

SCIENCE AND INDUSTRY.

A Russian inventor has introduced a most curious and ingenious anemograph or recording anemometer, in which the same record indicates at the same time both the velocity and the direction of the wind.

A new heat motor has lately been introduced which operates without valves or exhaust, using the same air over and over again at each stroke, and except for a small amount of leakage would run indefinitely by the simple application of heat and the cooling medium.

A celluloid film for positives, which gives the appearance of a photograph on ivory is now being manufactured. One grade is a delicate sea-shell pink, another white, and the third closely resembles ivory. After drying, the positive prints are flowed with papyrine varnish. The pictures may be produced either as vignettes or with a margin of clear film.

Satisfactory tests have been made of the new liquid, pyroden, which renders wood, textile fabrics and such inflammable materials fireproof. The liquid, which is an English invention, is made of all colors, so as to be used as a substitute for paint, and is claimed to render houses entirely fireproof.

Pasteur's system of inoculation for anthrax and splenic apoplexy is being successfully introduced on a large scale in New South Wales. The experiments have been so successful that many stock owners are anxious to have their sheep vaccinated at once. Pasteur's agents offer to vaccinate sheep at the rate of six cents per head, of which four cents is for Pasteur's royalty, and two cents for the necessary expense.

A writer in a Buenos Ayres journal reports having examined the fiber made from the reeds and rushes of the lowlands of the Parana, and finds the textiles manufactured therefrom to be undistinguishable from those made of wool or silk. Blankets, heavy goods for men's wear, feltings, and "black silk" dress goods are among the articles produced from the fiber, and are pronounced unrivaled for texture, finish, color, and durability. Paper pulp is also made by means of a newly invented process from these reeds and rushes.

A new invention exhibited in Mexico is the photographing photophone. By speaking in a photophone transmitter, which consists of a highly polished diaphragm, reflecting a ray of light, this ray is set into vibration and a photograph is made of it on a traveling band of paper. If the image of this photographic tracing is projected by means of an electric arc or oxy-hydrogen light upon a selenium resolver, the original speech is then heard.

The cement commonly employed for fastening the tops on kerosene lamps is plaster of Paris, which is porous and quickly penetrated by the kerosene. It is now stated that another cement, which has no such defect, is prepared with three parts of rosin, one of caustic soda, and five parts of water, this composition being mixed with half its weight of plaster of Paris. The mass sets firmly in about three-quarters of an hour, and is said to have great adhesive power, not permeable to kerosene, a low conductor of heat, and not superficially attacked by heat.

Steam pipes of copper are now made by electro deposition from sulphate of copper solution. The pipe is formed on an iron core in the depositing bath, and the copper is pressed by a moving tool as it is deposited. By this operation a fibrous strength is given to the crystalline copper. After the pipe is thus formed it is subjected to hot steam which expands the copper shell, or pipe, and clears off the iron core, thus separating the two. These pipes have no joints, and are said to be very strong, tests showing that they break with strains of from twenty-seven to forty-one tons per square inch.

WHAT NOT TO DO.

Eight Mistakes Made by Farmers in All Parts of the Country.

To think that any one can farm; that a man who has starved as a canvasser for a patent churn or has been unsuccessful as a carpenter can jump into farming—a business requiring high intelligence and persevering efforts—and, being utterly unfamiliar with details, be able to make money on a farm.

To entertain the idea that a large farm half stocked and poorly cultivated pays better than a few acres well and carefully tilled.

To pay several dollars for good farm tools and allow them, for want of proper shelter, to become useless a year or so sooner than they should?

To let year after year pass by with no attempt to improve the quality of the farm stock. Blooded cattle and horses pay. The cattle make beef quicker, the cows give more and richer milk, and the horses are of a better temper.

To let foolish pride or narrow-minded prejudices prevent the adoption of new methods when they have been proven by practical men.

To get up after the sun, lean on fork handle and speculate for an hour or two upon what the weather is going to be, while the weeds get a start, and then wonder why farming doesn't pay.

