

TECHNIQUE.
I take a little bunch of words and set 'em in a row.
I take a little bit of ink and mark 'em down just so:
I take a little time and pains and then I have a verse
That starts about as this one does or may be slightly worse.
And then I go back to the start and criss and cross and scratch,
I vacillate my words until I find me some that match.
The pretty thoughts that dart about like silver fish and shine,
But need a patient, watchful hook to get 'em on the line.
My thoughts melt into words sometimes—not always—now and then,
And I can feel 'em coming down my arm and through my pen,
I only have to push it over the paper and it spells
For you and all my other chums the things and fancy tells;
Just like a boy with building blocks, I move my words about
When I have something in my mind and try to work it out.
Until in orderly array I get 'em in a row
Just as I think they ought to be and write 'em down just so.
And so just with some words I paint the pictures that I think
The boys and girls who live in me and set 'em down in ink;
And sometimes there's a tear in it, and sometimes there's a smile,
And there is many a grassy bank and many a vine-grown stile;
And many a line that you would know if you could be with me,
To look right where my pen is now and I could help you see;
I merely take a lot of words and place 'em in a row,
And build such pretty things if I can get 'em down just so.
—J. W. Foley, in the New York Times.

IN THE CLUTCH OF A BLIZZARD

By ERNEST MCGAFFEY.

The snow had fallen softly and steadily for days. The strawhacks resembled Swiss cottages, and the stable, with snow packed deep about it and a heavy mantle on the sloping roof, could hardly be distinguished from a huge drift. Every morning the prairie chickens perched on available corners of the stacks and out-buildings, and in the hedges the quail and rabbits sheltered themselves as best they could from the wintry blasts.
John looked on the landscape with keen interest. Toward distant Tarkio the timberline loomed black as night. To the northwest rose Satterlee's grove, a dark speck against the sky, and for the rest there was only a wonderful whiteness. Still the snow fell, and higher and still higher rose the drifts. They wound about the slender trunks of the young walnut trees like enveloping wreaths of foam, and among the tall cottonwoods to the south they broke in misty billows, urged onward by the wind.
It was hard work now feeding the stock and poultry, chopping and bringing in wood and looking after things generally on the farm. Saturday night the wind freshened about 12 o'clock, and John felt shivery under the old fashioned comforters.
In the morning he found his uncle and Mart Barr talking in whispers by the kitchen stove. He heard Barr say:
"I didn't much more than get back, and if this keeps up we're in for it."
He started to go outdoors, but his uncle's sharp "Wait a while!" kept him from leaving the room. He tried to look out of the windows, but could see nothing but a whirl of flakes.
It began to be bitterly cold. Back of the stove was a pile of wood, which rapidly found its way into the fire, and it was evident that a new supply must be obtained if they wished to keep alive. John's grandmother had already been warned to stay in bed, and with a lighted lantern at her feet she was buried under blankets and was quite comfortable.
"Step out on the stoop, John," said Uncle Tom. "See what you think of a blizzard. Hold on to my hand," he added, as the boy started for the door.
John took his uncle's hand and crossed the threshold. He found himself in a blinding maze of furious snows. He held his disengaged hand up before him, and could not see it for the revolving drifts; he was stung and cut by fine icy needles, which filled and even choked the air, and he instinctively felt for the door and got into the house again, gasping for breath.
The first thing he said on recovering his breath was, "What'll become of the buckskin?"
His uncle looked grave. "The pony will have to take his chances with the mules. Mart fed 'em all last night, and he tried to get to the stable this morning, but he barely got back." "We've got to wait till this storm clears, if she blows a week."
The tears came into John's eyes as he thought of the pony, but he knew the blizzard must be a serious matter when Mart Barr or his uncle could not get to the stable.
They sat down to a good breakfast, and the hot coffee heartened John up, and he began to feel the novelty of the adventure. He took his grandmother her morning's meal, and returned to the room below.
The house was a small story-and-a-half frame, with no sheltering trees or outbuildings near at hand. Up stairs were the bedrooms, three in number, and down stairs the single large room served as library, sitting room, dining room and kitchen. It was warmed by a squat, good sized kitchen stove.
Pretty soon Uncle Tom rose, tied a clothline round his waist, and went out into the swirl. Mart Barr held the other end of the rope, and in a few seconds Uncle Tom returned with

