The Czar Isn't a Reader.

The czar of Russia does not read newspapers regularly, and seldom looks at a book. While attending to his official business in the morning he sips one cup of tea after another, occasionally eats a caviare sandwich. The hours from 1 to 4 p. m. he gives to his family and family affairs. From 4 he works again till dinner time, at 7. His typhoid fever has left him stronger than he was before. His face is full and round, and he has had none of the headaches and epileptic fits that used to attack him before his recent illness.

Urban life decreases stature from 5 years of age on.

If you wish beautiful, clear, white clothes use Red Cross Ball Blue. Large 2 oz. package, 5 cents.

Palms never live more than 250 years.

EDUCATIONAL.

THE UNIVERSITY OF NOTRE DAME,
NOTRE DAME, INDIANA,

Classics, Letters, Economics and History, Journalism, Art, Science, Pharmacy, Law, Civil, Mechanical and Electrical Engineering, Architecture.

Thorough Preparatory and Commercial Courses. Ecclesiastical students at special rates. Rooms Free. Junior or Senior Year, Collegiate Courses. Rooms to Rent, moderate charges. St. Edward's Hall, for boys under 13.

The 58th Year will open September 16th, 1901. Catalogues Free. Address

REV. A. MORRISSEY, C. S. C., President.

20,000 HARVEST HANDS

required to harvest the grain crop of Western Canada.

FARMS IN WESTERN CANADA FREE

The most abundant yield on the Continent. Reports are that the average yield of No. 1 Hard wheat in Western Canada will be over thirty bushels to the acre. Prices for farm help will be excellent. Splendid Ranching Lands adjoining the Wheat Belt.

Excursions will be run from all points in the United States to the Free Grant Lands. Secure a home at once, and if you wish to purchase at prevailing prices, and secure the advantage of the low rates, apply for literature, rates, etc., to F. PEDLEY, Superintendent Immigration, Ottawa, Canada, or to W. V. Bennett, Canadian Government Agent, 801 New York Life Bldg., Omaha, Neb.

When visiting Buffalo, do not fail to see the Canadian Exhibit at the Pan-American.

THE GENUINE TOWER'S FISH BRAND POMMEL SLICKER
BLACK OR YELLOW
WILL KEEP YOU DRY NOTHING ELSE WILL
LOOK FOR ABOVE TRADE MARK. TAKE NO SUBSTITUTES.
CATALOGUES FREE
SHOWING FULL LINE OF GARMENTS AND HATS
A. J. TOWER CO., BOSTON, MASS.

PREMIUM SCALES OF THE WORLD
FOR HAY, GRAIN, STOCK, COAL, ETC.
Steel Frame and Royal Scale Rack. Requires No Pit. Most Complete Outfit Made.

Official Stock Scales at World's Fair, Chicago, 1893, also at Trans-Mississippi Exposition, Omaha, 1898-1899. Best and cheapest reliable U. S. Standard scales made. Many useful articles for farmers at wholesale prices. Catalogues, prices and information furnished free.
CHICAGO SCALE COMPANY
292, 294 & 296 Jackson Boulevard, Chicago, Illinois.

Warranted Waterproof. Made to stand hard knocks and rough work. Look for the trade mark.
SAWYER'S SLICKERS KEEP OUT THE WET.
If your Coaster hasn't them, write for catalogue to H. H. SAWYER & SONS, Sole Mfrs. East Cambridge, Mass.

I CURE FITS
FREE
A Full-Size $1 Treatment of Dr. O. Phelps Brown's Great Remedy for Fits, Epilepsy and all Nervous Diseases. Address O. PHELPS BROWN, 99 Broadway, Hartford, Ct.

SCALE AUCTION
BIDS BY MAIL. YOUR OWN PRICE. Jones, He Pays the Freight, Binghamton, N. Y.

PATENTS GUARANTEED MASON, FENWICK & LAWRENCE, 515 Ramge Building, Omaha, Neb. H. J. Cowgill, Representative. Est'd at Washington, D. C., 1861. Useful Guide Book on Patents FREE.

If afflicted with sore eyes, use Thompson's Eye Water

PAN-AMERICAN EXPOSITION

THE WABASH IS THE SHORTEST LINE TO THE BUFFALO EXPOSITION
KANSAS CITY, ST. LOUIS, CHICAGO AND INTERMEDIATE POINTS.
For Descriptive Matter, Rates, etc., call on nearest Ticket Agent, or address
C. S. CRANE, Gen'l Pass'r and Ticket Agent, ST. LOUIS.

When Answering Advertisements Kindly Mention This Paper.