To leave a lot of unchopped wood wet or half-split at the pile, a lot of old harness hanging in the kitchen, and muddy tracks in the dining room, and expect to see the women good-natured.

To have a lot of half-fed, emaciated, lonesome-looking fowls roosting dejectedly in some old tree, when a few good healthy chickens properly housed would make the poultry yard an honor instead of a disgrace.—Farmers' Call.

SOUTHERN AGRICULTURAL.

Things to Ponder.

Judge John W. Brown, of Upton County, Ga., recently addressed the Farmers' Academy Alliance, in which he gave them the following advice:

"There are things being done in our midst that are wrong, and the men who do this wrong are religiously and morally as good men as we have. They certainly do not think they are doing wrong. By the force of custom or common consent they are drifting along in their department, controlled by the one idea of making money, without stopping to consider whether they are doing right or wrong so the custom of trade sanctions what they do. A wagon that cost them \$51, they sell to a poor man for \$75, take a mortgage on the same and a mule to secure the payment. Twenty-four dollars profit on an investment of \$51. Extortion is said to be a great wrong. If this is not extortion I would like to see the word defined. And as if to make the wrong worse, they will sell the same wagon to man who is always prompt in payment for \$10 less, thus making light the burdens of him who is going easily along, and adding to the same of him who is already staggering under his load. If the first come up and pay as the last, nothing is given him back. I want to beg the merchants of our town who are so clever and kind socially, to stop and look at this from the standpoint of right and justice. We take it for granted that the wagon is no exception, but answers for a rule that runs through the whole business. It is wrong to sell to the landlord cheaper than to his tenant, and it is wrong for the landlord to be a party to such a transaction.

"How much sunshine would \$10 bring around many a poor man's hearthstone on a Christmas morning if one good Christian hereabout even thought of the struggle that thousands of poor farmers make to meet their obligations due October and November next. Their children—girls, as well as boys—and oftentimes the wife and mother herself, toiling in the dews of morning and hot sun of evening, bringing on disease and premature death by exposure, doing all in their power to help the father and husband pay the debt he owes, stinted in food and clothing, while the members of his (the merchant's) household can indulge every luxury and grow tired for want of something to do.

"I hope the Alliance will soon be able to arrange so that they can buy at the same price. I expect great benefit on this line from our exchange. It will be a grand pricing department, by which we will be able to know the price of every article we want to purchase where it is made. Then if our merchants can sell to us at the same prices we will buy from them. Otherwise we can buy through the exchange. And through that department we hope some time in the future to price some things we have to sell."—Southern Cultivator.

Room for Reform.

Farming at the South is done at a great expenditure of physical force and consequent unnecessary outlay of money. Some years since we planted cotton in the use of one mule and one man to open a furrow, one man to scatter the seed followed by one mule, and one man to cover. Now we use one mule and one man, with a machine, and do the work much more cheaply and much more effectually.

Into every department of farm work this same principle of economy should enter. Upon a comparison of methods, it is easy to be seen that the States at the South are very far behind those of the North and West in economy of time and labor, and, therefore, in the economy of production. In these States we find the constant study to be the saving of labor at every point. The management and handling of every crop is had through machines, that not only accomplish more in a given time, but do the work more effectually and, therefore, more satisfactorily.

The loss from producing cotton is not so much from the low price in the market as from the cost of production. The work necessary to be done has heretofore been so much manual that farmers have been forced to employ a large force of help, that is to be maintained during the work and oftentimes carried over idle seasons in order to be on hand when needed.

The demands in the construction of machines for chopping and picking cotton should be studied and mechanical contrivances continually applied until suitable machines are perfected to accomplish successfully the work. Corn shellers are far better than a rough-edged rock and corn huskers are much more convenient than wearing out the fingers at the slow process of pulling the shucks in an all day work that could be finished by a machine in an hour.

