



Johnny's Bath.—SEE PAGE 256.

LEAVENWORTH.
AUG. 15, 1872.

Leavenworth City, Kansas. 1872. KANSAS AGRICULTURAL AND MECHANICAL ASSOCIATION.

OFFICERS:

P. G. LOWE, PRESIDENT.
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J. B. KITCHEN, W. S. PLUMMER, JAMES C. STONE.

LEAVENWORTH, KANSAS, June, 1872.

The next ANNUAL FAIR of the Association will

Commence on **TUESDAY, SEPTEMBER 10th, 1872**, And will continue **FIVE DAYS**. It will be held on the grounds of the Association, within the corporate limits of the CITY OF LEAVENWORTH. These grounds have been during the past season vastly improved, over five hundred shade trees have been set out, and the whole grounds have been well set in blue grass, and are now in as fine condition as any Fair Grounds in the State, or adjoining country. New and commodious stalls have been erected in large numbers, and several wells and cisterns dug, which, with the never failing springs already on the ground, will make the facilities for taking care of stock equal to those of any Association in the Missouri Valley.

It is the intention of the Officers and Directors to make this the leading Association not only of the State of Kansas, but in the Missouri Valley, and every facility will be offered the Farmer and the Stock Raiser, the Mechanic, the Manufacturer, the Inventor, and the Producer, to compete for prizes in their various lines of business, and every opportunity for the advertisement and sale, as well as the exhibition of articles and things presented at the Fair will be afforded.

A new and spacious Amphitheater capable of comfortably SEATING THIRTY THOUSAND PERSONS, is being erected. LARGE HALLS for the exhibition of

MACHINERY OF EVERY DESCRIPTION, Flowers, Fruit, Needle-Work, Wax-Work, &c.,

Will be placed in order previous to the Fair. In short, no effort will be spared to make the grounds of the Association, and the Fair this Fall, second to none held west of St. Louis.

The location of Leavenworth City for accessibility is now second to none in the Missouri Valley, and the City itself, both in natural location and artificial adornment, is, we think, equal to the most favored. The new IRON BRIDGE across the Missouri River at this point, and the NARROW GAUGE KANSAS CENTRAL RAILWAY, which by that time will be regularly running to HOLTON, sixty miles west of this point, will also be worthy objects of interest to the visitors at the Fair.

The Premium List will Exceed \$15,000, all Cash.

Of this list near Twenty-five Hundred Dollars will be expended in premiums upon the various classes of Horses, and a like proportion upon every other variety of Stock. It is the intention of the Directors to offer a premium for everything that can, or will be got ready for exhibition, and that is worthy of a premium, so that every class of industrial enterprise may be as fully exhibited, as the participants in it may desire.

REMEMBER THE TIME—From the 10th to the 15th of September. Come one, come all, come with your families, come with your stock, come with any and every description of product raised upon your farm, come with the evidences of the thrift of your domestic household, bring needlework, paintings, wax flowers, &c., bring your butter, your cheese, your canned fruits, your jellies, &c.

Come One, Come All, and We will Make You Glad.

The Premium Lists are now in press, and will be sent to all applicants. For further information, address any officer of the Association.

J. NIEHAUS, Secretary,
Leavenworth, Kansas.

Smith-Mower & Reaper.

Simple in Construction,
Very Light in Draught,
True Plan of Rear Cutting,
No Gumming of Guards,
No Pressure on Tongue,
No Side Draught,
Safe for the Driver.

THE SIMPLE CONSTRUCTION OF THE SMITH MACHINE is one of its distinguishing features. There are parties who for five years have cut annually an average of one hundred acres, who report their Machines as running smoother and easier than when first purchased.

Our draft is very light—lighter, we claim, than any other Machine that runs—made so by the great care used in getting up our gearing, the small amount of it used, and also from the fact that there is no side draft, as has been satisfactorily proved in various trials.

The main frame of the Machine is made of wrought iron, angling, so as to secure the greatest amount of strength and elasticity with the least weight of material.

By the peculiar arrangement of the parts and distribution of weight, the pressure upon the necks of the horses is reduced to the minimum. Mowing can be done, indeed, without any neck-yoke or any connection at all of the horses with the tongue, showing the absence of both side draft and pressure.

Our SMITH MOWER AND REAPER is warranted to cut, with proper management, one acre per hour, or ten to twelve acres per day, of either grass or grain, in a workmanlike manner, with one pair of horses.

Repairs for Machines will be kept by our Agents, and all orders will receive prompt attention. For sale by
M. S. GRANT, Leavenworth, Kan.



American, Swiss and English
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WATCH MATERIALS,
FINE GOLD JEWELRY, DIAMONDS,
Silver and Plated Ware,
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Jewelry of every description made to order. Country orders promptly attended to.

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Leavenworth, Kansas.

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Full Particulars about Homestead and Pre-emption Laws.

Eight thousand copies have been sold, and it has received the unanimous commendation of the Press of Kansas. Sent, postpaid, on receipt of 50 cents; bound in muslin, 75 cents.

THE HUTCHINSON NEWS,

Is published weekly, at the County Seat of Reno county, at \$2.00 per annum. This town is situated where the Atchison, Topeka & Santa Fe Railroad strikes the Arkansas river, and is the end of the Second Division, where a Round House and Machine Shops are now being erected.

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Pomona, Franklin County, Kansas.

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Terra Cotta Ware Trellis Work, Rustic Work, Statuary in great variety, Flower Vases, Aquariums, Globes, Gold Fish Fountains, and other articles too numerous to mention. Low Prices will be given, and every attention paid to customers. jan-ly

SCHENCK'S Pulmonic Syrup,

SEAWEED TONIC AND MANDRAKE PILLS ARE THE only medicines needed to cure Consumption, and there are but two things to do to make the Lungs heal.

First. The Liver and Lungs must be got into a good, healthy condition; for, when the Lungs are wasting, the whole body is wasting, and the food of a consumptive, even if he has an appetite, does not nourish the body. If the liver and stomach are loaded with slime, it lies there and takes the place of food; consequently, the patient has no appetite, or very little; and the gastric juice cannot mix with the food, which lies in the stomach and spoils or sours, and passes off, without nourishing the system.

SCHENCK'S MANDRAKE PILLS act on the liver and stomach, and carry off this slime. The SEAWEED TONIC is a very pleasant stimulant, which, if taken directly after eating, unites with the gastric juice and dissolves the food, producing good chyme and chyle. Then, by partaking freely of the PULMONIC SYRUP, the food is turned into good blood, and the body begins to grow. As soon as the patient begins to gain in flesh, the matter in the lungs begins to ripen, and they heal up. This is the only way to cure Consumption. No one was ever cured unless they began to gain in flesh.

The second thing is, the patients must stay in a warm room until they get well. It is very important for them, to prevent taking cold when the lungs are diseased. "Fresh air" and riding about are all wrong; and yet, because they are in the house they must not remain quiet; they must walk about the room as fast as the strength will permit, to get up a good circulation of the blood.

To those who can afford it, and are unwilling to stay in the house, I recommend a visit during the winter months to Florida, well down in the State, where the temperature is regular, and not subject to such variations as in more northern latitudes. Palatka, Melonville and Enterprise are points I can recommend—a good hotel being kept at the former place by the Messrs. Peterman; while the accommodations and advantages of the latter place are also such as to facilitate the recovery of all who partake freely of my Preparations and follow the advice I have here laid down, and which is more fully set forth in the circulars accompanying my medicines.

I am now permanently located in my new building, northeast corner of Sixth and Arch streets, Philadelphia, where, on every Saturday, from 9 A. M. to 3 P. M., my son or myself can be consulted free of charge; but for a thorough examination with the Respirometer, the charge will be \$5.


SCHENCK'S Respirometer detects the slightest murmur of the respiratory organs, and the operator can readily determine whether a cavity or tubercles have been formed in the lungs, and whether the patient can be cured or not. This the patients must expect to know, if they are examined by the Respirometer.

Full directions accompany all my Remedies, so that a person in any part of the world can be readily cured by a strict observance of the same. J. H. SCHENCK, M. D.

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THE KANSAS FARMER



DEVOTED TO THE FARM THE SHOP AND THE FIRESIDE

[ENTERED, ACCORDING TO ACT OF CONGRESS, IN AUGUST, 1872, BY GEO. T. ANTHONY, AT THE OFFICE OF THE LIBRARIAN OF CONGRESS, AT WASHINGTON.]

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LEAVENWORTH, AUGUST 15, 1872.

[\$1.50 A YEAR.]

The Kansas Farmer

GEORGE T. ANTHONY, Editor.

A. G. CHASE, ASSISTANT EDITOR.

MISS M. E. MURTFELDT, ENTOMOLOGICAL EDITOR.

B. S. CHASE, VETERINARY EDITOR.

Published Semi-Monthly, at 317 Delaware Street.

FAIRS.

The following Fairs will be held at the times and places below named:

Northern Kansas District Fair, September 10th to 14th, at Atchison.

Nemaha County Agricultural Society, September 18th to 20th at Seneca.

Brown County Agricultural Society, September 26th to 28th, at Hiawatha.

Leavenworth County Agricultural Society, September 10th to 15th, at Leavenworth.

Pottawatomie County Agricultural Society, September 25th to 27th, at Wamego.

Republic County Agricultural Society, September 12th and 13th, at Republic.

Salem Township (Allen County, Kansas) Agricultural Society, September 24th to 26th, at Jeddo.

Industrial Exposition, September 23d to 28th, Kansas City.

St. Louis, Mo., Exposition, October 3d to 8th, at St. Louis.

Northern Ohio District Fair, September 16th to 21st, at Cleveland.

Kansas State Fair, September 16th to 21st, at Topeka.

Iowa State Fair, September 9th to 14th, at Cedar Rapids.

Minnesota State Fair, September 14th to 19th, at St. Paul.

Wisconsin State Fair, September 23d to 28th, at Milwaukee.

Illinois State Fair, September 16th to 21st, at Ottawa.

Indiana State Fair, September 3d to 8th, at Indianapolis.

Ohio State Fair, September 2d to 7th, at Mansfield.

Johnson County, Kansas, September 10th to 13th, at Olathe.

Wyandotte County, Kansas, Oct. 1st to 4th, at Wyandotte.

Washington County Fair, Oct. 9th and 10th, at Washington.

Butler County, Kansas, September 18th to 20th, at Towanda.

Woodson County Fair, Oct. 2d; 3d and 4th, at Kalida, Kan.

THE GRASSHOPPER FALLS FARMERS' CLUB.

FRANK H. HURON, Secretary of the Grasshopper Falls Farmers' Club, writes as follows: "The following resolution was adopted at our last meeting:

Resolved, That the thanks of this Club be tendered to Capt. GEO. T. ANTHONY, for the bound volume of THE FARMER, also current volume; and we recommend each and every member of this Club to become a subscriber to the same.

Mr. HURON adds: "Our Club is a decided success. Its members would rather miss their *weekly wash day dinner*, rather than miss a Club meeting."

We beg to return our thanks to the Club for their kind resolution, and we are glad to know that they are willing to forego the pleasures and comforts of a "wash day" dinner—proverbially the *healthiest* dinner of the week—rather than miss a Club meeting. Gentlemen—your devotion to the interests of improved Agriculture, is as remarkable as it is commendable. May you hold out faithful to the end. Let not the sumptuous board, usually spread for the Monday mid-day repast, allure you from the path of duty. March on, right on, in the line you have chosen, and believe us, that in the end when Agriculture shall have reached the proud

pinnacle of science that we hope for her, that then woman's work shall have been so far improved that the "wash day dinner" will have no terrors, and then—surely then—you shall have your rewards for your heroic sacrifices now. Be faithful, gentlemen, be faithful.

THE LEAVENWORTH COUNTY FAIR.

Satisfactory progress is being made by the Committee of Arrangements, in erecting the large amphitheater, buildings, stalls, &c., and in putting the whole ground in excellent condition.

Some three acres of land have been secured, that places the whole in better and more convenient shape. The demand for Premium Lists from adjoining counties is increasing, and shows that we may expect a large attendance from abroad.

Arrangements will be made with the Leavenworth & Denver (Narrow Gauge) Railroad, to transport stock free of charge to and from the Fair, and there will also be a commutation of passenger fare, so that we feel sure the attendance from Jefferson and Jackson counties will be large, where heretofore, owing to the want of facilities, very few have exhibited or even attended our Fairs.

We would recommend that the Committee of Arrangements call upon the various hotel and boarding house keepers, and obtain an assurance from them that the regular rates will not be increased for board and lodging; indeed, we know not why they might not be asked to *lower* their rates, with as much propriety as railroads. The latter always show a commendable public spirit in reducing fares to a nominal sum, and why should not hotels and boarding house keepers?

Some action should be taken by the Committee, and let the public know what to expect. We are sure that our hotel keepers will do the fair thing, if the matter is presented to them.

We trust the people of our own county and city will do their part toward the success of the coming Fair. It should be such a one as would give prominence to Leavenworth, and we can only make it so, by each and every citizen contributing his mite toward it. We want all the best stock and farm products there; we want all works of mechanical genius and skill there; we want evidence of the ladies' handiwork there, and then we want the people there. This will make the Fair a success.

THE KANSAS CITY EXPOSITION.

We have received the Premium List of the above Fair, to be held at Kansas City, September 23rd to 28th, inclusive, an advertisement of which appears elsewhere in our columns.

We have carefully examined the premiums offered, and find that they are fully fifty per cent. higher than they were a year ago, and we have to say that it is the most admirably arranged list that we ever saw.

All the different articles to be exhibited are grouped together in divisions, as for example: All

implements, such as plows, cultivators, corn planters, drills, harrows, plows, &c., form one division. Hay rakes, hay presses, corn shellers, hemp brakes, wool pickers, &c., form another. Engines, boilers, fittings, pumps, water wheels, &c., another, and so on; so that the exhibitor, or the committee, will have no trouble in finding the article, and where it belongs.

They offer a premium of \$150 on fruit, and a similar one on vegetables, upon the same terms as those offered by the Kansas State Board.

They offer, in addition to several smaller ones, a premium of \$1500 on one trotting race, and \$500 on the running race.

The sweepstake premium on bulls, is \$200, and \$100 on cows, \$100 on stallions, and \$50 on mares, \$100 on boars and \$50 on sows. No sweepstakes offered on sheep. The other premiums are equally liberal.

WOODSON COUNTY FAIR.

A letter from R. F. EAGLE, Corresponding Secretary of the Woodson County Agricultural Society, informs us that the Society will hold its first Fair October 2nd, 3rd, and 4th.

There is not a county in the State that we know so little about, as we do Woodson.

We have never been in that county, except across the northeast corner, and we have had but few correspondents from there to post us up. But it is a safe rule to judge a county, or rather farmers, by the number of agricultural papers taken, and we find by referring to our subscription books, that judged by this rule, Woodson county is full of intelligent, enterprising farmers, and we will insure, that they will do their part towards making a good Fair.

BUTLER COUNTY FAIR.

We see the Premium List of the Butler County (Kansas) Agricultural and Horticultural Association printed in the *Walnut Valley Times*, and we commend the pluck of the gentlemen composing the Society, for the liberality displayed in the premiums offered at this their first Fair.

Butler is among what we call our new counties; yet it boasts a large population, has a very large area of choice farming lands, and the people are energetic and intelligent. We do not know what progress they have made in the way of thoroughbred stock, but presume they are up with the best, considering their opportunities.

The Fair is to be held at Towanda, September 18th, 19th and 20th. We trust the farmers of Butler will give to this enterprise their cordial support.

An exchange says "that an old woodman says that beech and sycamore are never struck by lightning, which, if true, is a singular fact."

Yes, but unfortunately for the "singular" part of it, it is not true; as we have seen both of these varieties struck by lightning, and know one sycamore tree that was struck the second time.

The Kansas Farmer

FOREST TREES FOR Shelter, Ornament and Profit

BY
ARTHUR BRYANT, SEN.

THIS IS THE MOST THOROUGH AND PRACTICAL work ever written upon the subject, and should be in the hands of every Farmer in the State of Kansas. It tells you

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We are the sole Agents for the State of Kansas. Send in your orders. We will send the book free of postage, upon receipt of the above price, or we will send a copy free to any who send us four subscribers to THE KANSAS FARMER, at \$1.50 each.