W. N. U.—OMAHA No. 33—1901

CAMPFIRE SKETCHES.

GOOD SHORT STORIES FOR THE VETERANS.

Learning the Charm of the Music of "Taps"—A Soldier Tells What He Learned About This Call in St. Louis.

Laureled.

Back from the strenuous wars he comes
to me.
He is my son, grown brown with
strange scarred hands;
The months of blood and death in alien
lands
Are in his face; his boyish will to be
Is four-fold won. I glow and weep to
see
The trodden meadow blackened with
the bands
Of bearded, marching men whom he
commands.
With being rearranged he comes to me.
I, small beside him, try to utter
prayers;
I, honored for the laurels that he
wears;
God knows—God knows I stand with
empty hands,
And lonesome heart no meed of praises
warms.
I crush the laurel branch. Oh, God,
I miss
The soft-mouthed baby I can never
kiss!

—Zona Gale in Bookman.

Effect of Taps Upon the Soldier.

"Taps" is the name of the last bugle call in the soldier day. It is the last tribute to the dead, also, and is held in peculiar reverence and respect by all soldiers. When that call sounds all revelry ceases, and when its half-sacred tones are unnoticed by the turbulent spirit of a recruit, who has not yet learned that nameless feeling of the soldier for it, he is quickly taught a lesson which he never forgets. During the great strike in St. Louis I first learned the charm of the music of "taps." Strike duty is intensely disagreeable to the regular army. Stern discipline makes the army most effective in quelling the riots attending a strike, but "It's not what I enlisted for," is a common comment of the soldier. Nevertheless the duty is sometimes before the soldier, and his training has taught him to fulfill it. So it was with us when we were ordered from Fort Supply, I. T., to St. Louis on strike duty. Many other commands were sent in from all over the great West. All was turmoil and excitement among the citizens, who more than half sympathized with the strikers and made our work of the hardest kind. We were quartered in a church, the best our jolly gray-headed old captain could procure for us. The officers of several other companies found sleeping room in our spacious domicile. We had a fearful day, and the men, dead tired, were lying around the pews and in every way trying to gather strength for tomorrow's trials, which we knew would be hard. A small kerosene lamp upon the pulpit cast a weird glow over the sleepers. Suddenly a crowd of young officers, five or six of them, who had been out having a good time, came in and they were not as quiet as the time and place would naturally suggest. The cavernous depths of that great church echoed their ribaldry. They went on toward the end of the church occupied by their companions, fully intent on rousing out other fellows and making a night of it. Suddenly, out of nowhere in particular, but apparently from somewhere, came the low, sweet, pleading tremolo of a pipe organ, playing, as never played before—"Taps!" Ere the first strain had died away the turning of an uneasy, dreaming soldier was distinctly audible in the far corner of the sacred room, and not another sound, save the most angelic music, could be heard. Being on guard, I stole forward to see who was playing and came upon our hands upon the keys of the organ. At last the faint notes died away and he saw me. "It's all right, sergeant. I could not sleep and thought I would play a little," said he, which were the last words spoken in that church that night.—Russell Frances, in Kansas City Star.

Gen. Crook's Joke.

Crook, the Indian fighter, was a solemn man, but he loved a practical joke, says Col. Joseph Iler, who knew him well. Back in the '70s, soon after he was made a brigadier general and stationed at Omaha, Gen. Crook organized a wildcat hunting party among a lot of us, and one moonlight night we started across the prairie from Omaha for the fort. The plan was to sleep at the fort and at daylight start for the wildcats. After we were all asleep Gen. Crook came down stairs without any shoes on and took from our rifles the ball cartridges, replacing them with blanks. On the way to the woods the general indicated the order in which he wished us to fire on the first wildcat in case we should tree the beast. We had hardly reached the woods before Gen. Crook rose in his saddle and said: "By thunder, boys, there's a cat right in the crotch of that fir! Drop off your wagons and bag him!" We were on the ground in a twinkling, and in less time than it takes to tell it we were blazing away at a monstrous big wildcat which was hugging the limb of the tree. The cat never stirred as the successive shots were fired, and the hunters looked at one another with open-mouthed astonishment. We looked around for Gen. Crook and found him behind a stump laughing away to beat the band. At once it flashed on us that we had been hoaxed. The general had just straightened up and was beginning to explain the joke, when the driver, a hired man at the fort, pulled from under his blanket in the wagon a double-barreled shotgun, loaded with buckshot. The general didn't see him fire, but he turned around just in time to see tufts of fur and hair fly from the wildcat as it dropped from the tree. Off went the general into another fit of laughter, But this time the laugh was on himself, for the hired man had poured both charges of buckshot into a beautifully stuffed wildcat, completely ruining it, and the general subsequently paid the saloonkeeper from whom he had borrowed it about $15. All that Crook said was: "Boys, it was worth $100 apiece to see five good marksmen miss a wildcat in broad daylight at 30 paces."