Reapers and mowers and horse rakes are always under the barn when called for, and the teams stand ready in the stalls to draw them; the landlord is convenient to drive them. These contrivances all give the farmer an immense advantage in controlling labor to his own interests. The larger part of his work he can do himself and become independent of trifling idlers who abandon the fields at the slightest censure or the mildest rebuke.

The use of machines is but the practical embodiment of convenience. The matter of convenience, involving

economy as it does is not necessarily a matter of mechanics solely. The women on a farm wear themselves out and accomplish but little that is profitable, for the lack of convenience of arrangement. During the course of the year the farmer loses months in an unnecessary waste of time for lack of convenience in his business arrangements. Let us abandon so much hard work by substituting machines and convenient systematic arrangement.—W. J. Northen, in Dixie Farmer.

Buffalo Gnats—How to Kill.

The Southern Live-Stock Journal has an instructive letter from a Louisiana planter (G. A. Frierson, Frierson's Mill, La.), telling how to destroy buffalo gnats and save mules and horses at work in the field or elsewhere. In the spring of 1885 the gnats were first very troublesome on this plantation, when fifteen mules were lost in one week. The mules had all the symptoms of colic, and were treated accordingly. Mr. Frierson says: "We afterwards learned that they all died from the effects of the poisonous bite of the gnat, and could have been saved but for our ignorance of the fact that train oil applied with a feather or a small mop is an absolute specific. Since then we buy this fish oil by the barrel, and furnish every plowman with a small tin can of convenient form, which is taken to the field to be applied when needed."

Fish oil is very pungent, and very likely will kill the "wolf" in a cow's back, and perhaps drive a botrub out of a horse's stomach.

The writer happens to know, from long experience, that tanner's oil is an excellent remedy for lice on pigs, calves, colts and other stock, and he suggests that this oil may be a first-class remedy for hog cholera and plague, taken with wood-ashes, salt and sulphur. As farmers we need something that will kill the germ of every form of swine plague. Sixty and seventy years ago man and his pig rarely had a kidney disease or plague. These parasites have come to stay like the Colorado potato bug and the curculio on peach and plum. We should not be disheartened, but learn to cooperate to destroy our enemies when they are most vulnerable. Watch the enemy and strike him when practicable. We need more knowledge of living parasites, their ways, habits and methods of propagation. It may pay every farmer to keep a few gallons of oil to fight insects with.—D. Lee, in Dixie Farmer.

HERE AND THERE.

—The carrot is the root crop preferred by horses. The mode of feeding carrots to horses is to chop them fine and give each horse half a peck three times a week.

—Plant trees along the roadside now, and do not delay it until spring. Drains along the road should be kept open, the roads leveled and put in the best condition for winter.

—Try the experiment of packing a few sweet potatoes in layers, with dry dirt between the layers, and keep them in some place where the temperature will not get below the freezing point.

—Salsify (called oyster plant) is very hardy and may remain in the ground in the rows through the winter without injury. It is not cultivated as extensively as it should be, although it is one of the best and hardest vegetables known.

—Bulls are dangerous animals, and a majority of the injuries received occur from placing too much confidence in gentle bulls, which suddenly and unexpectedly attack the attendant. A bull will usually prove obedient when young, but it is seldom that a fully-matured bull is safe.

—Plaster is an excellent material for sprinkling over manure that is being mixed with urine, in order to absorb the liquids, and also serves admirably for deodorizing the stalls to a certain extent. It is not caustic, like lime, and consequently does not cause sore feet, as is sometimes the case when other deodorizers are used.

—System in storage and a place for every thing is as necessary in the barns and stables as in the dwelling house. The loss of time in hunting for an article is much more than the time spared to put it in a proper place. Every thing should be where it can be found easily when wanted, and every animal in the stables should have its appropriate stall.

—The Mirror and Farmer calls attention to the fact that geese can do good work on any location overrun with weeds, when the weeds are young. Many kinds of young weeds are preferred to grass by geese, and especially plantain and purslane. Geese go right down to the roots for the plants, and effectually keep them down if the flock is a large one.