Address,

GEO. T. ANTHONY, Leavenworth.

PATRONS OF HUSBANDRY.

Elsewhere in this issue will be found the preamble and constitution of the Patrons of Husbandry, in full, and our readers can all have the opportunity of examining it for themselves.

Unlike any organization that we are acquainted with, the National head of this organization fixes all the fees that are to be charged by all State or Subordinate Granges, and no State or Subordinate Grange can change the constitution in any particular. They are compelled to pay such fees as the National head may order, and are permitted to have no voice in making the laws which they are compelled to obey.

All officers of the National Grange hold their office for five years; in the State Grange two years, and in Subordinate Granges but one year.

These three features make of their organization almost a monarchy; it only needs an arrangement in the National Grange (which they may have for aught we know) to re-elect themselves to office, to make it entirely so.

The National Grange, too, keeps in its own hands the right to issue charters, and each Subordinate Grange must pay to the National head the sum of fifteen dollars for its charter.

The National Grange is composed of Masters and Past Masters of State Granges, so that the only door to the National Grange is to become Master of the State Grange, and when we see that they hold their office for two years, it will be seen how very exclusive the National Grange is, and must be for years to come.

The more we examine this scheme, the more we are convinced that there is a money making scheme at the bottom of it, and that it is the money rather than the desire to benefit farmers, at the bottom of the whole concern. There may be, and no doubt are, some in the National Grange who are there with a sincere desire to elevate the farmer's calling, but the many avenues by which money must flow to the Treasury of the National Grange, the long term of office (five years would make several men rich, and at the end of that time they could afford, if indeed it were not for their interest, to let the organization die), and the exclusive character of its members leads us to believe that the benefits will be *personal*, rather than general.

CONSTITUTION of the PATRONS OF HUSBANDRY. PREAMBLE.

Human happiness is the acme of human ambition. Individual happiness depends upon general prosperity.

The prosperity of a nation is in proportion to the value of its productions.

The soil is the source from whence we derive all that constitutes wealth; without it we would have no agriculture, no manufactures, no commerce. Of all the material gifts of the Creator, the various productions of the vegetable world are of the first importance. The art of agriculture is the parent and

precursor of all arts, and its products the foundation of all wealth.

The productions of the earth are subject to the influence of natural laws, invariable and indisputable; the amount produced will consequently be in proportion to the intelligence of the producer, and success will depend upon his knowledge of the action of these laws, and the proper application of their principles.

Hence, knowledge is the foundation of happiness. The ultimate object of this organization is for mutual instruction and protection, to lighten labor by diffusing a knowledge of its aims and purposes, expand the mind by tracing the beautiful laws the Great Creator has established in the Universe, and to enlarge our views of creative wisdom and power.

To those who read it aright, history proves that in all ages society is fragmentary, and successful results of general welfare can be secured only by general effort. Unity of action cannot be acquired without discipline, and discipline cannot be enforced without significant organization; hence we have a ceremony of initiation which binds us in mutual fraternity as with a band of iron; but although its influence is so powerful, its application is as gentle as that of the silken thread that binds a wreath of flowers.

CONSTITUTION.

ARTICLE I.—OFFICERS.

SECTION 1. The officers of a Grange, either National, State, or Subordinate, consist of and rank as follows; Master, Overseer, Lecturer, Steward, Assistant Steward, Chaplain, Treasurer, Secretary, Gate-keeper, Ceres, Pomona, Flora, and Lady Assistant Steward. It is their duty to see that the Laws of the Order are carried out.

SEC. 2. *How Chosen*—In the Subordinate Granges they shall be chosen annually; in the State Granges once in two years, and in the National Grange once in five years. All elections to be by ballot.

Vacancies by death or resignation to be filled at a special election at the next regular meeting thereof—officers so chosen to serve until the annual meeting.

SEC. 3. The Master of the National Grange may appoint Lecturers to visit State and Subordinate Granges for the good of the Order, and Deputies to organize Granges where no State Grange exists.

ARTICLE II.—MEETINGS.

SEC. 1. Subordinate Granges shall meet once each month, and may hold intermediate meetings as may be deemed necessary for the good of the Order. Where it is convenient, weekly meetings are to be held expressly for lectures and discussions upon agricultural topics. All business meetings are confined to the Fourth Degree.

SEC. 2. State Granges shall meet annually at such time and place as the Grange shall from year to year determine.

SEC. 3. National Grange shall meet annually on the first Wednesday following the first Monday in January, at such place as may be determined upon by a majority of the members, and they may adjourn from time to time, as a two-thirds vote on joint ballot may decide.

ARTICLE III.—LAWS.

The National Grange at its annual session, shall frame, amend, or repeal such laws as the good of the Order may require, but a two-thirds vote in each branch shall be required to pass or repeal a law. All laws of State and Subordinate Granges must conform to this Constitution and the laws adopted by the National Grange.

ARTICLE IV.—RITUAL.

The Ritual adopted by the National Grange shall be used in all Subordinate Granges, and any desired alteration in the same must be submitted to and receive the sanction of the National Grange.

ARTICLE V.—MEMBERSHIP.

Any person interested in agricultural pursuits, of the age of sixteen years (female), and eighteen years (male), duly proposed, elected, and complying with the rules and regulations of the Order, is entitled to membership and the benefit of the degrees

taken. Every application must be accompanied by the fee of membership. If rejected, the money will be refunded. Applications must be certified by members, and balloted for at a subsequent meeting. It shall require three negative votes to reject an applicant.

ARTICLE VI.—FEES FOR MEMBERSHIP.

The minimum price for membership for males in a Subordinate Grange shall be five dollars for the four degrees. For females, the minimum fee shall be two dollars. The maximum to be established by the National Grange. The rates shall be two dollars for the first degree, one for the second, one for the third, and one for the fourth. For females, fifty cents for each degree. All applications are received by the Secretary, who shall pay the money to the Treasurer, taking a receipt for the same.

ARTICLE VII.—DUES.

SECTION 1. The minimum of regular monthly dues shall be ten cents from each member, and each Grange may otherwise regulate its own dues.

SEC. 5. The Secretary of each Subordinate Grange shall report quarterly to the State Grange the names and age of each and all persons initiated or passed to higher degrees.

SEC. 3. The Treasurer of each Subordinate Grange shall report quarterly, and pay to the Treasurer of his State Grange the sum of twenty-five cents for each degree conferred on males, and twelve and one-half cents for each female during that quarter. Also the annual due of twenty-five cents for each member, in quarterly installments, except in the District of Columbia, where all payments shall be made direct to the National Grange.

SEC. 4. The Secretary of each State Grange shall report quarterly to the Secretary of the National Grange, the membership in his State, and the degrees conferred during the quarter.

SEC. 5. The Treasurer of each State Grange shall pay to the Treasurer of the National Grange, in quarterly installments, the annual due of ten cents for each member in his State.

SEC. 6. Payments in all Granges shall be made to the Secretary, who shall pay the amount to the Treasurer, taking his receipt for the same.

ARTICLE VIII.—RESERVED FUND.

All donations or receipts from Fairs or any source other than membership fees, by either Subordinate or State Granges, shall not be subject to any tax by the National Grange.

ARTICLE IX.—REQUIREMENTS.

SECTION 1. Reports from Subordinate Granges relative to crops, implements, stock, or any other matters called for by the National Grange, must be certified to by the Master and Secretary, and under seal of the Grange giving the same.

SEC. 2. All printed matter on whatever subject, and all information issued by the National or State to Subordinate Granges, shall be made known to the members without unnecessary delay.

SEC. 3. If any brothers or sisters of the Order fall sick, it shall be the duty of the Patrons to visit them, and see that they are well provided with all things needful. (This may be done by a committee regularly appointed.)

SEC. 4. Any member found guilty of wanton cruelty to animals, shall be expelled from the Order.

SEC. 5. The officers of Subordinate Granges shall be on the alert in devising means by which the interests of the whole Order may be advanced; but no plan of work shall be adopted by State or Subordinate Granges, without first submitting it to, and receiving the sanction of, the National Grange.

ARTICLE X.—CHARTERS AND DISPENSATIONS.

SECTION 1. All charters and dispensations issue direct from the National Grange.

SEC. 2. Nine persons having received the four Subordinate Degrees, may receive a dispensation to organize a Subordinate Grange.

SEC. 3. Applications for charters or dispensations must be signed by the persons applying for the same, and accompanied by the fee of fifteen dollars.

SEC. 4. Nine Subordinate Granges working in a State can apply for authority to organize a State Grange.

SEC. 5. When State Granges are organized, dispensations will be replaced by charters, issued without further fee.

SEC. 6. All charters must pass through the State Granges for record, and receive the seal and official signatures of the same.

SEC. 7. No Grange shall confer more than two degrees at the same meeting, unless by virtue of a dispensation.

SEC. 8. After a State or a Territorial Grange is organized, all applications for charters must pass through the same and be approved by the Master and Secretary.

ARTICLE XI.—TREASURERS.

The Treasurers of the National, State, and Subordinate Granges, shall give bonds, to be approved by the officers of their respective Granges.

They shall make annual report of all receipts and disbursements of their respective Granges. Those of the National and State Granges shall be transmitted to all State and Subordinate Granges.

In all Granges bills must be approved by the Master, and countersigned by the Secretary, before the Treasurer can pay the same.

ARTICLE XII.—RESTRICTIONS.

Religious or political questions will not be tolerated as subjects of discussion in the work of the Order, and no political or religious tests for membership shall be applied.

ARTICLE XIII.—AMENDMENTS.

This Constitution can be altered or amended as provided in Article 3, at an annual meeting of the National Grange, six months notice of the same having been given in writing, by any member of the National Grange, stating the alteration proposed, and the same having been made known to each State and Territorial Grange.

Our Correspondents.

Isaac Colburn, Leomi, Illinois, Secretary of the Loami Farmers' Club, writes that Sangamon county has enjoyed an abundance of rain since July 1st, so much so that there is danger of grain and hay being spoiled. Crops generally good, wheat very good, apples and peaches plenty, and all the small fruits "splendid." Wheat is worth \$1, corn, 25 cents, oats, 25 cents, flour, \$4.50. Cattle, 4 cents, hogs, 3½ cents, butter, 15 cents, eggs, 10 cents.

T. F. Bailey, Meredeth, Cloud County, Kansas, says: "I never saw better prospects for crops. Are now having about two rains a week. Winter wheat has turned out better than any one expected, and Spring wheat is very good. Corn is now tasseling, vegetables of all kinds good and early. How late will it do to plant Early Rose potatoes, in order to secure a second crop? There are several good claims to be taken in this neighborhood yet, and if any family has any young ladies in it, please send them along."

Frederick Kautz, Cedar Vale, Howard Co., Kansas, asks for information about rhubarb wine, "where and how he can get the genuine plants" (*Linnaeus Rhei*), &c."

Rhubarb wine, like a good many other things, is a humbug; inasmuch as it is claimed that the wine plant (?) varies from other varieties of rhubarb. The rhubarb growing in your garden has all the wine making properties of the so called *Linnaeus rhei*, and in our opinion, neither of them possess any.

By adding enough sugar to the expressed juice of the rhubarb, currants, raspberries, &c., you can get some alcoholic fermentation, but the juice alone, will give you nothing but the acetous fermentation, or, in other words, vinegar. If you desire to try it, don't pay any more than the commercial value of the plants, or you will be swindled just that much.

Mrs. A. J. Cameron, Lawrence, Kansas, desires information upon the question of silk culture, and wants to know if there are any text books on the subject. She also asks, "What has become of the Housekeeper's Department in THE FARMER? I was much interested in it."

We stopped the Housekeeper's Department because, with one or two exceptions, our lady readers seemed to take little interest in it—never sending any recipes or communications, or in any way showing that they felt any concern in it. We shall be glad to start it again, if our lady friends will agree to keep us supplied with practical recipes, observations, and short articles pertaining to the household. There are hundreds of our readers that could supply us with matter for a whole year, that would be of great intrinsic value to thousands of young housekeepers. They need information upon how to make bread, cakes, pies, jams, jellies, pickles, butter and cheese; and about making carpets and bed quilts, men, women and children's clothing, and an abundance of other topics that we should be glad to discuss through THE FARMER, if the ladies will supply them.

In regard to the question about silk culture, we know of no text book upon the subject that is of value. In the last Agricultural Report of Missouri, C. V. RILEY has an excellent article upon the subject. Send fifty cents to the Secretary of the State Board, at St. Louis, and we think likely you will get a copy. M. DE BOUSSIERE, Williamsburg, Franklin county, Kansas, can give you all the information you desire. He is engaged in silk culture on a large scale.

T. W. B.—(no postoffice given) says: "I have a valuable mare worth \$150, if she would work. She likes to stand back and look at a load, as well as any animal I ever saw, but she has no liking for putting her own shoulder to the collar, to help pull it. Can you tell me how to convince her that as long as I feed her and take care of her well, that she ought to pull a little? Is so, you will oblige a subscriber."

If the mare has not been badly spoiled, patience and good judgment may convince her ladyship that she ought to help when called upon.

Balking is an idiosyncrasy, and can never be cured by any harsh means. Kindness and tact will in most cases overcome it.

We would recommend putting on the harness and driving her around for half an hour or so without hitching her to anything, and repeat the experiment for some days at about the same hour of the day, giving her a small measure of oats, or an ear or two of corn after each experiment, while she yet has the harness on. Then we would hitch her to a light wagon or buggy and exercise her daily with this, walking by her side, and if she will pull that, get in the buggy and follow this up, gradually adding to the load and each time petting and encouraging her. Whenever the load reaches a point that she will not pull or attempt to pull, is the time to decide who is to be master.

The experiment should always be made in the morning, so as to have plenty of time. When she refuses to pull, speak to her in the ordinary tone of voice once or twice to satisfy yourself that she means "business," and then make up your mind to sit on the load the balance of the day. If you have more patience than the mare, you will succeed in making her a serviceable animal, but if the mare excels you in patience, you may as well turn her out for breeding purposes.

One day may not be sufficient to disgust her with standing still; if so, put her in the stable and hitch her up again the next morning, and endeavor to start her as before, but if she refuses to start, get on the shady side of the wagon with a newspaper, and—wait. If she is worth \$150, you can afford to spend a week or so with her. Try it.

OUR PARIS LETTER.

The Chemistry of the Soil—M. Grandean's Experiments—Grass vs. Selling—The Gray Horse—The Honey Bee—Artificial Manures—Phylloxera—The "Isabella" in France, &c., &c., &c.

PARIS, FRANCE, July 13th, 1872.

Both in France and Germany chemists are actively employed, not to discover the composition of soils, but rather the degree of their fertility. Under what forms are the elements of the soil assimilable by plants? That is the question for practical men, and to confess the truth, about which science has furnished but little exact knowledge. M. Grandean, the celebrated French agronomist, has attacked the problem. He takes two specimens of soil, equally rich in mineral matters; the one is black, very fertile, and comes from Russia; the other is from France, and is only rich in proportion as it is manured. In the first specimen of soil, the mineral matters exist in a form that the roots can at once assimilate; which is not a condition in the case of the second. This black coloring matter of soil number one was carefully separated; it remained unaffected by certain chemical tests, and only when evaporated and the residue calcined were mineral matters detected. Farm-yard manure gave the same results as the black soil. This colored liquid, a sort of "chyle," contained the prepared, the cooked matters, for vegetable nutrition, and circulates at once through the tissues, where organic substances in combination with mineral matters do not. In a word, organic matter is essential to work up the minerals into this "chyle," thus reconciling the humus theory of DE SAUSSURE with the mineral axioms of LIEBIG.

To complete our scientific news, BOUSSINGAULT delivered an interesting lecture the other day, on iron as an element in life. I gathered from the old chemist's remarks that there is as much iron in white blood—as in oysters and snails—as in red; and the coincidence is the same in the vegetable kingdom, green juice being no richer in iron than the white juice of the mushroom. As food, blood is the richest in assimilable iron, as the metal has been already assimilated; and the pig is the only animal, added the celebrated chemist, whose blood is not repulsive as an article of diet.