The Retirement Law.

It is generally agreed by the best friends of the army that the law should be modified to say 68 years as the best, subserving both the interests of the government and the army. The theory of the retirement law is that at the age of 64 an officer has largely if not wholly lost his capacity for usefulness. Very few military authorities longer believe any such nonsense. Its ostensible object is wholly negatived by the foregoing examples, and what is patent on every hand. The real object is to expedite promotion. If Gen. Cloud's services were needed and likely to be valuable why should he be put out of the way and another put in his place? If there were still critical duties which only he could successfully perform why supersede him with another who could not perform them? So, in the case of Gen. Shafter and other retired officers whose active services are still required by the government. The law as it stands is in high favor with the young subalterns, and for very obvious reasons. Its beauties and utility grow more and more doubtful, however, as they near the 64 year milestone. When that fell day arrives they are to a man most decidedly "agin it," for reasons equally obvious. There is an old story that the original act of June 30, 1882, for compulsory retirement was conceived and engineered through Congress by the late Senator John A. Logan. The gossips had it that it was a shaft aimed at William T. Sherman, then general of the army, for whom Logan had a bitter antipathy, as is well known, for displacing him from the command of the army of the Tennessee before Atlanta in 1864.—New York Sun.

Both Prayers Answered.

Gen. Joe Wheeler is good to the interviewer. He talks out without reserve, as if speaking to a friend. He is modest in his manner, even meek-looking, and certainly no one at first sight would imagine that this gentle, genial, kindly man was a hero of some of the bloodiest, rimmest battles of modern times. Gen. O. O. Howard, who commanded one of the wings of Sherman's army on the famous march to the sea, and who bore Lee's first shock at Gettysburg, is another of precisely the same type. No one could be simpler, kinder or gentler. In fact, it seems to be the rule with men as with steel that the hardest knocks produce the best temper. Old army officers and old physicians are apt to have a broad-minded charity and a hopeful, sunny love of their kind which is rare elsewhere. They reverse the rule of the witty French cynic: "The more I know about men the better I like dogs." The last time I interviewed Gen. Howard it was on the subject of answers to prayer, and I thought I had him. In his famous fight with Stonewall Jackson the Union forces were defeated, so I inquired of Gen. Howard: "You prayed before that battle?" "Yes," he answered. "And Jackson was a praying man. He prayed also?" "Yes," he answered. "Then how was it that he gained the victory? Did that mean that the Union cause was wrong?" Very gently the good old general replied: "Both our prayers were answered. Jackson prayed for immediate victory and I for the ultimate triumph of our cause. We both got what we prayed for."

Rosecrans and His Cigars.

Gen. W. S. Rosecranz, for a long time previous to his death register of the Treasury, never smoked and knew nothing about cigars. Yet he had no objection to others enjoying a smoke, and when he first assumed his office he determined to have a box of good cigars handy for the benefit of friends who might drop in the register's office. The general accordingly purchased a box of expensive cigars, put them in a drawer and forgot all about them for some time. Then one day when a friend was calling the general remembered the cigars and brought them out. "I know nothing about cigars," said Rosecrans, "but I am told that these are very fine." His friend lighted a cigar, and a look of pain and horror instantly overspread his face. He tried to conceal his feelings and puffed manfully at the cigar for several seconds. Then Rosecrans, noticing that he was growing pale, asked what was the trouble. "General," said the visitor, "I don't want to be ungrateful, but I'm afraid of this cigar." "Impossible, exclaimed Rosecranz. "Why, when I bought them I was told that they were the finest cigars in the market." "Well, general, you were deceived. The cigar tastes and smells exactly as if it were made of camphor." "Camphor!" stammered Rosecranz, looking chopfallen. "Why, I never thought—but perhaps camphor does injure a cigar." And reaching into the drawer he brought into view several garments filled with camphor balls. "Do you suppose that can be the trouble?" he inquired.

Losing an Arm in Battle.