—Stockmen who have made observations in feeding swine are claiming that some of the breeds have lost vigor by long-continued feeding of corn as an exclusive food. Corn is deficient in mineral matter, especially of lime, and the use of corn leads to degeneracy. Only by varied diet can the vigor be maintained. Injudicious feeding leads to disease and loss.

—What is usually termed chicken cholera is caused by the fowls partaking of impure food or drink, generally the former. A fowl that dies from accident or other cause, and is thrown into the weeds or bushes, is a sure forerunner of cholera. The flock is sure to find the remains, and, by pecking and scratching about it, become contaminated and develop cholera.

—A Philadelphia newspaper says that the prevailing impression that the "old-time, broad-brimmed, sugar-scoop Quakers" are dying out is erroneous, at least as far as Philadelphia is concerned. Twenty-five years ago the same impression prevailed, but today the benches in the meeting houses are as full as then. The explanation is that after coquetting with worldly ways and fashions for a season the young generation of Friends undergo a reaction and gradually fall into the same ways and the same austere life, even to the plain garb of their grandfathers and grandmothers.

Don't Waste Your Time

and money experimenting with doubtful remedies, when Dr. Pierce's Golden Medical Discovery is so positively certain in its curative action as to warrant its manufacturers in supplying it to the public, as they are doing through druggists, under a duly executed certificate of guarantee, that it will acceptably all its recommended to do, or money paid for it will be promptly returned. It cures torpid liver or biliousness, indigestion or dyspepsia, all humors, or blood taints, from whatever cause arising, skin and scalp diseases, scrofulous affections, (not excepting consumption, or lung-scurf), if taken in time and given a fair trial.

Thousands of cures follow the use of Dr. Sage's Catarrh Remedy. 50 cents.

MARY—"Mebby I'm ugly now, mum, but in me day I've broken a great many hearts." Mistress—"Well, Mary, if you handled hearts the way you do my best china, I believe you."

REV. DR. BELL, Editor of the *Miss-Comer*, Kansas City, Mo., says in its issue of Oct. 1st, 1887:

It is to be believed that Dr. Shallenberger, of Rochester, Pa., has a sure remedy for Fever and Ague. A gentleman in our employ suffered greatly from Malaria, and tried many remedies to no purpose; when, seeing this ANTIDOTE advertised, tried it, was immediately relieved, and finally cured. This was two years since, and he has had no return of his trouble.

Mr. LANOCHIESS says that if the Prince of Wales were to appear in petticoats the streets of London would soon be filled with men in the same garments.

The man who is profitably employed is generally a happy man. If you are not happy it may be because you have not found your proper work. We earnestly urge all such persons to write to B. F. Johnson & Co., 1000 Main street, Richmond, Va., and they can show you a work in which you can be happily and profitably employed.

"In what light," asked the teacher, "did the Emperor Nero regard the Christians at Rome?" And the smart lad boy thought it was a torch-light.

A Pleasing Sense

Of health and strength renewed and of ease and comfort follows the use of Syrup of Pige, as it acts in harmony with nature to effectually cleanse the system when costive or bilious. For sale in 50c and \$1.00 bottles by all leading druggists.

"NEVER before," says the Paris correspondent of the London Telegraph, "has work been so abundant and so well remunerated in the city as during the exhibition season."

Oregon, the Paradise of Farmers. Mild, equable climate, certain and abundant crops. Best fruit, grain, grass, stock country in the world. Full information free. Address Oregon Immigration Board, Portland, Oregon.

The King of Italy recently visited the tomb of Garibaldi and placed upon it a wreath.

Did you ever go within a mile of a soap factory? If so you know what material they make soap of. Dobbins' Electric Soap factory is in New York or as a chair factory. Try it once. Ask your grocer for it.

In analyzing the contents of the stomach of an oyster nothing but vegetable matter has ever been found.