a stick of wood from the woodpile. This he sawed into stove lengths with a hand saw.
The wood was dried in the oven and piled into the stove and eaten up like tinder. Then Mart put on the life line and made a dash for more wood. After this grist had been devoured by the kitchen stove, John begged and insisted on being allowed to go for a stick. The woodpile lay south of the house, hardly fifty feet away, and you could not miss it, although you could not see it. After some persuasion Uncle Tom fastened the clothesline with a firm grip about the boy, the door was opened and out he darted.
The instant he emerged he seemed to be wrapped in a suffocating blanket and pierced by innumerable bits of glass. The time spent in reaching the woodpile occupied only a few seconds, but he almost fell before reaching it.
He seized a cord stick and half ran and was half hauled into the house. He was speechless from even that short exposure, and for a few seconds fairly numb. His uncle looked at him.
"You can't go out again, John," he said. "It's as much as Mart or I want to do to tackle that blizzard."
And with the rising of the wind and the plunging of the drifts it seemed to the boy's imagination that the storm was besieging the house. The thin and fragile window glasses were re-enforced with wood, there being no shutters, and snow fine as the finest sand crawled in at every crevice and was sifted down like powder on the beds above. The grandmother's bed was brought down from up stairs and placed close to the stove. John distinguished himself by finding an old cross-cut saw in that corner of up stairs called the garret, and the men sharpened it up and allowed him to help saw the sticks they brought in.

Outside the wind raved and tore at the cottonwoods and walnut trees, breaking off branches and moaning away in the distance. The winds piled up the snow against the house until the men were sheeted with it when they rushed back from the woodpile.
Three days and nights the carnival of an icy ghost dance kept up, and three nights they had but fitful snatches of sleep in the intervals between the hurried races to the woodpiles.
At last the strength of the storm was spent, and Wednesday it cleared, bitter cold. The men and the boy hurried to the stable. The stock were all alive, but weak. They had eaten the feed left in their boxes and mangers, and then broken their halters and got at some of the "blue grass" which formed the roof of the stable. The snow had so completely covered the low structure in many places that they had not suffered unusually from the cold.
Every chicken and turkey on the place had frozen, but the hogs had burrowed into a strawstack in their pen, and were squealing vociferously for feed.
Away to the river bottom the trees rose dark as scaffolds, and a great white sea stretched in all directions as far as the eye could reach. The air was still, but nipped sharply at the boy's bare cheeks. It was his first blizzard.

To the northwest he saw the Satterlee windbreak, and wondered how it weathered the storm. And as a solitary hawk, strong of wing and gray as the drifts beneath him, swung high over the prairies, he turned to the house.—Youth's Companion.

What's the Score?

By C. M. BALDWIN.

Unless the doggerels of baseball. The season is open with the usual eclat. The baseball reporter has rubbed his facile pen on the seat of his pants, and ground out something like this:
"Smiling Harry came to the bat for the local gladiators. He was a good waiter and got three counterfeits. Lanky Jim, who was handling the damp spheroid for the opposing nine finally unwound his superstructure and put the joy pebble to the liking of His Merrieness. Smiler pressed against the little comforter for a one-sacker out into right truck farm. Smiling Harry tarried not long on the initial sack, but when Lanky Jim was not sitting up and taking notice immediately drug his anchor toward the second depot, which he larned in safety. The Long One showed symptoms of taking on a sky-pilot at this time and Lonesome Jim, the next batter, reached the first oasis via the charity route. However, his narrow lankships took a caucus with himself and Handsome Ike whipped the ozone, the understudy for the Singer building occupying the box for the visitors putting Ike to sleep with three of his fadeaway knockout drops. In the meantime Smiling Harry and Lonesome Jim performed a twin piffle and were safely occupying second and third refuge when the smoke cleared away. Hank the Bite put a fly in Lanky Jim's ointment by aeroplaning to the Midway Plaisance, Smiling Harry ambuling on to the lowly thatched cottage on the put-out."—From Puck.

