-house and polisher and costs from \$7,000 to \$12,000. The machines working are very interesting. The little blocks of wood five and a half inches long are placed on an endless belt, which feeds the blocks automatically into the lathe. As the lathe is turned the pin is turned automatically from the spindle and placed on a turn-table and carried to a circular saw, which whittles out the slot in the pin. It is then finished and thrown out of the turn-table by the same appliance that puts the pins on the table. Falling, they are caught in a basket or barrel and are then taken to the drying-house for ten to twenty-four hours, or until dry. The polishing-cylinder or rubber holds twenty to forty bushels; this is run at a slow speed, about thirty turns a minute, and by simple friction and contact they become polished.

## THE PANAMA CANAL.

The *Engineering News* publishes an article on the "Actual Status of the Panama Canal," giving the results of a recent expert examination of the entire length of the canal, and accompanied by a progress profile, showing the amount of work done and undone to January 1 of the present year, both for the sea level and lock canal.

The profile shows that the work which is anywhere near completion is about eleven miles of dredging on the Atlantic end and about a mile at the Pacific end. On the remainder of the work the proportion done is very small in comparison with that undone.

The estimate given in connection with this profile shows a total of 34,081,000 cubic meters remaining, without allowing for changes of river channels, etc., which raises the aggregate to 51,000,000 cubic meters. The company had admitted 32,000,000 40,000,000 meters.

At the highest rate yet reached 900 cubic meters per month, it is that at least four years will be required to finish the canal, if there is no money.

The total amount of cash expended up to the present date is represented by \$351,150,000. The amount necessary to complete the canal is estimated at \$1,100,000,000. The *Engineering News* at a minimum estimate, which would be represented by \$500,000,000 of new capital.

A teacher recently what lbs. stood for. was the unexpected