Some one asked Capt. Lucius D. Creighton of Missouri in the Arlington lobby last night how it felt to have an arm shot off, says the Washington Post. Capt. Creighton served during the civil war between the United States in a Confederate regiment, and his left sleeve hangs empty at his side. "It doesn't feel at all," the Confederate veteran answered. "It is chiefly in the lack of feeling that you know you have been hit. I lost my arm at Gettysburg and when the bullet struck me I could not imagine at first what had happened. There wasn't the slightest pain, only a slight tickling sensation which soon gave way to numbness. In a few minutes my arm seemed to have an enormous weight hanging to my shoulder, but it was not until after the amputation had been made that I suffered actual pain. The after effects of losing an arm are not altogether pleasant, you sort of come to miss it in time, but so far as suffering is concerned I would much less rather a bee would sting me."

New Rapid-Fire Pistols.

The board of ordnance has adopted a new magazine pistol which fires 116 shots per minute as against 40 fired by the best Colt revolver, which has been up to the present time the standard weapon of the army. The new pistol is also said to fire far more accurately than the Colt. It costs, however, $15 when bought in lots of 1,000.

She Told the Doctor.

The following story is told of a precocious little girl of 10. She is the daughter of a well-known lady of considerable charms, whom the family doctor was visiting for influenza. He felt the pulse gravely and tenderly, holding her wrist after the orthodox manner of a ladies' doctor as he sat beside her in the drawing room. As he did so he became aware that the child had her great, grave eyes, full of inquiry, fixed upon him. "You don't know what I am doing?" said the medical man, lightly, to the young lady. "Yes—I do," was the portentously solemn reply. "You are making love to my mother!"—Exchange.

The orchestra conductor should never get in front of more musicians than he can shake a stick at

FARM AND GARDEN.

MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up-to-Date Hints About Cultivation of the Soil and Yields Thereof—Horticulture, Viticulture and Floriculture.

Save the Forests.

The preservation of the forests has become a live question with the American public. Everyone that studies the question at all must be convinced that something should be done and done at once. Forests are of slow growth, and an area denuded cannot be reforested in a generation. There are few big trees that are not older than the men around them. Careful estimates on the growth of the spruce shows that the trees now having a diameter of 18 inches cannot be replaced by trees of the same size in less than 150 years. It takes a spruce seedling 22 years to attain a diameter of 3 inches at breast high from the ground. To gain the next inch in diameter requires 17 years. The next inch of growth is made in 14 years; so that in 53 years it has attained a diameter of only five inches. The diameter of a foot and a half will be reached when the tree is 154 years of age. We look upon a young forest of spruce without realizing its value. We see trees 5, 6, 7 or 8 inches in diameter without suspecting that they represent decades of growth. They are cut down ruthlessly and sometimes set on fire for pastime. Yet the 8-inch trees are more than 80 years old, and more valuable because of age. A tree that is 17 inches in diameter makes another inch in 6 years. This fact indicates that the larger the tree the more rapidly does it increase in diameter. The time of waiting is while the tree is small.

* * *

These small but old trees will, in a few decades, be very valuable for lumber, if preserved. Yet how often are they sacrificed without thought. The big trees fit for lumber are cut down and trimmed. The branches are left on the ground where they fall and in a few years become as dry as kindling wood. They are kindling wood spread out over hundreds of square miles of so-called young growth. The day is sure to come when the fire gets a start in this material and when the wind is in a mood to work mischief. Then the tiny fire becomes a demon of flame, rushing through the slender forests and devouring as it goes. Even green wood will burn when the heat around it is intense. We all know the stories of the recent great fires in the west that have had their origin in the rubbish left by the companies that had exploited the forests and then left them a public menace. The record of loss of property and life is long. Whole villages have been obliterated, miles of railroads destroyed, trains caught in the fiery vortex and abandoned, herds of cattle and flocks of sheep smothered. All this has occurred because men or companies have been given free hand to conduct their operations with the sole idea of profit to themselves, and with no idea of the profit or even safety of others.

* * *

There is only one solution to the problem. The states must secure as much of the land now in forests as possible. In some cases this can be done without expense. In other appropriations should be made for the purchase of forest areas. New York has already taken the lead in the matter and is showing what can be done. By an act of the legislature the state has entered on a system of forest preservation. In the Adirondack region the forest preserve amounts to 1,290,987 acres, and in the Catskill region to 79,941 acres. This large public reservation was set apart to "be forever reserved, maintained and cared for as a ground open for the free use of all the people for their health and pleasure, and as forest lands, necessary to the preservation of the head waters of the chief rivers of the state, and a future timber supply; and shall remain part of the forest preserve." Additions to the preserve are made by the Forest Preserve Board. The superintendent of state forests has "charge of all work connected with the care and custody of the forest preserve."