Absent-Minded Alderman.

A Lynn (Mass.) alderman at a recent aldermanic meeting inquired what had become of an order he had introduced some time before calling for an arc light on Willow street. The city clerk, after digging into his files, informed him that the order had come before the board nearly a month previous and that he had voted against it.

The Power of Man Over Plants.

By DR. H. W. WILEY, Chief Chemist of the Department of Agriculture.

We all know what education and environment will do for the child in the way of molding his character, forming his mind and shaping his future life. A few illustrations, it seems to me, will show that a similar change may be produced in plants themselves. In fact, a great distinction has long been recognized between wild and cultivated plants. It is a matter of universal experience that under cultivation plants change their character.
One remarkable illustration of this fact is the sugar beet. In the wild or uncultivated state the sugar beet is indigenous to Southern Europe, especially along its Mediterranean coast. Under cultivation it has been converted from a plant containing only three or four per cent. of sugar to one which contains from twelve to sixteen per cent.

This has made it possible to utilize the beet for the production of sugar to such an extent that the amount of sugar which is now produced from the beet is equal to that which is produced from the sugar cane.
The factors which are active in the production of changes in plants are soil, sunshine, rainfall, cultivation, fertilization and selection. It is through the scientific use of these factors that man produces the modifications he desires upon plants, whether they be for the production of foods or drugs. In regard to the matter of drugs, it is interesting to know that comparatively little has been accomplished in the way of modifying the medicinal properties of plants by use of the factors above mentioned. Nearly all our medicinal drugs of vegetable origin are derived from the wild or practically wild plant. It has only been of late years that the possibility of improving the medicinal composition of plants by human agencies has been realized.

A drug of very high potency, which possesses violently poisonous properties in fact, is hydrocyanic or prussic acid. This acid naturally exists in many plants, notably in the kernels of peaches, apricots and fruits of that description, and in the root of the plant known as the cassava. Cassava is a source of large quantities of starch, and especially of that food product which is so highly prized, known as tapioca.
It is important that the plants selected for the manufacture of tapioca be free from hydrocyanic acid, or as nearly so as possible. It has been observed that by pushing the cultivation of the cassava plant northward just as far as it can grow and have a sufficiently long summer to produce maturity, the quantity of hydrocyanic acid is diminished.

Within the past two or three years systematic investigations have been made toward the selection of cassava plants of a low content of hydrocyanic acid for the purpose of planting, and securing by selection plants containing less quantities of this undesirable medicinal substance. Extensive experiments looking to this end have been made in Southern Mississippi and in Florida.

Hereditary in Plants.

It is a well known principle that qualities in plants, as in animals, are largely hereditary. This is the keynote of what is known as selection in the improvement of plants. By chemical analysis those plants are selected which have the largest quantities of the desirable constituents or the smallest quantities of undesirable constituents, and these plants are used for the propagation of others. One of the earliest and most extensive experiments of this kind was conducted under my supervision, in collaboration with the late Mr. A. A. Denton, in the improvement of the sorghum plant.
A series of experiments was conducted extending over eight years, with the idea of increasing the content of sugar in sorghum for the purpose of securing a plant which would be suitable for the manufacture of sugar. In this experimental work there was selected by analysis the best typical cane, that is, the cane containing the largest quantities of sugar, and by comparison, the smallest quantities of undesirable qualities, and the seeds of this cane were used for the work.