Don't sneeze and cough when Hale's Honey of Horehound and Tar will cure. Pike's Toothache Drops Cure in one minute.

A FLAIN gold ring was lately found by a Washington (N. C.) man embedded in a large block of ice.

TO REGULATE the stomach, liver and bowels, and promote digestion, take one of Carter's Little Liver Pills every night. Try them.

When the Czar of Russia visits his father-in-law, the King of Denmark, he pays all the expenses.

The regular down-East Yankee pronunciation, according to a writer in Notes and Queries, must have come from Essex. The same twang is observed in the speech there as in New England, such words as blue, true or through being pronounced blew, trow and threw, with a double e.

POLICE JUDGE—"State how the trouble originated." "Accused—"We was holdin' r' debatin' society, and I said I had the floor, and he called me a liar." Judge—"What colored?" "Accused—"From that time until we were arrested we both had the floor."

"RAISE your right hand," said the court. "Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so?" "Hold up, judge," interrupted the witness; "can't you mitigate that sentence just a little? You know I've been in politics for a good long while."

TO HAVE a plentiful supply of early greens next season sow turnip seeds and allow the turnips to grow and remain in the ground during the winter. A slight covering of straw will protect them.

The proper way to control the growth of geraniums is to pinch back their growth, and to remove buds as the plant is losing its proportion. This method does not interfere with the vitality of the plant and prevents much useless growth.

The highest structure of masonry in the world is the National Museum recently completed at Turin. The gut statue on the top of the spire stands five hundred and thirty-eight feet from the ground.

NEXT to England little Holland is the greatest colonial power in the world. The Dutch colonies have an area of nearly eight hundred thousand square miles, which includes some of the finest possessions in the world.

The salaries of colonial governors are very high. New Zealand pays \$7,500 a year; Bermuda, \$3,000; Jamaica, \$3,000; Feejee, \$3,000, and British Guiana, \$3,000. The entire Feejee revenue is only \$75,000. There is only a handful of whites there.

OYSTERS will quickly freeze in cold weather.

Malaria

is believed to be caused by poisonous miasm arising from low, marshy land or from decaying vegetable matter, and which, breathed into the lungs, enters and poisons the blood. If a healthy condition of the blood is maintained by taking Hood's Sarsaparilla, one is much less liable to malaria, and Hood's Sarsaparilla has cured many severe cases of this distressing affection.

H. H. If you decide to take Hood's Sarsaparilla do not be induced to buy any other.

If you are tired taking the large, old-fashioned griping pills, try Carter's Little Liver Pills and take some comfort. A man can't stand everything. One pill a dose. Try them.

Mrs. STAGGERS—"We are to have dear mother for dinner, James." Staggers—"All right. See that she is thoroughly cooked."

NO STRANGER should visit the city without smoking "Tansill's Fench" 5c. Cigar.

WHAT people call the eye of the oyster is scientifically known as the abductor muscle.

If afflicted with Sore Eyes use Dr. Isaac Thompson's Eye Water. Druggists sell it. 25c.

The food of an oyster consists of such microscopic organisms and organic particles as float freely in the water.

BRONCHITIS is cured by frequent small doses of Piso's Cure for Consumption.

THERE is undesigned humor in the remark of a Berlin correspondent that "the Czar of Russia is rather bombastic."

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Is absolutely pure and fit to eat. No Chemicals are used in its preparation. It has been analyzed and found to be pure Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, costing less than any other. It is delicious, nourishing, strengthening, EASYLY DIGESTED, and admirably adapted for invalids as well as for persons in health. Sold by Grocers everywhere. W. BAKER & CO., Dorchester, Mass.

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After eating, persons of a bilious habit will derive great benefit by taking one of these pills. If you have been DRINKING TOO MUCH, they will promptly relieve the nausea, SICK HEADACHE and nervousness which follows, restore the appetite and remove gloomy feelings. Elegantly sugar coated. SOLD EVERYWHERE. Office, 44 Murray St., New York.

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