From a series of interesting experiments, conducted at the agronomic station of Prileas, in Austria, applications of potash, in the form of phosphate or carbonate, sensibly increased the yield of sugar—the former more markedly.

The question is still being warmly discussed as to the relative advantages of grazing cattle, or converting the grass into hay for the stall-feeding of stock. The opinion seems to be, that where meadows can be well irrigated, &c., grazing is not the most profitable plan of culture.

In Belgium, the chief incident to signal is the increased rarity of the celebrated dray horse. The government is occupied in the purchasing of stallions of that breed—their services to be gratuitous.

Efforts are being made to promote bee culture in France, under the auspices of a central society. The pupils of the rural schools will receive prizes for every hive they can maintain; the German or "Dzirzonhire" is that which is coming into favor. Parents are reminded that, as an article of food honey is most excellent, and can be used as substitute for butter, which commands double the price.

With the season for employing artificial manures comes the necessity for guarding against adulterations. The French authorities recommend farmers to purchase no cheap chemical manures; to compel the vendor to set forth in his account the composition of the manure sold; to obtain a sample of what is purchased, requesting such to be sealed in a bottle by the seller, and forwarded to the appointed chemist, who will analyze it gratuitously. The sample is to be selected promiscuously from the sacks when delivered. This plan has successfully checked adulteration.

In a recent Agricultural show, two new features

were much remarked. Prizes for a set of instruments, including thermometer, barometer, microscope, lactometer, sugar-tester for beet juice, &c., and also for a cattle medicine-chest, were awarded.

The *phylloxera* continues its ravages on the vine. Soot, lime, carbolic acid, have been tried, but only with partial success. One farmer has even watered the infected roots with white wine. The prize of 20,000 frs., offered by the government for a perfect cure, has yet to be won. Like the cattle plague, destruction of the infected is the best of plans.

Switzerland has interdicted the introduction of vine stocks, either from France or Italy. Stocks of the American vine, "Isabelle," are now being tested as to their alleged power to resist the insects. The grape of that American species, up to the present, has been employed to give a bouquet to some French wines. It is intended to graft native cuttings on the American favorite.

During the war France imported much forage from Algeria; and in the neighborhood of Blois, Orleans and Vendome, where the cavalry were picketed, quite an African flora has sprung up, in places quite sandy wastes, and hitherto stranger to all vegetation. One hundred and fifty-nine new and distinct species have been reckoned, some reaching three feet in height. The *medicago* and the *alopecurus* are most general.

CORRESPONDENCE.

THE TIMBER AND COAL OF KANSAS.

BY C. A. LOGAN.

EDITOR FARMER: In your last number Mr. R. S. ELLIOTT, Industrial Agent of the Kansas Pacific Railway, has an article entitled, "Forest Trees in Kansas." The article is valuable as indicating the best methods of gathering the seeds—with directions how to plant them—of nine of the most valuable of our forest trees. It should be read and preserved by every farmer in the State; as the absolute necessity of tree-planting, for the economic uses of life, must, ere long, force itself upon every thinking man in Kansas. This necessity will comprehend not only the demand for shade trees (considered also in their physical influences), trees for building and fencing timber, &c., but likewise, timber for fuel; and, in my opinion, this latter, in the years to come, will be the most exacting and importunate of any.

This statement may scarcely be credited by many, in the face of the oft-repeated boasts of our "inexhaustible coal-fields." Although, in a certain sense, there is something of theoretical truth in these boasts, yet, in the practical application, it will some day be found how much of fallacy underlies them. It is my purpose, so soon as my observations shall be sufficiently complete to comprehend a portion of the State, about whose geological position and character I am not yet satisfied, to publish an article, which I trust may do something toward establishing exact information as to our real coal resources.

At present, let us not deceive ourselves into a false belief by startling computations, fixing so many million bushels of coal under each square mile of our State; for practical purposes, it has no existence, to any such extent.

Of the superficial coals—those actually, not geologically nearest the surface—the Fort Scott and Carbondale, so-called, are the only coals north of the fifth standard parallel, S. (as a purely arbitrary line), which can be made available for practical purposes. I do not now pretend to speak of anything south of that parallel, my information thereof not being sufficiently definite. The fields containing these coals do not, by any means, comprehend all of the superficial coals of the State. Seams of true coal are found nearly all over it, to the western line of Pottawatomie county, or even beyond; but these seams are so thin, they cannot be mined, and they have too much cover to "strip;" as, for instance, the seam cropping out on Wolf Creek, in

Jackson county; or, they are so impure—as the Stranger and Franklin county veins—or perhaps both, as to possess no practical or commercial value.

Now, instead of the coal fields above referred to being "inexhaustible," they are, in my judgment, destined to very rapid exhaustion. The coal in them is found in knolls, having been cut out in the intervening vales by aqueous erosion; and in those places where "stripping" is practiced, the surface is dug over with great quickness. This fact is well illustrated in the remark made to the writer lately by a Fort Scott coal-dealer, that "Every car of coal gotten out, makes the next cost more." The cream of these veins is now being skimmed, and it is but a question of time when "stripping" must cease, and our coal be produced from mines. This result must be hastened by our rapidly increasing consumption.

Railroads are multiplying and extending through our State with amazing strides, and the amount of fuel eaten up by these iron cormorants is even now immense. Population and growing manufactures of every kind will hasten the consumption; and but a few years, comparatively, will suffice to swallow every acre of available coal from these surface fields. Then the reliance of the State for coal must be upon its deep beds. Where are these deep coals?

Speaking only of the region north of the fifth standard parallel, I would say they are embraced in the territory extending from the eastern border of the State north of (at a rough guess) the third standard parallel, to a distance of from one hundred to one hundred and twenty-five miles west. Here the rocks of the carboniferous, proper, begin to be lost, and those of the secondary and tertiary, respectively, come into view. Here is a region, then, from the Carbondale coal-field to the western edge of the State, utterly destitute of available coal (no reference being had to the lignite or spurious coal of the later eras, whose fuel-value is yet to be determined, whatever enthusiasts may say of it), except it were possible to reach a large bed of the lower carboniferous by shaft. At Leavenworth the first workable vein (twenty-four inches) is found, at a depth of 700 feet. The "great micaceous sand-rock," so well described by LESLIE in his "Manual of Coal," and beneath which the six-foot bed of the West invariably lies, is only reached at a depth of 150 feet below the Leavenworth shaft.

These data will serve to convey an idea of the immense depth of a shaft—at Salina, for instance—necessary to reach into the lower carboniferous, if the strata of the different epochs were resting conformably in position; a shaft far deeper than any in America.

These statements, if acquiesced in, will force the conviction, that ultimately the whole demand of Kansas for coal must be upon the deep beds of its eastern border, north of the third parallel; for the Fort Scott bed, which represents the six-foot bed of the West, lying beneath the "great micaceous sand-rock," as it does, HAS NO CONSIDERABLE BED OF COAL UNDER IT. This statement will probably be disbelieved by many geologists of our State, but I am willing to rest its verification upon the developments of the future. Forty or fifty miles south of Fort Scott and the fifth parallel, this Fort Scott bed thickens in places, to nearly four feet, and there can be mined to advantage; but the same causes which have cut the bed down to one foot at Fort Scott, have also operated to render it unstable in varying localities.

Let us not deceive ourselves; and by all means, let us not give expression to the infamous sentiment, "After us, the deluge." Let our farmers plant trees for fuel, as well as for other purposes, and my word for it, those of them who shall live to see the expiration of the next two decades, will have no cause to regret the provident forethought.

There are other trees than those mentioned by Mr. ELLIOTT, which might be advantageously grown; and I do not see that we should be restrict-

ed to those native in our State. Speaking of the ash tree, Mr. E. remarks: "Dr. LOGAN, in the Kansas Geological Report, says that the white ash is native in Kansas; but I am not sure." The report was made in 1865, after several years' observation of the trees apparently native in the State. I see no reason why the ash should not be as old an inhabitant of Kansas, as the oak, walnut, and others. It belongs to a family (the olive) which, though not large, has an extensive geographical range, and adapts itself to wide diversities of climate. It grows freely from Canada to Louisiana, and from Kansas to Texas, Colorado, New and Old Mexico, &c. There was a time, of course, when all vegetation was introduced to localities theretofore without it; as there was a time, when animal life spread itself from its initial point to successive localities. I have seen, not only the white, but the blue and green ash, at many points over Northern, Southern and Western Kansas; all varieties, however, seeking a moist soil.

There is one thing about the ash, which is the common fault of a great deal of our Kansas timber; it does not answer well for purposes requiring a clear, straight-grained, tough piece of wood—as for carriage-makers' uses. The season in which timber is cut, of course, influences its character; but as a general thing, our timber is "brah," and gnarly, which character it receives from the co-operative agencies of soil and climate. Selection of proper sites according to the habits of the tree, together with cultivation, would do much to overcome these difficulties.

Leavenworth, Kansas, August 6th, 1873.

THE STATE AGRICULTURAL COLLEGE.

BY J. DENISON.

EDITOR FARMER: The deep interest you have manifested in the welfare and development of this Institution, has in many instances been both an aid and a relief to its Faculty and its Board of Regents. Those engaged in a public enterprise should not only tolerate but welcome faithful, intelligent criticism. True interest in and friendship for an enterprise cannot be better shown than in this way. All personalities and harsh severities should, of course, be avoided. We have only been anxious that those who write from a distance should first come and get a knowledge of all the facts in the case; as an individual may appear very strange and awkward, if not wrong, to himself as well as others, who forms and publishes his opinions before getting this knowledge. We fully agree with you in the truth, made more evident in the articles in THE FARMER on the Act of Congress of July 2d, 1862, granting lands to Agricultural Colleges, that *Agriculture and the Industrial Arts should stand first and claim most in these Institutions, and that the development of these should be pushed forward as early in their history and as fast as may be possible.*

We trust that those who have read the other articles in THE FARMER, on the Agricultural College, will read the account in the last number (July 1st), from the pen of Dr. CHASE, of the late examination in this Institution, and that they will believe us when we say that both the Regents and the Faculty are earnestly working to bring out more results of the same sort.

You very justly commend the care that has been taken in creating the Endowment Fund of this Institution, as the present income from it is \$23,000 a year. The fact is worth recording that its funds, by your advice as well as others, are being invested in Kansas school district bonds; and that while eighty-five school districts have already been aided to build their school-houses, and have sold their bonds at a higher price than before the Institution began to buy, the revenue of the Institution has also been increased.

One thousand students have been more or less educated at this Institution, and a large majority of them are children of farmers. The average length of time each has attended is less than a year. If

persons will only remember that we have been and still are on the frontier, where many of the counties are not yet able, and may not be for some time to come, to give the farmers' children all the training they need in geography, arithmetic and grammar, and that if they get this at all it must be at the Agricultural College; and also remember, that to attempt to take a student, not trained in these, into the higher branches, such as agricultural chemistry, entomology, botany, animal husbandry, &c., would be simply preposterous, nay, impossible; and that, after we have taught them in these for about a year, the larger number of them leave us—I say, if persons would remember these facts, many of the charges of blame that now lie against the College would be removed. All of practical and scientific Agriculture that our students are prepared to receive, they now have, and many of the young men are paying their expenses by work upon the farm and in the Nursery.

It is stated that Congress gave large amounts in land, to endow Agricultural Colleges, and asked what have we to show for it.

We answer, that in this State we have the above and following facts, and yet more, to show: The Endowment lands wisely selected and kept from market until they were worth something; about one-half of them sold, and now producing a yearly income of \$23,000, and the other half steadily increasing in value; 1,000 children of frontier parents educated more or less; \$50,000 worth of property given to the State in lands and buildings and apparatus and library, by Manhattan and the friends of the enterprise in the East; one member of the Faculty alone has already given \$4,000 to the enterprise, and the obligations he has assumed are not yet paid off. If Iowa and Michigan and Massachusetts have done more, it is because they are older States, with more means, and with students farther advanced before entering College.

Of farm crops this year we have: Of corn, 35 acres; oats, 25 acres; millet, 9 acres; potatoes, 3 acres; beets, one-half acre; experimental crops, one-half acre; rye, 7 acres; clover, 3½ acres; meadow, 40 acres; pasture, 40 acres; lawns, 15 acres.

Of the nursery, the examining committee last month said: "That the forty to fifty acres under this and forest tree cultivation were in such condition as to leave nothing to be desired. The grounds were in perfect order, and the countless varieties of trees and shrubs were in most thrifty condition. In fact, it is the opinion of those members of your committee who have had experience in such matters, that no grounds of equal size, in this or any adjoining State, can put in so fine an appearance as the College Nursery."

From January of this year to June 26th, five thousand hours' work was done by from thirty to forty students, on the farm and in the nursery.

How could this or any other new State give a better showing? Are not growth and development evident here—and growth and development in the right direction? Of course, much more remains to be done.

If Congress, in 1862, had given its donations for the growing of a certain species of oak trees, what might we now, thus early, look for as a present reasonable result? Surely not full grown and mature oak trees, in ten years; but the germ, well developing, and in healthy process of growth. Full maturity can only come after the growth of years. *Manhattan, Kansas, July 19, 1872.*

COCKLE BURR—(AGROSTEMMA GITHAGO).

BY JOHN ENDSLEY.

EDITOR FARMER: One of your well known correspondents lately gave us warning of the advent of the Canada thistle. This is well; for, as a rule, we are not careful enough to give extra attention and battle to the first inroads of noxious weeds. I have never, as yet, seen the thistle, to know it. They might be growing near, I might see them frequently, and give no attention to them, because

ignorant of their true nature. Perhaps there are few who do know them.

The particular object in view in writing at present, is to call attention to another pest, the

COCKLE BURR.

Is there any other weed, common to all the States, in which the whole people should take a greater interest in exterminating, than this one? Every tiller of the soil, the wool-grower and dealer, the manufacturer and wearer of woolen goods (and who does not wear woolens?), all are, or should be, more or less interested in keeping that pest from taking a foothold in our fair State. What is a clip of wool worth, that is thickly matted with burrs? What quality of goods can be made from the wool? What is a field worth, when well seeded with this burr? Has any one ever known them entirely subdued in a neighborhood, where once well started? I have known fields in Iowa rendered almost worthless by them. Already they are started in certain localities in our eastern counties. In at least one neighborhood, in Johnson county, I deem them established. There are a few in our own neighborhood; but, by diligence and extra care, they could be subdued. But Kansas is, as yet, comparatively free from them. Is it not, then, a good time to agitate this subject?

We should keep in mind that prevention is better than cure. It is easier to dam the brook than the mighty river. It is, likewise, easier to be rid of those burrs when only a few, or a few dozen, are growing on the farm, than to wait until they are as numerous as the stubble of the grain field. We should make it a rule to pull up every stalk on sight. Don't pass it by unhurt; or if you do, be sure and go back and pull it up the first leisure moment, if you have to walk a half mile to do so. We owe this vigilance to ourselves; we owe it to our neighbor. Do we say that we are not responsible to others for the weeds that may grow on our lands, that may seed their grounds? If we do, we are either mistaken or we pervert language. One or more persons, by letting the burr in question grow upon their lands, will give all others in the neighborhood extra work, care and attention, in keeping them subdued. Then, let every one who either works or controls lands, see to it that not one of these burrs grows on his premises. *Richmond, Franklin Co., Kan., July, 1872.*

ABOUT CURRANTS.

BY ED. RUSSELL.

EDITOR FARMER: I am not a little astonished at the action of our State Horticultural Society in reference to currants, and can only account for it by the fact of the Society being held in the Southern portion of the State, whence most of the attendance probably came. I presume that Southern Kansas is too warm for much success with the currant; but if I lived there I should not give up the same without very much of a struggle.

I planted, in 1861, several hundred currant bushes, of various varieties, upon a high prairie, fully exposed to the sun and air. They received fair, not first-rate, attention. The second year there were fewer bushes than the first, and they seemed to grow scarcely at all. It occurred to me that the exposure was too great, and, knowing that the currant is adapted to cool instead of warm climates, I moved a portion of my bushes—part Red Dutch, White Grape and Victoria—and set them on the north side of an ordinary six-board fence; but upon the south side of the fence there was a thicket of hazel, hickory and oak. I also, the first year, carefully mulched the bushes. The bushes grew finely, and bore quite well the first year, and the second they were laden with fruit; and some of the bushes grew almost to the top of the fence.