In regard to plants which produce drugs, it has been noticed that when they are brought from their native environment and planted in green-houses, the quantity of the drug which they produce is usually diminished. The cinchona tree in captivity does not by any means produce the quantity of quinine which is found in its native forests. On the other hand, other constituents of plants, whether desirable or undesirable, may be increased in quantity under such conditions.
The improvement of plants of all kinds by the means which are in the hands of the scientific worker has become a very important part of agricultural research. The Department of Agriculture at Washington and nearly all the agricultural experiment stations of the several States are engaged actively in this work. It is extending to all kinds of field crops, even those of staple character. Particularly may be mentioned the work in the improvement of Indian corn, which has been vigorously prosecuted by the agricultural experiment station of Illinois, and the work in the improvement of cotton, which has been practiced under the direction of the scientific men of the Department of Agriculture in the Southern States. As is well known, there are two

great varieties of cotton, known as sea island and upland. The sea island cotton has the longer and better fiber and brings a much higher price in the market than can be secured for the upland. The improvement of the sea island cotton and the extension of its growth to the mainland are, therefore, highly desirable.
The sea island cotton, when first introduced to this country, was a slowly maturing variety, and it was difficult to secure proper seed. Therefore the first step indicated was the selection of those plants which matured their seeds earliest, in order to get a variety which would ripen well near the coast or on islands off the coast of South Carolina and Georgia. Success attended the experiments, and a variety of sea island cotton was produced capable of much wider extension than the original. A longer and better fiber has been developed, as well as a more hardy plant and one producing a larger yield.

In regard to the methods of improving Indian corn, it may be said the not only is the Indian corn bred on account of its composition and character, but also on account of its physical appearance. Work of this kind has been very extensively done at the Kansas Agricultural Experiment Station.
Mr. Luther Burbank has produced some very remarkable transformations of plants by the use of the factors which have been mentioned before in connection with cross-fertilization and other means of improvement.

The Magic of Cross-Fertilization.
The idea of cross-fertilization is suggested by Nature herself. The birds and bees carry the pollen from plant to plant, and often affect cross-fertilization in this way.
This idea has been worked out in a scientific manner, so that systematic cross-pollination or fertilization has now become one of the most important means of modifying plant life. These modifications may be good or bad. Those that are bad are abandoned, and those that are good are retained and propagated until distinct types or varieties are established. The human hand, in other words, takes the place of the bee or the bird. It may be possible to produce almost any kind of variation in a plant by patient and scientific effort. Those qualities in plants which are most useful and are most beautiful may be developed, modified and increased for the pleasure and the benefit of man. Thus progress may go on almost without limit.

A systematic and scientific cultivation of drug plants in the United States with a purpose of adapting them to practical use is an undertaking of recent origin. The Department of Agriculture has begun these investigations because of the fact that the natural supply of drug plants in the United States is rapidly being exhausted. Among the plants which have been experimented with may be mentioned licorice, capsicum, sage, belladonna, caraway, anise and coriander.

Especially in our Southern States it is evident that there are many advantages of which the grower of drugs may avail himself. The long growing season, warm summers, and the abundant rain supply are favorable to the growth of drug plants of many kinds.
In addition to the drugs already mentioned there have been cultivated, with an intent to domesticate them, a number of drug plants heretofore growing wild.
Golden seal is a plant of value as a drug, and its use has been of such a character as practically to exhaust the natural supply. The forests of the country have been searched far and near for the plant growing in a wild state.

Beginning of Another Era of Revolution and Change in Transportation.
The world is in the beginning of another era of revolution and change in its systems of transportation, says The Electrician Enquirer. The growth of electric systems and their development in the line of transportation have been little short of marvelous. The employment of hundreds of millions of dollars in capital in its various branches and the work given to hundreds of thousands of men could never have taken place except in this age of expansion of knowledge and capital.

The use of electricity has scarcely commenced, but already the early plants established for light and power are antiquated and inefficient as compared with those that can now be installed. The great railway systems of the country are now seeking the most advanced methods of employing this force in order to equip their roads and thus gradually supplant the steam power now employed.
Many of the roads are met with an awkward financial problem instead of a mechanical one in the situation presented to them.
There is no doubt that electricity can be produced and supplied at the minimum cost to cities, districts or roads, within a radius of 200 miles, at the mouths of the coal mines. Roads that pass through or close by such coal mines derive immense revenues from the transportation of the coal to the cities and the districts. To establish and use an electric system for their own roads with power derived from plants at the mouths of the coal mines is an ideal economy as