* * *

It is perhaps well for the other states that New York has taken so vigorous a lead; for they can profit by her mistakes. In their haste to further the movement for the preservation of the forests, the people of New York in the year 1894 adopted an amendment to their constitution as follows: "The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed." This is certainly overshooting the mark, and leading foresters are recognizing the fact. It is believed that the amendment will be modified at the first opportunity. It is manifestly absurd to permit the state to sell no lumber, as the annual removal of a portion of the trees is a benefit to the forest, and the revenue thus secured would be in time considerable. To demonstrate this the state of New York has made an arrangement with the United States Forestry Commission by which one township in the Adirondacks is set aside for experimental work in scientific forestry including the annual removal of some of the trees.

Remedies for Chinch Bugs.

The chinch bug disease, which the experiment station at Columbia, Mo., has been sending out, is effectual only when the weather is warm and moist. When it is hot and dry, this disease will not take at all, and it is useless to distribute it in the fields at this time. Furthermore, the disease may be found in the fields naturally, and when proper climatic conditions occur, it will "take" and kill the bugs without the special introduction of diseased germs from the experiment station. There are two things which can be done to lessen the ravages of the bugs and to kill them, that are under our control and should be used when the weather is dry. In the first place, by plowing for a space of ten feet around the corn field, harrowing and dragging brush after the harrow, so as to make as much dust as possible, it will be found that when the young bugs begin to migrate from the wheat to the corn they will not as a rule be able to cross this ten feet of dust. When the insects develop wings, they may fly over the plowed space (this will happen about once in ten times) and if they alight upon the first few rows of corn the second method may be used for destroying them.

Second, when the insects collect, as they frequently do, upon the first few rows of corn, the best way to kill them and prevent their spreading through the field is to spray immediately with kerosene emulsion. This will not injure the corn, and will kill the bugs readily. Kerosene emulsion is made as follows: Dissolve one-half pound of hard soap in one gallon of soft boiling water, add two gallons of kerosene or coal oil, and then by means of the force pump with the spray nozzle removed, churn this mixture for ten minutes by pumping it back into itself. Then add to this emulsion nineteen gallons of water, stir thoroughly and use as a spray. The important thing to be noted in the use of this kerosene emulsion is that it should be sprayed just as soon as possible and before the bugs have scattered through the corn; otherwise it will be impracticable to reach them by spraying. This spray kills only by contact, and hence one must actually touch the bugs with the spray in order to kill them.—J. M. Steadman, Entomologist of Experiment Station.

Care and Breeding of Sheep.

John Howat, at the Iowa State Farmers' Institute, spoke on the breeding and care of sheep. In part he said:

In breeding sheep the first necessity is a knowledge of conditions and an understanding of what market demand you want to meet. If you expect to go into business as a breeder of fine stock to supply the market for breeders, then you need the best there is to be had at reasonable figures. If you expect to raise fat lambs for the market, then you may be satisfied to get your experience with common sheep. Good natives make a very satisfactory foundation. But be sure and use a good mutton ram of known family. Avoid buying a cheap ram. We have seen men pay $400 for a bull and $25 to $75 for a boar pig, and $5 for a ram. The longer the leg, the poorer the wool, the more mongrel the appearance, the better he suited. We have never seen the arguments for breeding to good stock so thoroughly fortified as in breeding a half hundred native ewes to a Shropshire ram and having every lamb bearing on its face the image of its sire.

I will say that in personal experience the April lamb is the lamb for Iowa conditions. The early lamb needs too much feed before the grass comes and the late lamb gets the stomach worm and the hot weather. Breeding sheep is a simple matter, but caring for them is different. They need the closest watching.

In building sheep barns or sheds, we always have the doors in the ends and never less than eight feet wide. Sheep are the most gentle and docile animals on earth, and yet are the biggest fools in creation. It makes no difference how well fed and cared for they may be they will wedge themselves in a doorway or a gate and strain and pull and cause abortion. We have never been able to go through a season without some cases of abortion, especially in young ewes.

We rarely shut our breeding ewes in the shed, except at lambing time. Unless the wind blows hard the coldest nights will find the bulk of the flock in the open yards. Avoid close sheds; sheep must have an abundance of air. If a man will go into a close shed where a flock of sheep has been penned over night, the stench will almost sicken him. Even in the open yards, in moist muggy, heavy weather the smell is foul. Fresh air is the first great requisite.