I have in my garden, in Leavenworth, a row of currants on the west side of a light board fence, and they have received very little care; nevertheless, they are growing slowly, yet surely, and this year bore fruit quite encouragingly. They have

not done so well as many bushes did upon the farm (which was in Doniphan county); but the situation is not so good here, nor have they received so much care.

A few words about budded peaches. On the same farm aforesaid I planted, on the top of a ridge of prairie, one hundred choice budded peach trees, from a Rochester (N. Y.) nursery. They grew finely, but the severe Winter of 1866 nearly killed them, requiring them to be cut back for more than two years of their growth. In 1867 the trees bore finely—much more than paying for all cost of trees and tillage—the peaches selling for \$4 to \$7 per bushel. I have, in my yard, budded trees, at this time laden with fruit; one bushel of which, to my fancy, is worth a tree full of most seedling fruit. *Leavenworth, July 31, 1872.*

STIRRING GROUND.

BY E. SNYDER.

EDITOR FARMER: On page 232 (number for August 1st) occurs: "The greater the drouth, the oftener should it be stirred." This depends on circumstances. In the drouth of 1860, the fallacy of the theory was plainly proven on my own ground. In very severe drouth, the object should be to prevent evaporation as much as possible, which cannot always be done by plowing. In fact, frequent plowing accelerates evaporation, when the soil is in certain conditions.

The benefit of Fall plowing cannot be too strongly urged. Unless heavy rains occur, to beat down the ground, late plowing of corn is undoubtedly an injury to the crop. The fact is, the farmer must be educated how to apply cultivation and fertilization to crops; and as no detailed rules can be given to suit all cases and localities, the agriculturist must become acquainted with the requisites of growing plants, or success is by no means certain, to pay for the trouble.

The education of Agriculture has been woefully neglected, and in perusing the Agricultural literature of the times, we find to a great extent a mass of contradictory statements, and a much greater desire on the part of contributors to maintain an untenable theory than to arrive at the truth.

METEOROLOGICAL.

BY WILLIAM NEISWENDER.

EDITOR FARMER: As I see no one writing to you from this portion of the country, I thought I would scratch a few lines. The corn crop is excellent—was a little late in getting it planted, but since it was planted I never saw corn do as well as it has done in the Kaw Valley. There is at least twenty-five per cent. of an increase in the acreage over last year, and it bids fair to average fifty bushels per acre, and some even lay it higher. Oats are rather above an average crop. Potatoes are good. What rye was sown is a fair crop. There is, and will be, considerable buckwheat sown.

I will give you a synopsis of my meteorological observations for May and June. I take observations at 6, A. M., 1, P. M., and 9, P. M. During the month of May, 8.20 inches of water fell. The highest the mercury rose, during the month, was 89 deg., which was on the 31st of the month, at 1, P. M., in the open air. The mean temperature for the month, at 1, P. M., was 75 deg. 33 min.

The number of times the wind was from the northwest was twenty-five times, from the southwest six times, from the southeast thirteen times, from the northeast twelve times, from the south twenty-two times, from the west five times, from the north two times. The number of times it was perfectly calm was five.

The lowest mercury was, during the month of June, was on the 23d, at 6, A. M., which was 57 deg. The highest was on the 27th, at 1, P. M., which was 100 deg. The mean temperature for the month, at 1, P. M., was 89 deg. 30 min. The amount of water that fell was 2.95 inches.

North Topeka, Kansas, July 17th, 1872.

The Kansas Farmer

AGRICULTURAL COLLEGES.

In the series of articles of which this is the conclusion, we have not been unmindful that it is easier to tear down than to build up, to discover defects than to remedy them. We have endeavored to show that the Agricultural College Act had a clearly defined object, as understood by those who enacted it. It was to provide a new means of educating a specific class. It was to aid Agriculture, by training those who were to follow it in the application of better methods and more science in its practice. It was designed to establish a school of thorough, practical Agriculture, where those who desired to till the soil as a life calling, could fit themselves for the peculiar duties of their chosen profession.

It was designed to make the man a farmer, and not the farmer a man. It did not propose to make the farmer a philosopher, a logician, linguist, master of the arts and sciences, but to make him master of the art and science of soil culture, and its kindred pursuits, whether possessed of those other acquirements and accomplishments of learning or not. It did not assume that farmers must not be educated in the classics, made masters of art, doctors of divinity, law, or medicine, no more than our medical colleges reject men who have studied law, or mastered civil engineering. But to read the law in connection with the extracts we have quoted from the debates preceding its passage, and then say that Agricultural Colleges were created to instruct students in any of the branches of learning taught in common schools, Normal schools or colleges, is to fly in the face of reason, and deny common sense to the men who executed it.

If the language of the Act, in the light of contemporaneous facts, means anything; if the men who projected it had any intelligent purpose in its passage, that meaning and purpose were to provide a limited, technical course of education, embracing such studies, and such only, as are required to fit the student for success in the industrial professions and pursuits of life. That this education should be practical, applied instruction, in the sense that military science and tactics are taught at West Point, commercial law and practice in the business college, and mechanics in the workshops. No candid mind, we believe, will attempt to disprove or evade this conclusion.

Assuming this to be a correct conclusion, as to the purpose of the law, we find no existing machinery of education adapted to the end; no Agricultural College existing, except in name. Such machinery must be devised, such colleges perfected, or the undertaking will fail, with dishonor to the people, and disaster to the country. The idea was new and novel to our system of education. Time alone could put it in practice. No one could stand up and claim fitness for a professorship in such a college. We do not believe there are a dozen men to-day in connection with these colleges, who have an adequate conception of the grand purpose and beneficent end contemplated by that far-seeing statesman who framed the law, Senator MORRILL. If he could have left the halls of Congress, and been untrammelled in building up a model Agricultural College, under the provisions of the law he devised, ten years would more than offset fifty years of the progress we can rightfully expect from those uninspired by his comprehensive grasp and enthusiastic support of the undertaking.

We hold, then, that to reach the desired end there must be a radical change in the course of study and mode of instruction, even in our most progressive experiments under this Act. Our present courses of study are confined to books, and pursued in-doors. These habits of study unfit the student for out-door active life. He lives and moves and has his being, as a book-worm. His

habits and tastes conform to his circumstances. He becomes sedentary, inactive, and necessarily averse to the robust, active, moving habits of out-door life. Research and study of text-books dwarf his power of observation, and subordinate his judgment to the author he studies. Manual labor is not called into requisition; it is not a necessity of his studies, and forms so small a part of his daily duties that it will never be cheerfully accepted as a part of his after life, until re-educated in the school of a forced experience. He will cultivate his library, to the neglect of his fields, until hunger drives him between the plow-handles, where he will find, to his sorrow, that the mastery of pure science, the higher mathematics, and the classics, are cheap accomplishments, to be gladly exchanged for a moiety of learning in the field of applied science.

Every study, not a purely professional one, must be eliminated from the curriculum, and left to other institutions, where the student may go and master them before entering an Agricultural College. The hands must be educated to apply what the head is made to understand. The student must enter it as young men do the counting-room or machine-shop—to learn a trade. Ample grounds must be supplied for the cultivation of fruit, grain and vegetables, for profit; ornamental trees, shrubbery and flowers, for comfort and adornment; and all needful experimental culture, for scientific and practical tests. The breeding of animals and crossing of blood for the improvement of breeds, must be amply provided for—not as a plaything for the curious, but to determine results for profit. Every study in school-room and laboratory must be capable of being coined into the solid currency of practical result, and be sealed with the sweat of the student's face upon the farm. Every study, in its character and pursuit, must have reference to the life work of the student, and be taught as an applied, not as a pure science, that he may go out unencumbered with unpractical, vague notions, as to the uses of his learning.

Such an institution is our ideal Agricultural College; and until it is approximated in practice, we do not believe Senator MORRILL will have his expectations realized, or the Agricultural interest of the country feel any appreciable benefit from them. We are not unreasonable, nor even impatient at the delay, so long as the managers of these institutions admit the fundamental object in view, and strive to attain it. Apples do not ripen in May; it takes the morning sun and evening dew, the burning noon and pelting storm of a Summer, to mature and ripen the perfect fruit. We must have a like delay and varied influence in perfecting this new educational enterprise. Patience only ceases to be a virtue when efforts to run our Agricultural Colleges in the old college groove are persisted in, and we are told that Congress intended to duplicate those old-time institutions of learning under the disguise of a new name.

QUESTIONS ABOUT THE ASH.

SAMUEL BUCHANAN, Garnett, Kansas, sends us some seeds of a species of ash, and asks us to name the variety, and also, to tell him when they get ripe, and when they should be planted, and adds: "Have had heavy rains. Creeks very high. Corn will be worth ten cents per bushel this Fall; oats ditto; wheat light; fruit abundant; drouthy Kansas played; doctors whittling dry goods boxes, consequently, health good." (We hope our correspondent don't mean to be sarcastical, as JOSH BILLINGS says, on the doctors.)

ANSWER.—We are unable to determine, positively, to which species of ash the seeds sent belong; and it is really immaterial, for practical purposes. They may be the seeds of the white ash (*Fraxinus Americana*); of the blue ash (*Fraxinus quadrangulata*); or of the green ash (*Fraxinus viridis*). To determine positively which of these three it belongs to, would require specimens of the leaves and a section of the bark.

The ash is a valuable timber, and as it is of rather quick growth, should be largely planted. The ash belongs to the class of trees known as dioecious; that is, the fertile and barren flowers are on different trees; and in selecting seed we should gather it from different trees standing in the same neighborhood.

The seeds of all the species, we believe, ripen about the 1st of October, and may be planted in the Fall, by covering lightly with earth, or may be kept through the Winter in moist sand, and planted in the Spring.

The green ash, to which we suspect the seeds sent belong, is a smaller tree than either the white or blue ash, is a much more rapid grower, and it is said the seeds of it will germinate in the Spring, even if kept dry throughout the Winter.

All species of ash are comparatively exempt from the depredations of insects. The white ash is sometimes attacked by the may-bug (*Lachnostema furca*), which destroys the foliage early in the Spring.

These facts are mostly obtained from that excellent work upon Forest Tree Culture, by ARTHUR BRYANT, and to which we refer our correspondent for further information upon the subject.

We should certainly recommend Mr. BUCHANAN, and others who have the opportunity, to gather the seeds of the ash this Fall, and plant largely of them—a part this Fall, and a part in the Spring. The young trees of all the varieties transplant readily at one or two years old.

DOUGLAS COUNTY HORTICULTURAL SOCIETY.

The Horticultural Society of our neighboring county is one of the most intelligent and efficient of any in the West, and while other counties start Horticultural Societies, meet half a dozen times, and die, the Douglas county fruit growers meet, organize, and go to work intelligently, and keep at work month in and month out.

One reason of this is that members of the Society in this county have cultivated the social element, and have enlisted the sympathy and support of the ladies, and hence they are successful.

Their practice is to meet once a month at the house of some one of the members, and have a kind of picnic. That is, each family brings provisions with them already prepared, and consequently the family at whose house they meet are put to but little trouble, and all hands have pleasant and instructive time. We get the following items from the *Tribune*, which has an excellent report of the meeting.

The last meeting was held at Mr. MANNING's, and the meeting was called to order by the President, Mr. BRACKETT.

Mr. HILL, Chairman of the Committee on Orchards, reported that he had examined several orchards, and found considerable twig blight, mostly among trees from three to five years old. The peach crop has been considerably damaged by curculio, and some of the earlier varieties are rotting badly. Thinks the crop will be inferior.

Blight is affecting many of the pear orchards, mostly the old trees. He expressed the opinion that pear blight was not caused by the sun.

Mr. JOHNSON reported considerable pear blight in Johnson county, Kansas, and Jackson county, Missouri. Several gentlemen reported that they had no blight among their pear trees.

Mr. MESSENGER was of the opinion that electricity was the cause of blight, affecting the sap as it does milk—souring it.

Some one suggested lightning rods as a remedy. Mr. PEIRSON said his trees were affected most on the northwest.

Mr. MESSENGER said his trees were affected most on low ground, where there was the most water, and conditions most favorable to electricity.

Mr. PEIRSON said trees on high ground were affected quite as much.

Mr. RANDOLPH said in his orchard on the clay

soil, there was no blight, and but little on the hard pan, but on the deep soil it prevailed to an alarming extent.

Mr. KELLY said that that portion of his orchard over which liquid manure flowed, was free from the blight.

Mr. T. E. TABOR, Chairman of the Committee on Small Fruits, had no report to make. The reporter, in a note, concluded that it was because he had been so busy marketing his Kittatinny blackberries that he had no time to look away from home.

Mr. DUNNING from the Committee on Vineyards, reported that the Concord berry was filling out finely, but the bunches not as compact as usual. Catawba and Isabella had full branches. No rot has appeared.

Mr. TWEED said that grapes had commenced to rot within the past few days.

Mr. BELL said his Catawbas and Isabellas were looking fine. Last year at this time they were rotting badly. His Clintons rotted badly last year, and were rotting again this year.

Mr. VINCENT said his Clintons had rotted badly for the last three years. Had dug them all up.

Mr. SEDGWICK had planted one hundred Crevelinges, and they had all winter-killed.

Mr. COLEMAN's experience with them was the same.

At this stage of the discussion dinner was announced, and over two hundred persons who were in attendance, surrounded a table one hundred feet long, and after the blessing had been invoked by Rev. Mr. LOVEJOY, the company feasted upon the good things provided by the ladies.

After dinner the discussion upon vineyards was resumed.

Mr. LOVEJOY's Catawbas had done well for the last four years, and thought the rot was produced by the weather.

Mr. CRAMER thought it was meteorological.

[NOTE.—We are of the opinion that when the barometer indicates great humidity, with the mercury running high in the thermometer, and these conditions are maintained for a considerable length of time, that grapes and peaches will be found to rot. Some varieties more than others certainly, but sooner or later, all varieties.—ED. FARMER.]

Mr. VINCENT said "rot" was not new, had existed for two hundred years, and was as much of a mystery, as then.

Mr. DUNNING said his early peaches were rotting badly. Hale's Early the most.

Mr. CRAMER used game chickens to catch curculio. His plums and peaches were in good condition. Would have an immense crop of peaches.

Mr. LOVEJOY will have from six hundred to one thousand bushels.

The question, "What to do with the peach and grape crop," was discussed.

Mr. CRAMER thought they ought to start a canning establishment, which project was discussed to some length.

[NOTE.—Kansas ought to have half a dozen canning establishments, and they may be started at little expense. Baltimore alone has several, and much of the fruit put up there, is shipped from a long distance.—ED. FARMER.]

A vote of thanks was extended to Mr. MANNING & SON for the kind reception and pleasant entertainment the company had received.

Mr. PEIRSON, Dr. GLEASON, Messrs. VINCENT, MESSENGER, DUNNING, FURMAN, and COLEMAN, exhibited specimens of fruit, among which was the Red Astrachan, Red June, Summer Queen, Early Harvest, Indiana Red Streak apples, Hale's Early, and two fine seedling peaches, and Lawton blackberries. After considerable profitable discussion, the meeting adjourned.

STIRRING GROUND.

At the risk of offending we publish elsewhere a part of a private letter from our friend Mr. SNYDER, of Highland, Kansas, upon the above subject.

The words quoted by him from our last issue were not mere theoretical opinions, but, as we then stated, were the result of long and careful observation; and we can cite several instances where thirty bushels of corn per acre were raised in Kansas

in the drouth of 1860, to which Mr. SNYDER refers, and which were cultivated once a week as long as a horse could go between the rows. Those instances where crops are damaged by plowing in dry weather, are where a shovel-plow, or some implement that goes deep enough to break the roots, is used. We recommended the use of a five-toothed cultivator, for the last plowings, and two or three inches is deep enough to go. It is the surface that needs frequent stirring.

REMEMBER THE WHEAT CROP.

The time for sowing wheat is fast drawing near, and every moment of spare time should be devoted to preparing the ground for this crop.