For a number of years this plant has been under observation in the testing gardens at Washington, and some of the points which seem to be necessary to successful cultivation have been established. Evidently plants which grow in the shade of the forests could not be expected to become used to growing in the open, at least without years of cultivation; hence, the use of artificial shade in the cultivation of such plants is highly necessary. This is also true, as is well known, of the pineapple, which grows best in the shade of the live-oak or in artificial shade in Florida.
Growing in the Shade.
In France the truffles are found to grow only under the shade of certain trees, such as oaks and walnuts, and certain kinds of mushrooms flourish in the greatest abundance in the forests.
In the cultivation of mushrooms it is necessary to have a dark cellar or cavern, as the mushrooms do not grow artificially in the full light. This is an important point to keep under consideration in the cultivation of wild drug plants.
The cascara is another plant which has been cultivated both in Washington and in South Carolina. Professor Sargent, of Harvard University, states that at the Arnold Arboretum the cascara maintains an existence after some years of transition, but eventually dies. Senega, snakeroot and purple coneflower are other drug plants to which particular attention has been given.
The above are sufficient examples to show that the cultivation of drug plants may result in a very profitable industry, but it must be conducted in such a way as to preserve and increase the valuable ingredients of the plants, and it requires the highest degree of scientific skill.

If the youth of our country can be got to take an interest in the marvelous possibilities of country life, especially in the application of science to the improvement of plants and the development of new varieties, rural life will become much more attractive than it is at present. There is a general idea that only mediocre talent is required for service on the farm and in the garden, but it is evident from the achievements already made that the highest talent can find opportunity for expression in these avenues of activity.—Youth's Companion.

Tears of Blood.
The belief that certain individuals are able to weep tears of blood is of such antiquity that the German equivalent for "bitter tears" is "blutige Thränen," "bloody tears." There seems, however, no authentic instance of blood being actually secreted by the lachrymal gland.
Micah has published a very interesting article on real and false tears of blood. It is a clinical study on conjunctive hemorrhage. Some years ago the author was consulted about a boy aged twelve years, who from the slightest cause, such as laughter, or sometimes apparently for no cause whatever, wept tears of blood—an occurrence often repeated several times a day. The lad was pale and emaciated from constant hemorrhage. The source of the bleeding was the tarsal conjunctiva, which was covered with fine papillae, and light cauterization with the galvano-cautery resulted in a cure.
This case led the author to study the literature of the subject. He found that in none of the cases cited it is certain that the blood did not come from the conjunctiva or from the lachrymal passages. He feels that it is unwise to deny the possibility of a sanguineous secretion from the gland, but that examples in which other sources cannot be shown to be present must be exceedingly rare.

Introducing Her Resolution.
"Johnny," said Mrs. Lapsling, putting on her wraps, "I've been in the house all day and I need the fresh air. If you'll mind the baby a while I'll go and take a preamble around the block."
To their own operation. But what an object lesson it is for the cities and towns to which they carry their tonnage of coal! While in the State of Colorado there soon will be in operation a plant upon their order, furnishing light and power for a district of 150 miles radius, the great cities of New York, Philadelphia, Pittsburg, Cincinnati, Cleveland, Baltimore, Indianapolis, St. Louis, Chicago and a hundred lesser ones are still carrying their electricity on the coalcars to the cities, instead of having it more cheaply brought to them on a wire direct from the mines. The railways may as well accept a situation which will force itself upon them—and, while it will revolutionize existing systems, will only do so because it is the best thing for the people, the country, and possibly for the roads themselves.

Somewhat Rough on Society "Man."
At dinner one evening a well-known actress was most amiable to a very young lieutenant who sat next to her. He was mightily pleased at being on such good terms with a live actress. Suddenly she said, in her artless, pretty manner: "I am taking a boy's part in a new play and I have been watching you ever since we were introduced. You don't mind, do you?"
It is figured that a successful physician must have a clientele of 150 families, or about 750 persons.