In going around among your sheep, go quietly; don't hustle things and make them jump and run. We often go through our sheep with a lantern, and scarce a sheep gets on its feet, but if a stranger be along they get on their feet with a bound. We have lain among them by the hour, watching lambing ewes, but a quick movement will get them up in an instant. The lambing season is a delicate time with the shepherd. Where it is possible it is profitable to have some one with them all the time, especially at night. Lambs are apt to come at all hours. We have heard men say at stock-breeders' meetings that sheep were safe from 10 p. m. till 4 a. m., but we have to confess we have never in our experience had the pleasure of handling sheep possessed of such capabilities or good manners. We have sometimes thought that daybreak was the most popular time with the ewes, but we get experiences that confirm us in our opinion that a ewe drops her lamb whenever she gets ready. On one occasion we had seventeen lambs dropped between the hours of 12 midnight and 1:30 a. m.

When the lamb is dropped it is necessary to see that the ewe milks freely. A black, stringy matter fills the teats, and in many cases the lamb cannot start the milk. It should then be done by hand. The long ends and tags of the wool surrounding the udder should be clipped so the lamb won't get them in its mouth. We let our lambs run with the ewes till August, when they are weaned.

Rape and Turnips as Green Manure.

A Pennsylvania farmer recommends a combination of rape and cowhorn turnips as a green manure crop for the renovation of soils deficient in humus. He sows it broadcast in his corn field the last time he cultivates the corn, scattering the seed in advance of the cultivator. When sowing on an unoccupied field he harrows in the seed. The rape and turnips mature in the fall and may be plowed under then or in the spring, at the convenience of the farmer. By this plan he incorporates with his soil several tons of matter that is immediately available as plant food.

Pruning Old Apple Trees.—Prof. Taft of the Michigan Agricultural College says it is well to go slow before sawing off the lower limbs in a neglected orchard sufficiently high to permit of cultivation. The injury might be greater than the benefits that could be secured from cultivation.

Ordinarily the best time to prune old trees is just before growth starts in the spring, but, as this is generally a busy time on the farm, the work may be done in the late fall or winter. If the branches are not frozen when the pruning is done the injury will be slight. If the trees are making a rank growth and are unfruitful, it will often be found advisable to delay the pruning until the last of May when, the trees being in leaf, they will be subjected to a check and the formation of fruit buds will be promoted.

G. W. Franklin: The goat has asked for a portion of the honors belonging to sheep. Not being satisfied with the peculiarity of assisting in clearing brush lands, it is asking for a part of the demand for flesh, and unscrupulous dealers are palming off large numbers of them for mutton. They go into the stock yards at Chicago and other large market centers as goats, but no goat meat is ever brought out of any of the killing establishments.

Pawnbrokers prefer customers who have no redeeming qualities.

They also serve who sit down and wait.

Clover Exhaustion.

From the Farmers' Review: The famous clover sub-soil pump has been spoken of so much in farm papers and institute lectures that it seems to have gotten beyond the stage of a mere figure of speech. As a matter of fact, clovers have no more power to draw plant food from the sub-soil than every other crop of an equal root area; furthermore, there is always a great deal more plant food in available form in the top soil than in the sub-soil. In many cases the penetration of roots into the sub-soil is of very doubtful value to the plant. Plants take up moisture through their roots and draw moisture from depth just as a wick draws up oil in a lamp. This moisture flowing as it does over and around soil particles, dissolves a very small quantity of mineral matter, and in this manner in the aggregate, a great deal of plant food is brought to the plants, but this supply is too scanty and too irregular to be depended on for profitable culture. If such plant food supplies seems all that is needed, there never would have been any need of what is called modern agriculture.

Clover makes growth where such crops as corn, wheat and timothy fail because clovers have the power of supplying their own plant food nitrogen, taking it from the air. Of course, they must have potash and phosporic acid to do this. Soils after many years under cultivation lose a great deal of plant food which they contained as natural soil, and are apt to be short of at least one of the three elements of plant food. As nitrogen is subject to more losses in the soil than potash and phosphate, soils are most commonly short of nitrogen, hence clovers which supply their own nitrogen will make a good growth when non-legumes fail. They are the potash and phosphate and add to their own nitrogen. This is about all there is to the famous clover "sub-soil pump."

We have often read that quick acting chemicals fertilizers are injurious to the soil because they stimulate the soil to the quick use of all the available plant food "in sight." Really, the clovers are much worse than chemicals. Chemicals can go no further than an equal balance to the plant food they contain, while clovers supply all the nitrogen needed to draw out of the soil every bit of its soluble potash and phosphates. As 100 pounds of nitrogen acting through clovers takes out about 105 pounds of potash and 25 pounds of phosphoric acid, the speed of this exhaustion becomes apparent. If a soil contains say 400 pounds of soluble potash per acre, the clover will furnish nitrogen to take up all of it, and no more, just as it will do if there are but 100 pounds of soluble potash present. Hence the exhausting nature of clovers is very severe and lasting in its effects. We are all pretty familiar with clover sickness and know that it means nine times out of ten simply soil exhaustion.