The harrow, the roller, and the drill, are the implements that insure a good crop. Use them without stint. It is a good plan to soak the seed wheat for a few hours in a solution of blue stone (sulphate of copper), say one pound of blue stone to eight gallons of water, and if to be sowed with a drill, dried with plaster or ashes. The plaster will add materially to the crop on most soils. Try it.

CORRECTIONS.

Prof. RILEY writes us to correct three or four errors in his article on the "Green-Striped Maple Worm," published in our last issue, as follows: In the first column, fourth line, for "Bonebycidae," read Bombycidae. For "Stigmatæ," read Stigmata, wherever it occurs. [Both of these errors are in the copy, and not the fault of the compositor.] In line 22 from the bottom of second column, for "experiences," read specimens.

EARLY ROSE POTATOES.

In another place a correspondent asks, "How late Early Rose potatoes may be planted, in order to secure a second crop?"

It requires about one hundred days to ripen up the potato perfectly in ordinary seasons, although one year we had a crop that perfected itself in seventy-six days, so that the potatoes grew when planted the same season.

We have no doubt they might be planted as late as the 20th of August, and still mature.

Why not try how late it can be done, planting say, every week until September 1st?

THE FRUIT PREMIUMS.

Our remarks addressed to the County and Township Agricultural Societies, and to fruit growers generally, in regard to the State Fair Premiums, are bringing forth fruit plentifully.

Several of our best exchanges have taken up our ideas and are pressing them with force and vigor upon the fruit growers of their respective localities, and our fears that some other State might come in and carry off the prize, are considerably allayed. If the papers of the State will but urge it upon their readers, we will not only save the prize to Kansas, but will have the largest exhibition of fruit ever made on this continent.

General News.

MR. D. W. POWERS, of this city, sold \$82,000 worth of cattle to an Illinois firm, two days ago.

MORRIS County proposes to hold a Fair this Fall, a Society having recently been organized. The time of holding the same has not been agreed upon at this writing.

WORK on the Pleasant Hill, Lawrence & Topeka Railroad, is progressing finely, and it is thought that the cars will be running from Topeka to Le-compton by the first of September.—Perry Times.

PRESIDENT HOSS, of the Normal School, has been made a Doctor of Laws by the Indiana State University. Doctor Hoss is, however, a very different thing from a "Hoss" doctor, you understand.

WE regret to learn that Messrs. SPRIGGS & NICCOLLS lost considerable by the freshet. About thirty Chester White pigs were drowned on the

Judge Campbell farm, also about ten acres of corn was destroyed, and other damages to property from the flood.—Garnett Plaindealer.

THE arrangements are made with regard to the premiums offered by the Nemaha Agricultural and Horticultural Society for the best farms in the county. There are three classes: 40, 80, and 160 acre farms, and there must be five entries of each to secure the premium, which has been fixed at \$55 per farm. Entries must be made before the 15th of August, to Wm. Histed, Seneca, Kansas, by mail or otherwise.—Seneca Courier.

MR. HUNGATE sowed one-half bushel of Dolly Varden oats year before last, and raised forty-five bushels. Sowed several acres last Spring, and now has the finest crop of oats it has ever been our lot to see growing. It is an excellent article, that Mr. H. got from Canada. Mr. H. is going to sell them at \$2.50 a bushel. We think they are cheap enough to any one who wants to get a good variety of oats.—Wabunsee News.

ANDREW SCOTT, whose farm adjoins town on the north, has 45 acres of corn, which he feels sure will not come short of 80 bushels to the acre. His wheat crop was good, and his watermelons—three-fourths of an acre—will soon need watchers.

J. J. Lane, near the mouth of Elm Creek, has 40 acres of excellent corn.

J. W. Griffith, three miles south of town, has 35 acres of corn looking well.

N. W. Sabins, in the eastern portion of the township, has 16 acres of Spring wheat. In company with Mr. Wells, he has 60 acres of fine broom corn. This is a sweeping statement, but a true one.—Blue Rapids Times.

THE new barley crop is coming into market, and McCrum and Brenner are both buying. The prices are 85 and 40 cents. The crop is very good.

Brenner's vineyard promises an abundant yield. Mr. Floerkey, Mr. Brenner's courteous agent, informs us that the yield of wine from this year's crop would probably be 10,000 gallons. Mr. Brenner has about all the varieties of grapes grown in this country.

McCrum, one of the heaviest grain dealers in the county, has shipped 85 or 90 car loads of last year's corn. He has about 20,000 bushels still on hand, and he is in a hurry to get this off before the new crop comes in, which promises to be heavy.—Troy Republican.

LINCOLN TOWNSHIP FARMERS' CLUB.

From the Garnett Plaindealer, we learn that some of the progressive citizens of Lincoln township, Anderson county, met and organized a Farmers' Club, and elected the following officers: J. H. SHIELDS, President; M. E. OSBORN, Vice President; C. D. VALENTINE, Secretary; D. M. OSBORN Corresponding Secretary; C. G. REPSTOCK, Treasurer. M. E. OSBORN, was chosen Director to the County Agricultural Society.

We shall be glad to have a report of any matters of general interest that may come before this or other Clubs.

STEAM CULTIVATION IN EUROPE.

America, generally in the advance in all labor-saving improvements, is, in the matter of steam cultivation of land, away back in the dark ages.

True, one or two enterprising gentlemen in this country have proved their faith by their works, and now have the steam apparatus in successful operation; but the great masses of our farmers are ready to pooh-pooh the idea of steam plowing.

This cannot long exist. The practical results in the Old World are too great. They have and are proving too profitable, for American farmers to long neglect.

From the Boston Journal of Chemistry we learn that there are in England, at this time, between four and five hundred sets of steam tackle working for hire, as our threshing machines do. One farm

er, in Egypt, employs four hundred steam plows; but as he is building four hundred miles of railroad upon his farm, and recently bought machinery for manufacturing sugar to the amount of \$3,000,000, and inasmuch as he is pacha of that country, he can probably afford it.

A gentleman bought five hundred acres of land, near London, that could not be rented at three dollars per acre. He took down all the fences, drained the land, bought a steam plow, and put the whole tract in grain crops. Last year, his clear profits were \$18,000, after allowing \$5,000, or \$10 per acre, for rent of land.

In Scotland, many farmers have invested from \$6,000 to \$10,000 in steam machinery, and find that it pays far better than horse power. Joint stock companies are in existence there, that have invested in steam machinery, and find that it pays large dividends.

This experience should not be neglected by the agriculturists of this country; and we feel assured that those who first invest in steam agricultural machinery will make money.

NURSERYMEN AND TREE GROWERS.

There has recently been organized at the State Capital, as we learn from the *Commonwealth*, an Association of Nurserymen and Tree-Growers, for the purpose, we presume, of furthering their business interests, by securing a uniformity of prices for nursery stock, and the discussion of all questions pertaining to the business. The officers are: J. M. ROSSE, President; E. M. STONE, Vice-President; A. J. CLARK, Secretary; WILLIAM KEITH, Treasurer.

The first regular meeting is to be held at Topeka, September 18th, 1872. All nurserymen and commercial tree-growers are invited to be present at that time and place.

DO NOT DO IT.

An Eastern exchange says: "It may pay to go West, if a man has no heart to work in the East, for there he can live on less labor. He can hunt and fish, if he be too lazy to work at all."

We wish to say to those in the East, and who contemplate coming West, not to take the latter part of the above advice. Don't do it. For just as certainly as you do, you will be fooled. The fishing is not half as good as in the Adirondack or Catskill Mountains, and the hunting is nothing to brag of. The fact is, we don't want that kind of folks. We only want those to come West that are willing to work for what they get.

We want the strong arm and the willing heart. We want the head to plan, and the hand to execute. We don't want any of that class that expect to live from their wits, out here. Besides, that kind of labor is not profitable here. Stay in the East.

An ex-Attorney-General of Ohio once said to us, "When I start out to find a 'sucker,' I ain't going West!"

COCKLE BURR—(AGROSTEMMA GITHAGO.)

We ask particular attention to the article of our esteemed correspondent, Mr. JOHN ENDSLEY, upon the subject of "cockle."

What the Canada thistle is to the farmers of New York and the New England States, the cockle is to Kansas and the West generally. We would as soon have the one as the other, and in fact the Canada thistle is preferable, inasmuch as it does not affect the value of wool.

Mr. ENDSLEY does not exaggerate the case, in his reference to the burrs getting into wool. When well stocked with burrs, you can hardly give wool away; and we believe a law, making it a punishable offense to permit one to grow, as is the case in many States in regard to the Canada thistle, would be justifiable, in view of the great carelessness of many farmers in regard to them.

No man has a moral, if indeed a legal right to permit anything to grow upon his farm that will damage his neighbor. Of course, when a whole neighborhood permits this pest to grow, there is no

offense as against a neighbor; but where one man in a community is endeavoring to rid his farm of cockle or other noxious weeds, he should have the moral support of his neighbors.

The question of how to get rid of these burrs, is an important one. With the best culture in the cornfield that we can give, there will be a few of these weeds that will erect their heads, and without great care, will go to seed, and it only requires about two minutes and a half to seed a one hundred and sixty acre farm, after one plant has got a good foothold.

The only sure cure for cockle burr, is a Summer and Winter fallow.

After the corn crop is taken off in the Fall, put in the plows and break five or six inches deep. In the Spring or early Summer, as soon as the plants get up five or six inches, turn them under as deep as two horses can break the ground. Whenever they get a good start, again plow them under, and keep plowing until Fall.

The next season plant to corn, and sow to wheat in the Fall.

Great care must be taken to see that the fence corners are kept clean, both inside and outside the field. The loss of a crop for one whole year may seem too much for the whistle to some persons, but we doubt if there is any other effective plan. If there is, we shall be glad to hear it.

EXECUTIVE OFFICERS OF THE UNITED STATES.

For the benefit of our younger readers, and perhaps some of the older ones, we publish herewith a list of names of those who acted as Chief Magistrate of our Government before and during the Revolutionary war, and up to 1789, when the Constitution of the United States was adopted, together with their term of service. GEORGE WASHINGTON's term of service was from 1789 to 1797:

1. PAYTON RANDOLPH, of Virginia, from September 5, 1774, to May 24, 1775.
2. JOHN HANCOCK, of Massachusetts, from May 24, 1775, to November 1, 1777.
3. HENRY LAURENS, of South Carolina, from November 1, 1777, to December 10, 1778.
4. JOHN JAY, of New York, from 1778 to 1779.
5. SAMUEL HUNTINGTON, of Connecticut, from 1779 to 1781.
6. THOMAS MCKEAN, of Delaware, from July 10, 1781, to November 5, 1781.
7. JOHN HANSON, of Maryland, from November 5, 1781, to November 4, 1782.
8. ELIAS BOUDINOT, of New Jersey, from November 4, 1782, to November 4, 1783.
9. THOMAS MIFFLIN, of Pennsylvania, from November 3, 1783, to November 30, 1786.
10. RICHARD HENRY LEE, of Virginia, from November 30, 1776, to June 6, 1787.
11. NATHANIEL GORHAM, of Massachusetts, from June 6, 1787, to November, 1787.
12. ARTHUR ST. CLAIR, of Pennsylvania, from February, 1787, to November, 1787.
13. CYRUS GRIFFIN, of Virginia, from June to November, 1788.

THE HOG: ITS DISEASES AND TREATMENT;

WITH SOME OBSERVATIONS UPON

ITS BREEDING AND MANAGEMENT.

CHAPTER VIII.—INTESTINAL DISEASES.

[CONTINUED.]

Two other worms, that we next notice, are a white slender worm, about three inches in length and as large as a knitting-needle; the other a little white worm, shaped somewhat like a tadpole, and about a half or three-quarters of an inch in length. These two worms inhabit the lower bowels, or large intestines, generally near the anus, and may frequently be seen coming from the animal. The only symptom that we have ever observed, that

could be traced to these parasites, was an excessive itching, causing the animal to rub, especially the hind parts.

Ordinarily, these worms may be removed by giving one and one-half tablespoonfuls of Barbadoes aloes, with one teaspoonful of copperas, each morning for a week. If this fails to discharge them, after taking three or four days, an injection may be given, as follows: Tincture of asafetida, one tablespoonful; salt, one teaspoonful; water, one-half pint. Mix all together, warm slightly, and inject.

Such treatment as this may not be appreciated by the reader; but in these days, when a choice breeding animal may cost two or three hundred dollars, we certainly should know all the remedies that may be required to save life or restore health.

Another parasite that afflicts the hog, and of which but little is known, is the worm called trichina spiralis. It is a small worm, not visible to the naked eye, that has its home in the flesh of the hog, and, it is said, accumulates in great numbers.

It is stated, by those who ought to be competent authority, that this parasite, when taken into the human system, by eating the meat of the infected hog without sufficient cooking, produces a painful, speedy and horrible death.

This parasite is not confined to the hog, but is found also in sheep and goats, occasionally in cattle, and very frequently in cats, rats and mice.

It is thought by some that the hog gets these worms by eating rats and mice, which so often infest the hog-pens. While this may be true, to a certain extent, we doubt if this is the only source from which they derive them; but rather think that they may be derived from decaying animal matter, which they oftentimes eat.

The trichina spiralis arrives at maturity in about two days' time. The male is about one-eighteenth of an inch in length, and the female nearly as long again. It is taken into the stomach with the food, is set free by digestion, and in a few hours, or days at most, perforates the stomach, and makes its way to the muscles.

They reproduce very rapidly—so much so, that it requires but five or six weeks to produce millions.

The only surety we can have against this disgusting parasite, is a thorough cooking of the meat before eating; but very much may be effected toward stopping its ravages by careful attention to the diet of the swine, taking care that they are never allowed to eat any carrion or decaying animal matter.

This is a subject that demands careful attention at the hands of all swine breeders, that we may obtain all the light possible.

We have never known of an instance where the death of a hog could be traced to this cause. Without assuming that such is the fact, may not some of those cases misnamed cholera be caused by this worm?

The symptoms in the human are said to be, first, indistinct pains in different portions of the body, principally in the thighs; slight fever, with increase of pain, which soon becomes excruciating; a diarrhea discharge from the bowels; sometimes spasms, and death.

We know of nothing that could be called a remedy for such a disease.

There is another worm that infests hogs to an alarming extent, and though not fatal in its effects, is a frequent cause of disease. We speak of the kidney worm.

This worm is, when full-grown, as large as a small wheat straw, and nearly two inches in length. It inhabits the leaf lard, in the neighborhood of the kidneys, and we have sometimes seen scores of them in the same hog. It is nearly black along the back, and of a brown color on the belly. It burrows along through the fat, and is a frequent cause of weak loins, and sometimes produce a slight inflammation of the kidneys. Turpentine is the only remedy we have ever found to be of benefit, and conclude that its rapid absorption into the

circulation and through the kidneys, has the effect of driving the worm further away from that organ, when the irritation ceases. There is no way of expelling the worm from the system, that we are aware of.

Hogs are sometimes troubled with diarrhea. This may be occasioned by worms, or by colds. When it can be ascribed to worms, the indications are to remove the cause by some of the remedies we have prescribed before.

When occasioned by a deranged liver, indicated by a yellowish appearance of the eye, give of pounded may-apple root (dried) one fourth of a teaspoonfull, or of calomel a teaspoonfull, and follow it in twelve hours by three teaspoonfull of castor oil.

If it is occasioned by cold, which is indicated by a watery or inflamed condition of the eye, sluggishness, &c., the oil will be sufficient.



PAPILIO TURNUS.

EDITOR FARMER: Enclosed you will find a couple of worms that were such a curiosity to us that we thought we would send them to you in order to find out their names, and whether they really damage the apple trees upon which they were found, causing the leaves to turn brown, and curl up. If they are healthy when you receive them, upon pricking their noses, they will protrude a pair of little horns, and at the same time give out a peculiar smell, something like ripe apples. R. M. C., America City, Kansas.