A French chemist has invented a tablet which, if dissolved in a glass of water, will give off as much oxygen to clarify the air in a room as though a window had been left open for an hour.

A scientific labor of the utmost importance and interest is about to be commenced from Shanghai. This is a magnetic survey of China, and Dr. Edwards, of the Carnegie Institute, Washington, D. C., who is to carry it through, is at present in Shanghai preparing for the work.

In describing his latest journey in Thibet, ended during the present year, Dr. Sven Hedin says that the greatest result achieved is the discovery of a continuous mountain chain 2000 miles long, stretching east and west, and which, taken as a whole, is the most massive range on the crust of the earth.

Experts have held that the so-called "cat" of the ancient Romans and Greeks—"allurus," the wavy tailed one—was not a cat at all, but a kind of weasel. The mummified Egyptian animal, however, was a genuine cat, even if certain peculiarities about its teeth make it difficult to regard it as a near relative of the modern domestic puss.

Investigations of the recent royal commission of coal supplies have shown that the present inefficient consumption of coal in Great Britain leads to a waste of from 40,000,000 to 50,000,000 tons per annum, and it is also responsible for the greater proportion of smoke and dust from which they suffer. Thirty per cent. of the total British consumption of coal might be saved by employing the best known means for such purpose.

There is being constructed for the structural materials testing laboratories of the United States Geological Survey, a vertical compression testing machine of ten million pounds capacity. This machine, having a gross weight of over 200 tons and an extreme height above foundation of about eighty feet, is the largest ever constructed. The machine was primarily acquired for the purpose of testing large blocks of stone made necessary by the study of the building stones of the country, as requested by the supervising architect.

The Flag.

By ELLIS O. JONES.

"If you ever decide to settle down here and go in for politics," said the Politician, "the first thing you should do is to get up a good speech on the flag. Many an orator has made a reputation and concealed his ignorance by an apotheosis of the flag."
"The flag! What's the flag?" inquired the Man from Mars.

"Oh, of course, I quite forgot. You don't know what the flag is, do you? Well, you see, the flag—the flag—that is to say, the flag—is—well, the flag is a kind of emblem. It stands for what we are."
"What do you mean by that?" pursued the Man from Mars, with growing interest. "What does it stand for?"

"The flag," replied the Politician, blandly smiling, "is very meek. It can't talk back, and accordingly it stands for almost anything. That's what I'm trying to tell you. Whenever you make a speech in favor of a proposition do it in the name of the flag. If you are opposing the same or another proposition, you begin by denouncing it in the name of the flag. In both cases you at once cease talking about the subject and continue to talk exclusively about the flag, saying anything commendatory that comes into your head."
"But suppose what you say is not true," suggested the Man from Mars.

"That's not the point," replied the Politician. "You must commend the flag because the people will not believe ill of it. If what you say is false, it can't be helped. On the other hand, if you are going to stick to the truth all the time, there is no need of the flag at all. You must understand that the flag is not an argument."
"Yes; but what is it?"
"It is the emblem of an argument."
—From Judge.

The "Sisters" and Their Money.

"Most of the breddren, I've pleased to say, has been tollable lib'ral," a bit severely began good old Parson Bagger when the result of the collection had been reported to him, "but I regret to state dat de sistahs has been duss de diverse. Dey has contributed sc'arly nuthin' to de arwgin fund. Taint as if dey ain't got no money. Sistahs, lemme ax yo': Whuh does yo' putt yo' money? De Lawd knows—"
"Dar's all right, pahson!" interrupted Brother Tarr, rising in his place in the midst of the congregation. "Dat's all right 'bout de Lawd knowin'." Lawd knows whuh sistahs in gen'l puts deir money, but 'aint yo' gittin' slightly spectacular in axin' de infammaton for yo'self? Tassah, dess a little spectacular?"

A Toast.

The latest thing in toasts comes from "up-State," and was responded to by the father of twelve daughters, who claims that he ought to know: "To the ladies—to their sweetness we give love, to their beauty admiration, and to their hats the whole side-walk."—New York Times.