This exhaustion should be guarded against by liberal applications of potash and phosphate fertilization, where clovers are used in rotation, and the best time to use this is for winter wheat. The corn has drawn heavily upon the plant food stocked up in the clover, roots and stubble, so that there is little available mineral plant food left for the wheat, and consequently it is in no shape for spring stooling. In this way clover exhaustion becomes a very serious menace to profitable farming. It is useless to try heavier seeding, deeper plowing, rolling, etc., when the whole trouble lies in a soil exhausted of its soluble mineral plant food by a rank growth of clover. Of course the clover may be returned to the soil as manure, but it never pays to grow a crop simply for manure, at least not in cereal farming. —Geo. K. Wilson.

Harvesting Kaffir Corn.

J. G. Haney, in a communication to the Kansas State Board of Agriculture, says:

Kaffir corn remains green until frost and the seed does not shatter; so, if grain is the only consideration, there is no great hurry to harvest; it can stand until after frost and the stalk is dry. But generally the fodder is a consideration, as well as the grain, and then the problem is to cut when the best results from both may be obtained. The longer the fodder stands the harder and less palatable it becomes, while if cut too early the best yield of grain is not secured. After the grain is hardened so that it is difficult to mash between the thumb and finger, and there is little moisture apparently in the seed, there will be very little shrinkage in the grain. This would perhaps be called "just past the hard-dough stage." If cut earlier the fodder will be better feed, but there will be a considerable shrinkage in the grain.

One thing that has kept this crop from being more generally raised is the problem of harvesting. There are a number of methods and they all have their merits. If the fodder is desired for feed it is perhaps best to cut stalk and all and leave it in the shock until dry. The best machine for accomplishing this is the corn binder, which leaves it in bundles of convenient size for handling, and the fodder is held together. The common method, however, is to cut with a mower, and the crop should be left to cure well before raking. Ordinarily it is put into large shocks or small ricks containing from a ton to three tons each. This is done with a hay gatherer, "buck rake," or "go-devil," and saves a great deal of handling. It keeps in excellent condition when treated this way and can be hauled when needed. It is ready to harvest for hay in about 105 days after planting, and this should be before frost, as freezing while green is detrimental; besides, the hay will not cure as well in cool weather, and it is essential that it be as perfectly cured as possible.

Mucks vary greatly in the organic matter they contain. Occasionally a peaty muck will have as high as 95 pounds of organic matter for each 100 pounds of dry matter, while others will have little more than half that amount. Since the value of the muck as an absorbent depends upon its organic matter, it follows that for litter a peaty muck is better than one that is clayey or sandy.

The use of muck as a stable absorbent adds greatly to its store of nitrogen because of the nitrogen of the urine thus taken up, and the germs always present in manures accelerate the conversion of the inert nitrogen into available forms.

Labor in the south is in great demand and the negroes are better paid than they have ever been in their lives before.

Cerritos, Cal., claims to have the largest artesian well in the world. It is 14 inches in diameter and 684 deep.

A party of Suffolk, England, farmers have gone to Denmark to secure hints on dairy farming.

Love letters may not be legal documents, but they chronicle court proceedings.

Ask your grocer for DEFIANCE STARCH, the only 16 oz. package for 10 cents. All other 10-cent starch contains only 12 oz. Satisfaction guaranteed or money refunded.

To get a few flowers one must sow plenty of seed.

Ask your grocer for DEFIANCE STARCH, the only 16 oz. package for 10 cents. All other 10-cent starch contains only 12 oz. Satisfaction guaranteed or money refunded.

Perfumes were introduced into Spain by the Arabs.

ARE YOUR CLOTHES FADED?
Use Red Cross Ball Blue and make them white again. Large 2 oz. package, 5 cents.

Kindle the dry sticks and the green ones will catch.

Mrs. Winslow's Soothing Syrup.
For children teething, softens the gums, reduces inflammation, allays pain, cures wind colic. 25c a bottle.

Conceit may puff a man up, but it is not a good prop.

Are You Using Allen's Foot Ease?
It is the only cure for Swollen, Smarting, Burning, Sweating Feet, Corns and Bunions. Ask for Allen's Foot-Ease, a powder to be shaken into the shoes. At all Druggists and Shoe Stores, 25c. Sample sent FREE. Address, Allen S. Olmsted, LeRoy, N. Y.