We regret to say that the "worms" were dead when they reached us, but as they are familiar acquaintances, we had no difficulty in recognizing the "remains." They are the caterpillars or larvae of *Papilio Turnus*, one of the largest and most beautiful butterflies in North America. If our correspondent will place the larvæ that he has retained, or may find, in a box or jar with a thin muslin cover to admit air, and will supply them with fresh leaves every day until they change to chrysalids, he will find much pleasure in completing the observations, so well begun, upon the habits of these striking insects. After they have changed, the box may be set away over the Winter, as the butterflies will not issue until the latter part of May or in June next. About that time it will be well to keep a wet cloth or sponge in the box containing the chrysalids, in order that the butterflies may come out in an atmosphere sufficiently damp to enable them to expand their wings.

The larvæ of *P. turnus* feed upon the leaves of the wild and cultivated cherry, as readily as they do upon apple, but as they are comparatively rare, they seldom do any appreciable amount of harm to the trees. They only roll up those leaves in which they shelter, and seldom form more than two or three such cases of their larval life. The leaf is rolled into a cylinder and lined with silk, and within this case the larva dwells until it is outgrown, when it is deserted and a larger one framed. The larvæ come out to feed for the most part in the evening, and probably at night, and always retire to their cases as soon as their appetite is satisfied.

When very young, the caterpillars are of a mottled glossy brown color, with an oblique, cream-white band across the middle, but after the second molt, their color becomes a velvety green, with two eye-like spots on the third joint, composed of a black dot inside of a yellow ring. The fourth joint has a yellow and black transverse band near the posterior margin. The head is small and retractile, and the pair of orange colored horns or scent organs, that our correspondent mentions, are concealed in the front edge of the first joint. They are protruded whenever the caterpillar feels a touch, and are probably used as a means of defense against insect enemies. The larvæ attain a length of

over two inches, and are about one-third of an inch in diameter at the fourth—the largest—segment. They change about the first of August to an angular, grayish, wood-colored chrysalis, which is held in an upright position by a loop of silk which the caterpillar contrives dexterously to pass around the thoracic segments.

The brown and curled up leaves which R. M. C. notices upon the apple trees, are due, we suspect, to the punctures of plant lice—*Aphis mali*. Upon small trees these aphides may be killed by applying strong soap suds with a syringe or sprinkling can. Upon large trees, they can be kept in check by scrubbing the trunks and large branches early in the spring, and thus destroying the eggs.

THE FALL WEBWORM (HYPHANTRIA TEXTOR)

The unsightly webs, which, at this season of the year are the greatest disfigurement to our orchards and ornamental trees, are the work of the above named insect. The Fall webworm is very generally confounded with the true tent caterpillar, which depredates upon the same trees earlier in the season, but may be distinguished from the latter by its smaller size, light color, and more hairy surface, as well as by its appearance much later in the season than the tent caterpillar has ever been known to do.

These insects hatch about the middle of the Summer, and begin immediately forming a web under which to shelter. They are gregarious and never leave this web until ready to change to pupa, but continue to extend it from time to time to include fresh leaves for their voracious appetites, until they have taken possession of whole branches, and rendering the tree upon which they depredate, an object of disgust instead of a "thing of beauty."

They are, however, by no means a difficult insect to contend with. Their webs are conspicuous, and the worms are sure to be inside of them, and if watched for, may be found before the trees have suffered much injury, when the infested twig or branch may be pruned off and burned. This is so easily done, that no tree grower is excusable for neglecting to do it, and by concert of action throughout a neighborhood, these pests might, in a few seasons, be almost exterminated.

If suffered to complete their growth, at the end of four or five weeks the caterpillars leave their nest, descend into the ground and form a frail cocoon just beneath the surface, inside of which they soon change to a glossy dark brown chrysalis, and remain in that state over Winter.

The moths are pure white, and emerge generally during the month of June, and perish as soon as they have deposited their eggs.

OUR CORNER

Lee Summit Horticultural Meeting.—We regret that we were unable to accept an invitation to be present at the meeting of the Jackson County (Mo.) Horticultural Society, held at Lee Summit, Saturday, August 3d.

We learn that the meeting was held in the village, and after partaking of a sumptuous repast, the Society was invited, and accepted the invitation, to visit the Nursery Grounds of the BLAIR BROTHERS, one mile distant, where they were handsomely treated, as are all who visit the generous, whole-souled gentlemen that compose this firm. We hope to enjoy this pleasure at no very distant day.

The Postoffice Address.—It is remarkable that any one should write a business letter, and omit their postoffice address. We would as soon suppose a man would forget to kiss his wife when starting on a long journey, or to scold at the bowl of bread and milk set down for his Monday dinner.

We are often in receipt of letters, frequently containing considerable sums of money, and not a thing to show the address of the writer. These remarks are called out by JOHN S. WARNER, sending \$13, and thirteen subscribers, and he fails to send his postoffice address. Will he supply it?

Personal.—Our office was favored with a call from Hon. JAS. COOLEY, member of the House in the last Legislature from Easton Township, and Mr. D. G. CULP, who lives near Mt. Pleasant, in Atchison county. They report crops of all kinds excellent. We also received a call from Mr. JAMES SEEVERS, of Easton, and with the visit came a peck of choice

Summer apples. He has an excellent orchard, which was selected with care and skill, and he has now growing some as fine fruit as there is in the county.

Housekeeping.—What say our lady readers to a real tip-top, first-class Housekeeping Department in THE FARMER? We can have it just as well as not, if it is desired. Shall we have it? If so, send along your communications. Anything relating to household affairs is in order—from making a dumpling, to a healthy diet for the baby. We will give one, two or three columns in each issue, if you furnish the matter. Let us have short, sharp, concise articles, and lots of them.

Our Advertisements.—Our readers will confer a great favor, if, when writing to any persons who advertise with us, would say, "We saw your advertisement in THE KANSAS FARMER." This not only benefits us, but enables the advertiser to see where he can profitably place his goods before the public.

Let us have them.—We shall be glad to publish reports of grain crops that our friends may be pleased to send us. There is nothing that will stir a man up to renewed exertions more than to know that his neighbor has raised more bushels of grain to the acre than he. Let us have the figures.

C. S. Brown.—Yes. We will furnish any Agricultural book published in this country as a premium for subscribers. We give thirty-three per cent. of the subscription in books, to any one who sends us a club. This offer is only when \$1.50 is sent for each subscriber.

The Fruit and Vegetable Markets of this city are better supplied than at any former season within our memory. There is scarcely a vegetable grown in this latitude, but what can be seen here now in the greatest profusion, and of unexcelled quality.

"Hoosier Girl" (t).—Will "Hoosier Girl" (?) please send her postoffice address to THE FARMER. We desire to address a letter to her.

BOOKS AND PAPERS.

The Globe, St. Louis, Mo.; McKEE, HOUSER & Co., Publishers; Daily and Weekly. Terms—Daily, seven numbers per week, \$12 per annum; Weekly, single copy, \$1.50, five copies, \$6.50, ten copies, \$12.50, twenty copies, \$20.00.

It will be remembered that we gave notice some two months ago that Mr. McKEE, the founder of the *Democrat*, had sold out his interest to FISHBACH and others, for the sum of \$360,000. It was unreasonable to suppose that a man who had been in the newspaper business as long as Mr. McKEE, and who was so competent to successfully conduct one as he had proved himself to be, would long remain out of the business.

We now have before us some of the first issues of the *Globe*, an eight page, six column paper, that in our judgment is the best paper published west of the Alleghany Mountains, and we doubt if the country furnishes a peer to it in all that constitutes a good newspaper. It is Republican in politics, the editorials are solid, and there is a freshness about the whole paper that is in marked contrast with most of the large city papers. The *Weekly Globe* is designed especially for farmers, and those whose mail facilities do not admit of their receiving a daily. Every postoffice can easily secure a club of twenty, and the club rates are lower in proportion to the amount of reading matter, than any paper we know of. Specimen copies will be sent on application.

The School of Chemical Manures, or, Elementary Principles in the use of Fertilizing Agents; by Prof. GEORGE VILLE, translated from the French by A. A. PASQUET; published by HENRY C. BAIRD, Philadelphia. 112 pages, price, \$1.25.

It will be remembered that early in this year, we published some illustrations of a series of experiments made by Prof. VILLE, to determine the relation of manures to the wheat crop.

The book before us contains an elaborate statement of these experiments, together with much other practical matter relating to the chemistry of manures and their relation to all the different crops. The last fifty pages are devoted to tables showing just exactly what elements are required under given circumstances, to produce certain crops. The whole is placed in the form of questions and answers, making the book of especial value as a text book in schools.

As a hand book for the intelligent farmer, as a book of instruction to his sons, the little publication before us has no equal in the English language. It should be in the house of every farmer in the land that believes in a progressive Agriculture, and who desires to see rural pursuits return the same profits for labor, brains, and capital invested, as other pursuits. The book may be ordered from this office, or direct from the publisher, or we will give a copy free of postage to any one who sends us four subscribers to THE FARMER, at our regular price, \$1.50 each.

Report of the Missouri State Board of Agriculture, for the year 1871.

We are under obligations to Hon. JOHN F. WHITLANDY, Secretary of the State Board, for the above Report, and we are pleased to notice that it is a great improvement on the

former volumes, both in size and value of contents. It is a book of 533 pages, 160 of which are occupied by Prof. RILEY's Entomological Report, which is the most thorough and complete of any yet issued.

The Agricultural Department of the Report is made in part by the present Secretary, Mr. WEILANDY, and in part by C. W. MURPHY, the late Secretary, and the matter is all of interest and practical value to the farmers of Missouri, and will be appreciated, we are sure, by them.

Several of our citizens have asked us where they could procure this volume, and while it is published by Missouri, and for Missouri, we doubt not they would be willing to donate a few copies to our people, as we feel sure our State Board would return the compliment when our Report is issued. Any citizen of Kansas sending for this book, should enclose fifty cents to pay postage, and address Mr. WEILANDY, at St. Louis.

The Law of Horses.—Embracing the law of bargain and sale, warranty of horses and other live stock: the rule as to soundness and vice, and the responsibility of proprietors of stables, &c., &c.; by M. D. HARVEY, published by ROBERT CLARKE & Co., Cincinnati, Ohio. Price, \$3.50.

A peculiar subject for a book, and yet, an examination shows that it is a most interesting one. The title above given, indicates the character of the work, and it is enough to say that the subject is skillfully handled, and the book an indispensable one to every lawyer, stable or hotel keeper, and to horsemen generally.

Dream of a Free Trade Paradise.—A humorous pamphlet of 100 pages, plentifully illustrated; written by CR-ELDER; published by HENRY C. BAIRD, of Philadelphia; price, 50 cents.

It is designed to show the fallacies of the Free Trade doctrine, which it does by direct appeals to the common sense of the American producers. We have seen no work which placed the question in so strong a light, and as there is a vein of humor underlying the whole of it, it is one that will be read with interest. If you have fifty cents to spare, send to the publisher for a copy.

JOHNNY'S BATH.

Spat-a-dash—slap-a-dash—
Guess I make a jolly splash!
Water spatter, baby chatter,
Such a clatter!
Mamma says, "What is the matter?"
Now she's gone to fetch a towel,
Sure's my name is JOHNNY ROWELL!
Wonder if I could—I wonder—
Souse my curly head all under!
(Birdie does, and so does Ponto),
Then she'd look around, and may be
Say, "What's dot my JOHNNY baby?
Where's my lucky-lucky gone to?"
Then I'd spatter, chatter, slatter,
And she'd say, "That's what's the matter!
That's my baby in the water."
No, I can't—'Is thing's too small;
Dot to sit up, we-al tall:
When I grows a great big man,
Bet I'll have a monous pan,
Big-O, big as gran'pa's barn is!
(That one where we got the eggs out,
Last year, down at Gran'pa HARNEY's),
Then I'll stretch my arms and legs out!
My! I guess I'll splash and play
Free fo' hunderd times a day!

H. L. B.

Our Boys and Girls.

THE TECHNICAL SOCIETY.

EDITOR FARMER: The Technical Society, of which you spoke in one of your late papers, was greatly appreciated by me; for I immediately set to work to see what I could do in the way of starting one, and I am happy to say that I have succeeded in my effort. I have organized one, and my impression is that it will take well with the people when rightly understood among them. I would like to hear from you in regard to what else you calculate to go with it, to make it interesting. Am I first in the field, or not?

Yours truly, D. B. SHAFFER.

Clay Center, Kansas, July 26, 1873.

ANSWER.—We have nothing else in mind, to go with the plan given before.

We imagine that an abundance of intellectual enjoyment will be created in the search after questions and answers, and in the rivalry that will spring up between the different Sections, to see who shall best succeed.

We would not advise following up biographical, geographical, historical, or in fact any particular class of questions; as that might cause some, who are not over-anxious to learn, to grow careless and negligent; but we would exercise all our ingenuity to have a new kind of a question each evening. This can easily be done, if your Censor, or the

members, will permit their minds to think upon the subject.

To ascertain how many words in the English language end with "ton" or "ing"—Boston, baton, &c.; engraving, curving, &c. You need not be afraid that you will get all of the words thus terminating at one trial; but you can see which Section can get the most. Or, take such a prefix as "self"—self-abnegation, self-devotion, &c.

The peculiar advantage of such questions as these is, that it trains a person to be observant—to be watchful.

One-half the people you meet, pass through life without seeing anything; and it is because their minds were not trained to be observant while young. Just pick up a paper, and run your eyes over two or three columns, and count the number of words ending with "ing," and see if you get all of them the first time.

Another good exercise is to take, say, the first ten letters of the alphabet, and see which Section can correctly spell the most words with them.

It will take a full week for any of you to exhaust this subject, and some of the results will be funny.

An interesting and instructive exercise would be, to see which Section could collect the most moths or beetles in one week. Moths are those insects that fly around the lamp at night, and all butterflies belong to the moth family, too. Beetles all have a hard shell or case. When caught, pin them to a sheet of pasteboard, or a soft pine board, and they may be kept on exhibition at your place of meeting. You may, perhaps, have some among your members who are able to name many species for you.

But we only designed to say enough to set you all to thinking for yourselves, and we hope you may be successful; but you are not the first. Our young friend in Atchison county made the first start.

"GOING CLAMMIN"—A TRUE STORY.

BY "HOOSIER GIRL."

EDITOR FARMER: Away in western Kansas lived a family of four children, two boys and two girls. They had gone there because they hadn't the means to live anywhere else. Being very poor, they were dependent upon the resources of their little active brains for all the fun they got.

These little children had a dog, Carlo they called him, a very savage, and yet devoted dog, but not very profitable. For, didn't he eat the corn meal mush, when it was such hard work to get it. The dog wouldn't be starved, that was certain, and they hated to part with him, so what was to be done? These children had an uncle, who suggested that they might feed him upon the clams found in the creek near the house. No sooner given than acted upon. Away went they to the creek.

Now this was rather a curious creek. Some places the water dances over a little hard pebbly bottom, and in others there were long ponds deep and muddy, where the fishes hide.

When they got down to the creek, the question was, just where were those clams located. They walked around in the shallow pebbly places, but saw nothing but the shells washed down by the last freshet. Pretty soon Annette, the oldest, espied a little track in the sandy places of the creek bottom. Some places long and straight, others winding in and out in the funniest curls imaginable.

She determined to follow it and see where it went to. So to do this, she had to go right into one of these ponds, for there the little track led her. On, on, she went, the water rising over her little slender form, first over her ankles, then up to her knees, then up to her waist. The muddy bottom, slippery and slimy, made the water look so dark she was nearly losing sight of it, when she saw something white glistening through the water. On picking it up, the white all disappeared, and up came a little dark rough clam or "muscle," as some one said was the proper name.

Pretty soon she felt her feet smart from the pressure of some hard sharp substance. On examination, the bed proved to be full of clams of all sizes, from two to twelve inches long, and there they were, half buried, with their sides sticking up, and their white selves sticking half way out the shells. Annette called to the others, and in they came. Well, if they didn't pitch into them in true Western style, and soon they had more out than they could carry home. But just as soon as they went to take them out of the water they closed as quick as a wink in their shell houses.

Coming out into the shallow water again, they saw a fish floating around in the water in a very awkward style. On closer examination, they discovered that its side was bitten by some thing, and that death would soon end its misery. Edwin was going to carry it home, and started off boldly, but suddenly came down flat in the water. Something wriggled out from under him, and he saw to his disgust, a big water adder, which evidently had bitten the fish. Eddy did not slip on the gravel, but on a kind of marl found in places covered with slimy moss. They "made tracks" out of that region, but saw another curiosity in the shape of a flat, round, white water animal, with black spots on it, which their uncle could not tell what it was, so they remain in ignorance to this day, and if any of the readers of THE FARMER know, please inform us through these columns.

Well, when they got home, they cracked them for the dog and fed him on them all Summer, and though now, they do not need to do it, they still look back with pleasure to the hours they spent "going clammin'."

Lawrence, Douglas County, Kansas.

A BOY'S LETTER.

BY ALLIE B. ELLIS.

EDITOR FARMER: I am twelve years old. I live a little more than a mile from the State Agricultural College, and expect to get my education there. I think I had rather be a nurseryman, and raise trees, than anything else. I have five cows of my own. I have a grade Shorthorn heifer. She is sixteen months old, and has a calf two months old. He is a splendid fellow, and I call him "Greeley." If you come up to our Fair at Manhattan this Fall, I will show him to you, as I expect to take the cow and calf to the Fair.

My sister and I have a flower garden. We have some very pretty flowers. We are collecting bugs and butterflies for a case. I have a nice little pony. I call her Mollie. She has a real cute little colt. I have named him Don.



Prescriptions for Sick or Injured Animals, Free. BY A PROFESSIONAL VETERINARIAN.

[The readers of THE FARMER, who have sick or injured Horses or Cattle, can have the advice of a Professional Veterinarian of great experience, through this Department, gratis, by sending an account of the complaint they desire advice upon. No questions will be answered by mail.—EDITOR FARMER.]

ANSWERS TO INQUIRIES ABOUT ANIMALS.

Inflammation of the Eye.

EDITOR FARMER: I have a valuable young mare, afflicted with what the wiseacres here call "the hooks." The rim or washer of the eye is somewhat enlarged, causing weakness, especially when suddenly brought from the dark stable into the bright sunlight. Those who claim to know most about it here, recommend the use of the knife.

If you can tell me, through the columns of THE FARMER, what the disease is, and the remedy, you will confer a favor upon yours, C. W. LIBBY.

ANSWER.—Inflammation of the haw. The man who says cut them out, does not know what he is talking about. All that is necessary is, to reduce the inflammation, and the eye will be all right. To do this, bathe the lids several times a day with tincture of arnica, one ounce to the pint of water.

Cough.

EDITOR FARMER: I have a valuable mare, that has a very severe cough. She commenced to cough about a month ago. I was feeding her on corn and hay, and I thought the dust of the hay made her cough, so I turned her on the grass; but the cough is still getting worse. She does not run at the nose, and is not swelled under the jaw. She had the distemper several years ago. She is apparently well otherwise. She is fat, and eats heartily. She has a colt.

If your veterinary surgeon can tell me, through THE FARMER, what is the matter with her, and what is the remedy, you will oblige me very much.
JACOB MEYER.

ANSWER.—Give the mare five grains of arsenic, in cut feed, once a day for two weeks. It will give immediate relief.

Big Head.

EDITOR FARMER: I have a cow that has an enlargement on the head, about half-way from the nostril to the eye. It resembles that of big head on a horse, and has made its appearance much the same as big-head on horses, only the growth has been more rapid and threatens to become much larger. She is in good flesh, and seems otherwise to be in good health.

What is the disease? What is the remedy, or is she fit for beef? By answering the above, you will oblige a subscriber.
M. C. STARK.

ANSWER.—You had better beef her. Treatment would be very uncertain.

Lump on the Shoulder.

EDITOR FARMER: I have a four-year-old horse that got a bunch on his shoulder. It came all at once, and has been on since about the 1st of April. It is getting harder. Never felt sore to the touch. It is about the size of a goose egg.

Please let me know, in THE FARMER, how to take it off. Yours, truly, A SUBSCRIBER.

ANSWER.—Tell me whereabouts on the shoulder the swelling is coming, and I will then try to prescribe for it.

Fistula.

EDITOR FARMER: I have a mare that has got something on her neck, that appears to be making something bad. I think it is something like fistula. About one year ago, her neck was badly bruised with the collar, which caused an abscess, that broke and run, and was healed up, leaving a lump on one side of the neck, that has been in the way of the collar ever since. Now it is swelling up again on one side, and on the top of the neck it is going to break open soon. The mare is a valuable animal. I would like to know if it can be cured up sound, and what will do it. Please prescribe through your valuable paper, and oblige
B. J. PRICE.

ANSWER.—I think it is fistula. As soon as matter forms, it should be opened—don't wait for it to break—after which inject once a day, with carbolic acid, one ounce to the pint of water. Use of the mixture from one to two ounces at a time. Give internally one ounce of the sulphite of soda, in chop feed, twice a day for two weeks.

Lameness.

EDITOR FARMER: I have a young colt, that I would like to have your opinion and advice about. When it was two weeks old it became lame, and some swollen; but I applied arnica liniment, and reduced the swelling some, and cured the lameness (in that place). It next became lame and very much

swollen in the knee of the fore leg. Treatment—same as before; result—got worse. Applied cold water and salt frequently, with hard rubbing—result the same. Then I applied kerosene—result, suppuration; lanced it, and run freely. Next, the shoulder became intensely inflamed and swollen. Applied kerosene, as before. It did not suppurate. The swelling is reduced a little, but is still much inflamed and swollen; and now the other fore foot, just above the hoof, is attacked the same way. I have given him saltpeter, and sulphur. Have been advised to bleed him freely; but not being a believer in blood-letting, I have not done it. He takes nourishment freely, and appears to feel well, with the exception of being so very lame, but is losing flesh rapidly, and I think he will die soon. What is the matter, and what the remedy? The mare is six years old, and this is her first colt—having tried in vain to get her with foal for three years. She had the distemper when less than a year old, and came near dying. It broke out on all of her feet, as high up as her knee-joints, and then got them frozen while in that condition, and has been a cripple ever since; but she is a valuable mare nevertheless. Is the fault with her? If so, will she be likely to always bring colts to be afflicted the same way?

By answering the above questions you will greatly oblige a subscriber.
J. P. LITTLE.

ANSWER.—I think the fault is with the mare, and would not breed her, although all of her colts might not be so affected. If the colt is old enough to eat anything, give it one-fourth of an ounce of the sulphite of soda, once a day, in anything it will eat. If it will not eat, drench it, mixing the soda with milk or water. Repeat this dose once a day for two weeks.

Sweeney.

EDITOR FARMER: I have a horse that has the sweeney very bad in the left shoulder, and is getting very lame. If you can prescribe a cure through the columns of your valuable paper, you will oblige
J. H. STONER.

ANSWER.—Use the following liniment once a day for four days: Oil origanum, two ounces; oil of spike, two ounces; oil of sassafras, two ounces; ammonia, two ounces; alcohol, two ounces; sweet oil, two ounces. Mix, and rub in well.

PRACTICAL RECIPES.

EXCELLENT VARNISH FOR HARNESS.—Pulverize and put in a jug or bottle, half a pound to a pound of gum-shellac, cover with good alcohol, and cork tightly. Put the mixture in a warm place. In about two days, if shaken frequently, the gum will be dissolved and ready for use. If the liquid appears as thick as thin molasses, add more alcohol. To one quart of the varnish, add one ounce of good lampblack, and an ounce of gum camphor. An occasional coat of this is also good for rendering boots waterproof.

FIRE-PROOF WOOD FOR BUILDING.—Wood may be rendered nearly as capable of resisting fire as brick or stone, without great labor or expense, by soaking the dried lumber a short time in a solution of soluble glass, a silicate of soda or potash, and afterwards immersing it in lime water, by which the pores of the wood are filled with a silicate of lime. This substance is fire-proof, and cannot be dissolved in water, and its presence and effect in the fiber of the wood is therefore permanent. Soluble glass is readily obtained, being already largely used in this country. This is not patented.

TO VARNISH PLASTER OF PARIS CASTS.—Of white soap and wax, take each half an ounce; of water, two pints; boil them together for a short time in a clean vessel. This varnish is to be applied when cold, by means of a soft brush. It does not sink in; it readily dries; and its effect may be heightened by lightly using a silk handkerchief.—*Journal of Chemistry.*

"WHERE THE LAUGH COMES IN."

"A little Nonsense, now and then,
Is relished by the wisest men."

THE light of a match will frighten a wolf away, it is said. But love-matches don't always keep the wolf from the door.

"MAMMA, do you know what the largest species of ants are?" You shake your head. Well, I'll tell. They're elephants."

THE St. Albans (Vermont) *Messenger*, thinks that "sky blue is a pretty color for ceilings, but not so tasty for country milk at eight cents a quart."

"I DON'T care much about the bugs," said Warmly to the head of a general boarding house, "but the fact is, madam, I haven't the blood to spare; you see that for yourself."

A RETURNED Australian found the baby he left at home, a miss of five summers. One day he offended her, and she fretfully exclaimed, "I wish you had never married into our family."

A YOUNG lady at the camp meeting, asked the prayers of the assembly because she could not set her eyes upon a certain young man in the neighborhood without feeling as though she must hug him to death.

"To obtain sweet milk," says the veteran farmer Greeley, dropping his pen and gazing placidly at the inquirer, "feed your cows twice a day on sugar cane, and be sure to keep the calf away from the mother while teething."

"COME, Bob," said an indulgent father to his hopeful son, the other morning, "remember it is the early bird that catches the worm." "What do I care for worms?" said the young hopeful, "mother won't let me go fishing."

AT Pekin, Illinois, a woman was asked by the preacher if her husband feared the Lord. She replied, "Fear him? Why bless you, he's so 'feared of him, that he never goes out of the house Sundays without takin' his gun along."

"MOTHER, I should not be surprised if our Susan got choked some day." "Why, my son?" "Because her beau twisted his arm around her neck the other night, and if she had not kissed him to let her go, he would have strangled her."

A COUNTRYMAN in Savannah observed a gang of darkies laboring on the street, and wearing a ball and chain. He asked one why that ball was chained to his leg. "To keep the people from stealin' it," said the darkey, "heap of thieves about here."

IN New Hampshire, the following is posted on a fence: Notis—Know kow is alloud in these medders, eny men or wimmen lettin' their kows run the rode, wat gets into my medders aforeseed, shall have his tail cut short off by me, Obadiah Rogers."

A DANBURY paper says: "An out-of-town couple applied at one of the Danbury drug stores for soda water. 'What syrup?' pronounced the clerk. 'Syrup—syrup,' repeated the bucolic fop with an incredulous stare, and leaning forward, he impressively added: 'Stranger, money is no object to me to-day; you may put sugar in 'em.'"

THE modern woman, when she has a nail to drive, doesn't wait for her husband to come home. She catches hold of the nail as she would into the hair of a recreant son, swings the hammer over her head, and plunges downward. Then she ties up her fingers as well as she can, puts on her best bonnet and goes over to her mother's for a good cry.

SPECIAL NOTICES.

Few implements that farmers use have been tested and improved for so many years, that they are as near perfect as anything can be made of wood and iron. The Blanchard Churn is one of this kind.

Butter made in the Blanchard Churn commands the highest price, as the buttermilk is sure to be worked out more thoroughly than it can possibly be by hand. Expert butter buyers well know this.

J. H. SHIELDS,
Breeder of Durham Cattle,

AND OF
COTSWOLD AND SOUTHDOWN SHEEP.
Address J. H. SHIELDS,
augs15-4t-307 Garnett, Anderson County, Kansas.

DUTCH BULBS.

MY CATALOGUE OF IMPORTED HYACINTHS, TULIPS, LILIES, &c., is now ready and will be sent free to all applicants. Address M. C. McLAIN, Charleston, Coler County, Illinois. augs15-4t-145

MARKET REPORTS.

CORRECTED TO AUGUST 10TH, 1872.

APPLES—In full supply. Dealers are paying 60c@1.00 per bushel—the latter price for Cooper's Early White and apples of that class.

BRAN—Sacked, no change—90c@1.00 per cwt.

BARLEY—None in market.

BUTTER—15 to 17 cents; extra good, 20 cents per pound.

CABBAGE—Abundant. Wholesale, 2 to 3 cents per head; retail, 3 to 5 cents per head.

CORN—In good supply, and prices a shade lower. We quote 28@30c from the wagons, and 35@40c from the stores.

DRIED FRUIT—But little in market.

EGGS—More abundant than at our last report. We quote at 10c@12½c.

FLOUR—Steady. Fall wheat, \$4.25@4.50 per 100 lbs. retail.

HEMP—Undressed \$65@100; Dressed, \$160@170 per ton.

HIDES—Green Scaled, 10@10½c; Flint, 20@21c.

HAY—New Prairie, \$5.00@5.00 per ton.

LARD—Wholesale, 8c@9c; retail, 10c@12½c.

OATS—Plentiful, at 25c@28c, three-hed; 15c@20c per dozen in the sheaf.

POTATOES—In full supply. We quote at 25c@35c, wholesale; 40c@50c, retail.

POULTRY—\$2.00@2.75.

TOMATOES—In full supply, and prices low. We quote wholesale, at 25c@50c per bushel; retail, 50c@60c.

WOOL—Unchanged since our last report.

WOOD—Hickory, oak and hackberry, \$6.00@7.00 per cord; all others, \$5.00@6.00.

WHEAT—New Winter, \$1.10@1.30; old Winter, \$1.60@1.70, in St. Louis.

CATTLE—In the St. Louis market, are in better demand, and prices slightly advanced, the range being \$4.65@5.35 for Natives; Texans, \$2.60@3.50.

HOGS—\$4.00@4.55.

THE STRAY LIST.

BY AN ACT of the Legislature, approved Feb. 27, 1867, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisement, to "forward by mail, notices containing a complete description of said strays, and the day at which they were taken up, their appraised value, and the name and residence of the taker up, to THE KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice."

STRAYS FOR AUGUST 15.

Anderson County—E. A. Edwards, Clerk.
HORSE—Taken up by T. D. Barnett, Jackson tp, June 10, 1872, one light sorrel or dun Horse, 3 years old, 14½ hands high, Mexican brand on left hip, and J on left shoulder, hind feet white, saddle marks. Appraised \$40.

Butler County—John Blevins, Clerk.
PONY—Taken up by J. S. Wentworth, Plum Grove tp, one sorrel horse Pony, 8 years old, white stripe in face, four white feet, branded D on right shoulder. Appraised \$40.

Filly—Taken up by Wm McCulloch, Walnut tp, July 24, '72, one dark brown Filly, 2 years old, 14 hands high. Appraised \$60. Also, one sorrel stud Colt, 1 year old, 4 white feet, a white stripe in face. Appraised \$40.

Crawford County—F. R. Russell, Clerk.
HORSE—Taken up by C. L. Nott, Washington tp, one murky bay Horse, 7 years old, 14 hands high, black mane and tail, black mane, tail and legs, white on hind feet. Appraised \$50. Also, one bright bay Mare, 5 years old, 15 hands high, two right feet white, two shoes on near side. Appraised \$60.

Dickinson County—M. P. Jolley, Clerk.
COLT—Taken up by L. Hanson, Newberry tp, July 15, 1872, one gray Colt, 2 years old, dark spot on side of neck, legs iron-gray, mane and tail dark brown. Appraised \$50.

PONY—Taken up by Patrick Hall, Grant tp, June 18, 1872, one gray horse Pony, 8 years old, 14 hands high, branded SH on left hip, 3 on left jaw and left shoulder. Appraised \$25. Also, one roan Cow, 8 or 9 years old, small A square on right hip, and a cross on left hip. Appraised \$15.

Ellsworth County—S. L. Jelley, Clerk.
HORSE—Taken up by W. E. Fosnot, Ellsworth tp, July 18, 1872, one strawberry roan Horse, 9 or 10 years old, 15 hands high, hind feet white. Appraised \$35.

Franklin County—G. D. Stinebaugh, Clerk.
HORSE—Taken up by A. H. Brown, Peoria tp, one bay Horse, 4 years old, 15½ hands high, blazed face, three white feet, black mane and tail. Appraised \$55.

PONY—Taken up by J. S. Stack, Greenwood tp, June 3d, 1872, one dark bay horse Pony, 3 years old, white spot in forehead, a rope halter on when taken up. Appraised \$30.