Desiring the unattainable is not nearly so distressing as attaining the undesirable.

To Raise Tea in South Carolina.

A new tea company, influenced by Dr. Shepard's success, has just bought 6,000 acres of land in Colleton county, S. C., intending to raise tea for the market. The company paid $20,000 for the land, and will plant but 100 acres this season, as it is now rather late to begin the preparation of the grounds. Next year over 5,000 acres will be planted, and the output is expected to exceed 300,000 pounds.

There is no man who knows how he is going to act when he falls in love, and no woman who doesn't.

Ask your grocer for DEFIANCE STARCH, the only 16 oz. package for 10 cents. All other 10-cent starch contains only 12 oz. Satisfaction guaranteed or money refunded.

English residents have £110,000,000 invested in mortgages.

GREATLY REDUCED RATES
via
WABASH R. R.
$13.00—Buffalo and return—$13.00.
$31.00—New York and return—$31.00
The Wabash from Chicago will sell tickets at the above rates daily. Aside from these rates, the Wabash run through trains over its own rails from Kansas City, St. Louis and Chicago and offer many special rates during the summer months, allowing stopovers at Niagara Falls and Buffalo.
Ask your nearest Ticket Agent or address Harry E. Moores, General Agent, Pass. Dept., Omaha, Neb., or C. S. Crane, G. P. & T. A., St. Louis, Mo.

Gratitude doubles the gift and halves the debt.

WINCHESTER
CARTRIDGES IN ALL CALIBERS
from .22 to .50 loaded with either Black or Smokeless Powder always give entire satisfaction. They are made and loaded in a modern manner, by exact machinery operated by skilled experts.
THEY SHOOT WHERE YOU HOLD ◆ ALWAYS ASK FOR THEM

HAS NO EQUAL.
DEFIANCE STARCH 16 OZ.
REQUIRES NO COOKING
PREPARED FOR LAUNDRY PURPOSES ONLY
MANUFACTURED BY MAGNETIC STARCH MFG CO OMAHA, NEB.

You can't help being satisfied with Defiance Starch. It has all the qualities you want, there is more of it than you ever got before, and it will do more with less labor. It needs no cooking, simply mix with cold water. 16 ounce package for 10c.

Don't forget it—a better quality and one-third more of it.

SKIN TORTURES

And every Distressing Irritation of the Skin and Scalp Instantly Relieved by a Bath with

Cuticura SOAP

And a single anointing with CUTICURA, the great skin cure and purest of emollients. This treatment, when followed in severe cases by mild doses of CUTICURA RESOLVENT, to cool and cleanse the blood, is the most speedy, permanent, and economical cure for torturing, disfiguring, itching, burning, bleeding, scaly, crusted, and pimply skin and scalp humours with loss of hair ever compounded.

Millions of Women

USE CUTICURA SOAP, assisted by Cuticura Ointment, for preserving, purifying, and beautifying the skin, for cleansing the scalp of crusts, scales, and dandruff, and the stopping of falling hair, for softening, whitening, and soothing red, rough, and sore hands, for baby rashes, itchings, and chafings, in the form of baths for annoying irritations and inflammations, or too free or offensive perspiration, in the form of washes for ulcerative weaknesses, and many sanative antiseptic purposes which readily suggest themselves to women and mothers, and for all the purposes of the toilet, bath, and nursery. No amount of persuasion can induce those who have once used these great skin purifiers and beautifiers to use any others. CUTICURA SOAP combines delicate emollient properties derived from CUTICURA, the great skin cure, with the purest of cleansing ingredients and the most refreshing of flower odours. It unites in ONE SOAP at ONE PRICE, the BEST skin and complexion soap, and the BEST toilet and baby soap in the world.

Complete External and Internal Treatment for Every Humour, Consisting of CUTICURA SOAP, to cleanse the skin of crusts and scales, and soften the thickened cuticle; CUTICURA OINTMENT, to instantly allay itching, inflammation, and irritation, and soothe and heal; and CUTICURA RESOLVENT, to cool and cleanse the blood. A SINGLE SET is often sufficient to cure the most torturing, disfiguring, itching, burning, and scaly skin, scalp, and blood humours, with loss of hair, when all else fails. Sold throughout the world. British Depot: F. NEWBERY & SONS, 27 and 28, Charterhouse Sq., London, E. C. POTTER DRUG AND CHEM. CORP., Sole Props., Boston, U. S. A.

Cuticura THE SET

SOZODONT insures your Teeth 25¢
At all Stores, or by Mail for the price. HALL & RUCKEL, New York.