COW—Taken up by W. H. Brown, Greenwood tp, July 1st, 1872, one red and white Cow, 5 years old, swallow-fork in right ear. Appraised \$35.

PONY—Taken up by T. W. Brownlee, Pottawatomie tp, July 8, 1872, one gray mare Pony, 11 years old, 13 hands high, branded DM on left shoulder, snip on nose. Appraised \$20.

STEER—Taken up by John Barr, Greenwood tp, July 1, 1872, one red Steer, 4 years old, branded C on left hip. Appraised \$15.

Greenwood County—L. N. Fancher, Clerk.
STALLION—Taken up by B. F. Humphrey, Salt Springs tp, one light sorrel Stallion, 2 years old, 14 hands high, star in forehead, light mane and tail. Appraised \$45.

PONY—Taken up by S. B. Green, Madison tp, one gray Pony, 14½ hands high, dapple legs and hips, heavy built, saddle marks, flea-bitten on head and shoulder. Appraised \$40.

PONY—Taken up by Jas Lowery, Eureka tp, one sorrel horse Pony, 3 years old, medium size, star in forehead, hind feet white. Appraised \$30.

PONY—Taken up by Z. B. Love, Lane tp, one sorrel mare Pony, 7 years old, 12 hands high, white stripe in forehead, light mane and tail. Appraised \$37.50.

Howard County—Frank Clarke, Clerk.

PONY—Taken up by E. C. Burnett, Longton tp, June 21st, 1872, one bay mare Pony, 10 years old, white in face. Appraised \$10. Also, one light roan mare Pony, 3 years old, 13 hands high. Appraised \$12. Also, one brown mare Colt, one year old. Appraised \$10.

MARE—Taken up by Hannah C. Rickett, Liberty tp, July 25th, 1872, one chestnut sorrel Mare, 12 years old, 14 hands high, a scar on each thigh, white on each hind foot. Also, one chestnut sorrel sucking Colt, 1 year old, some white on left hind foot. Appraised \$45.

Jewell County—W. M. Allen, Clerk.

STEER—Taken up by A. R. Mager, White Rock tp, June 21, '72, one red and white spotted Steer, 4 years old, branded B on left shoulder. Appraised \$22. Also, one light red Steer, 2 years old, branded B on left shoulder. Appraised \$16.

Johnson County—J. T. Taylor, Clerk.

MARE—Taken up by J. J. Tinsley, Shawnee tp, July 8, 1872, one dark bay Mare, 7 years old, 15 hands high. Appraised \$75.

Miami County—G. W. Warren, Clerk.

MARE—Taken up by J. E. Cooper, Wen tp, June 28th, 1872, one light brown Mare, 11 years old, 15 hands high, scar on right side of neck, saddle marks, branded T on left shoulder, blind in right eye, small lump on right side. Appraised \$35. Also, one bright bay Horse, 4 years old, 15½ hands high, star in forehead, hind feet and right fore foot white, saddle and harness marks, had a bell on with M on same. Appraised \$40.

Montgomery County—J. A. Helphingstine, Clerk.

MULE—Taken up by F. A. Cowell, Cherry tp, one light bay Mule, 7 or 8 years old, 14 hands high, collar marks, black legs and feet, sweened in both shoulders. Appraised \$50.

Rice County—W. T. Nicholas, Clerk.

MULE—Taken up by E. C. Bacon, Atlanta tp, June 28, 1872, one light bay gelding Mule, 5 years old, 14½ hands high. Appraised \$125.

HORSE—Taken up by E. C. Bacon, Atlanta tp, June 28, 1872, one brown gelding Horse, 5 years old, 15 hands high, hind feet white, star on forehead, branded DIX on left shoulder. Appraised \$60.

Shawnee County—P. I. Bonebrake, Clerk.

PONY—Taken up by Edwin Stock, Dover tp, July 8, 1872, one dark iron-gray stallion Pony, 3 years old, 13 hands high. Appraised \$20.

HORSE—Taken up by A. H. Blanchard, Topeka, July 6th, 1872, one claybank Horse, 4 years old, black mane and tail, tall cut short. Appraised \$40.

COLT—Taken up by Narcis View, Silver Lake tp, one bay horse Colt, 2 years old, star in forehead, right hind foot white, black mane and tail. Appraised \$30.

Sumner County—C. S. Brodbent, Clerk.

COWS—Taken up by J. G. Davis, Oxford tp, May 24th, 1872, one pale red Cow, 9 years old, white face, slit in each ear, branded G on left hip. Appraised \$30. Also, one dark red Cow, 5 years old, white spots on flank, underbit and crop in each ear, upper bit in left ear, branded OOO on left side. Appraised \$30. Also, one dark brown and black Cow, 7 years old, line back, crop off left ear, slit and underbit in right ear, branded WJC on left hip. Appraised \$30.

Wabunsee County—G. W. Watson, Clerk.

PONY—Taken up by A. J. Van Syckle, Wabunsee tp, July 1, '72, one bay horse Pony, 6 years old, white hairs all over body, hind legs white, white front knees, black mane and tail, spot on left side. Appraised \$25.

STRAYS FOR AUGUST 1.

Anderson County—E. A. Edwards, Clerk.

MARE—Taken up by John McGlinchy, Reeder tp, June 28, 1872, one dark brown Mare, 4 years old, 15 hands high, left foot and leg white, right foot white on inside, white face. Appraised \$60.

MARE—Taken up by W. D. Osborne, Lincoln tp, June 24, 1872, one bay Mare, 12 years old, 16 hands high, left hind foot white, spot on left side. Appraised \$35.

Jefferson County—W. F. Gailuly, Clerk.

PONY—Taken up by Sarah Hicks, Grasshopper Falls tp, one roan mare Pony, 10 years old, star in forehead, left hind foot white. Appraised \$30.

MARE—Taken up by Moses Wiley, Jefferson tp, one light gray Mare, 8 years old, branded MC on left shoulder. Appraised \$40.

HORSE—Taken up by E. Graham, Grasshopper Falls tp, one sorrel Gelding, 5 years old, 14½ hands high, saddle marks, small star in forehead. Appraised \$47.50.

Johnson County—J. T. Taylor, Clerk.

PONY—Taken up by J. Ash, Olathe tp, May 18, 1872, one black horse Pony, 4 years old, 13½ hands high, 3 feet white. Appraised \$30.

MARE—Taken up by J. H. Storr, McCamish tp, June 14th, 1872, one bay Mare, 6 years old, 12 hands high, hind feet white. Appraised \$30.

MARE—Taken up by John Wall, Shawnee tp, July 3, 1872, one dark bay Mare, 3 years old, 14 hands high, star in forehead, hind feet white. Appraised \$35.

Labette County—L. C. Howard, Clerk.

PONY—Taken up by J. B. Williams, Montana tp, April 25, 1872, one bay roan Pony, 10 years old, hind feet white, star in forehead, branded 5 on left shoulder and left hip. Appraised \$25.

Leavenworth County—A. B. Keller, Clerk.

PONY—Taken up by Nathan White, Stranger tp, one black horse Pony, 10 years old, 14 hands high, white strip on forehead, branded US on left shoulder and C on left hip. Appraised \$25. Also, one bay mare Pony, 14 hands high, collar marks. Appraised \$16.

HORSE—Taken up by Wm Thompson, Stranger tp, one bay Horse, 9 or 10 years old, blind in right eye, right hind foot white, saddle marks, branded TW on right shoulder. Appraised \$40.

MARE—Taken up by Jos Dodge, Stranger tp, one roan Mare, 9 or 10 years old, star in forehead, left hind foot white, saddle and collar marks, branded TW on right shoulder. Appraised \$60.

Linn County—W. M. Nesbitt, Clerk.

MARE—Taken up by E. C. Jaried, Lincoln tp, one bay Mare, 4 years old, 14½ hands high, left hind foot white, ring-bone on left hind foot. Appraised \$25.

McPherson County—J. R. Fisher, Clerk.

HORSE—Taken up by H. B. Talle, Gypsum Creek tp, one sorrel Horse, 12 years old, 15 hands high, white spot in forehead. Appraised \$57.50. Also, one dark brown Pony, 7 years old, branded XX on each fore foot, X on each hind foot, [] on left hip, and 1 on right shoulder. Appraised \$47.50.

Miami County—G. W. Warren, Clerk.

MARE—Taken up by C. F. French, Miami tp, June 15, 1872, one black Mare, 7 years old, 15 hands high, strip on forehead, scar on inside of left ankle. Appraised \$50.

HORSE—Taken up by D. H. Hefebower, Wea tp, June 27, 1872, one dark brown Horse, 3 years old, 15 hands high, mane rubber off. Appraised \$45.

MARE—Taken up by Thos Doherty, Paola tp, July 6, 1872, one dark bay mare Pony, hind feet white, white spot on forehead, a little white on nose, saddle marks. Appraised \$25.

Nemaha County—J. Mitchell, Clerk.

COLT—Taken up by Henry Earl, Valley tp, June 15, 1872, one iron-gray stud Colt, 2 years old, 13½ hands high, blaze in face, right hind foot white, gray mane and tail. Appraised \$40.

MARE—Taken up by Geo Nations, Red Vermillion tp, June 24, 1872, one bay Mare, 12 years old, white stripe in forehead, saddle marks, left hind foot white. Appraised \$70. Also, one dark bay Horse, 13 years old, saddle marks, left hind foot white. Appraised \$50.

Wabunsee County—G. W. Watson, Clerk.

HORSE—Taken up by T. K. Thomson, Mission Creek tp, one sorrel Horse, 4 years old, 13 hands high, a small white stripe on face, left hind foot white, branded F on left shoulder. Appraised \$45.

HORSE—Taken up by Thos Douglass, Wabunsee tp, June 27, 1872, one white Horse, 9 years old, 13 hands high, branded O and MB on side, pony build. Appraised \$30.

Washington County—G. W. Shriner, Clerk.

COLT—Taken up by D. W. Horn, Washington tp, June 28, 1872, one black mare Colt, 3 years old, 14 hands high, white stripe in face, stiff in left hip.

SALE OF

Shorthorn Durham Cattle!

AND

BERKSHIRE SWINE!

WE BREED AND HAVE FOR SALE SHORTHORN Durham Bulls and Hefers, and Berkshire Pigs, all bred from stock imported from England. Call and see our stock, two miles from the Agricultural College, Manhattan, Kansas. [el-1y-40] N. L. CHAFFEE & SONS.



ARE UNDOUBTEDLY THE
CHEAPEST TO BUY!
BEST TO USE!
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NEVER FAIL TO GIVE

Entire Satisfaction

IN ANY AND ALL LOCALITIES.

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Sold in Past Three Years!

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Wholesale dealers in all kinds of

TINNERS' STOCK;

AND BY ALL

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WANTED—AGENTS (\$20 PER DAY), TO sell the celebrated HOME SHUTTLE SEWING MACHINE. Has the Under-Feed, makes the "Lock Stitch" (allike on both sides), and is fully licensed. The best and cheapest Family Sewing Machine in the market. Address JOHNSON, CLARK & CO., Boston, Mass.; Pittsburgh, Pa.; Chicago, Illinois; or, St. Louis, Missouri. oct-1y

Read! Great Bargain for Some One!

I WILL TAKE IN TRADE FOR 1,000 TO 10,000 GALLONS of the very best Grape Wine, Leading Nursery Stock and Grape Vines, good Western Lands, Town Lots or City Property. Give description and price of Property, and address to Bloomington, Illinois. [jy15-3t-155] Dr. H. SCHRODER.

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ELGIN WATCHES!

FACTS FOR THE PEOPLE!

OFFICE GENERAL SUPERINTENDENT ELGIN RAILWAY,
NEW YORK, February 7th, 1870.

T. M. AVERY, Esq., Pres't National Watch Co., Chicago, Ill.:
DEAR SIR: Having for three months tested, in various ways, the "time-keeping" qualities of one of your Elgin Watches, I most cheerfully award it the praise that is its due. For one month the Watch was carried by one of our Locomotive Engineers, and since then by different persons, so that its full value as a time-keeper could be known under different modes of treatment. I will simply say that it has given perfect satisfaction; and in my opinion is as near perfection as I believe it possible a Watch can be made.

Respectfully, yours,

L. H. RUCKER, General Sup't.

AMERICAN MERCHANTS' UNION EXPRESS CO.,
CHICAGO, February 17th, 1870.

T. M. AVERY, Esq., Pres't National Watch Co., Chicago, Ill.:
DEAR SIR: It gives me pleasure to state that the two or three Elgin Watches I have at different times purchased for presentation, have given entire satisfaction, and are highly valued as elegant and correct time-keepers.

A very large number of your Watches are being carried by the Messengers in the employ of this Company, and are giving entire satisfaction,—their time-keeping qualities being implicitly relied upon.

CHAS. RLES FARGO, Sup't.

OFFICE GEN'L SUP'T C. & N.-W. RAILWAY,
CHICAGO, February 16th, 1870.

T. M. AVERY, Esq., President National Watch Company:
DEAR SIR: I have pleasure in expressing my opinion of the Elgin Watches—the more so, since I do not think that there is a better Watch made. A large number of them are in use by our conductors and engineers, and other employees, and I have heard no dissenting opinion upon their merits. They run with a smoothness and uniformity fully equal to any other Watch that I know of, and justify all your claims of excellence in manufacture and fitting of parts.

Yours, truly,

GEO. L. DUNLAP, Gen'l Sup't.

CHICAGO & ALTON RAILROAD COMPANY,
CHICAGO, January 25th, 1870.

D. W. WHITTLE, Esq., General Agent National Watch Co.:
DEAR SIR: I have carried one of the Elgin Watches for some time, and am much pleased with it. It has kept excellent time under all circumstances, and I consider it perfectly reliable.

Yours, respectfully,

J. C. McMULLEN, General Sup't.

LAKE SHORE & MICHIGAN SOUTHERN R. R.,
CHICAGO, January 27th, 1870.

T. M. AVERY, Esq., President National Watch Company:
DEAR SIR: I have carried the Elgin Watch long enough to be able to pronounce it a first-rate time-keeper. I am making a very careful test of its performance, and will soon give you the results. I think it will show that the West can produce Watches equal to the manufacture of any part of the world.

Yours, truly,
E. B. PHILLIPS, Pres't L. S. & S. M. R. R. Co.

OFFICE GEN'L SUP'T UNION PACIFIC R. R.,
OMAHA, NEB., December 16th, 1869.

HON. T. M. AVERY, Pres't National Watch Co., Chicago, Ill.:
DEAR SIR: During the months that I have carried one of your B. W. Raymond Watches, it has not failed to keep the time with so much accuracy as to leave nothing to desire in this regard.

For accuracy of time-keeping, beauty of movement and finish, your Watches challenge my admiration and arouse my pride as an American; and I am confident that, in all respects, they will compete successfully in the markets of the world with similar manufactures of older nations. They need only to be known to be appreciated.

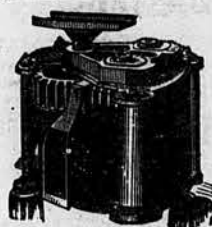
Yours, most respectfully,

C. G. HAMMOND, General Superintendent.

VARIOUS GRADES AND PRICES MADE, TO SUIT DIFFERENT TASTES.

NO MOVEMENTS RETAINED BY THE COMPANY.

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STANDARD Cane Machinery,

For Sorgo and the Sugar Cane.

THE ONLY RECOGNIZED
standards in Cane Machines are
THE COOK EVAPORATOR
AND
THE VICTOR CANE MILL.

There are of these Machines

MORE THAN 31,000 IN USE!

They have taken the

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Manufacturers of Cane Mills and Evaporators, Farm, School
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The Largest Manufactory of Threshing Machines in the U.
States Over 1000 Made and Sold Annually.

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MANUFACTURERS OF IMPROVED

THRESHING MACHINES.

With Steam Mounted and Down Horse Powers.

PORTABLE ENGINES, OF OUR OWN MAKE. ALL
Machinery warranted. Call on our Local Agents in any
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RESTORE YOUR SIGHT.



Spectacles Rendered Useless.

OLD EYES MADE NEW.

All diseases of the Eye successfully treated by

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Read for yourself and restore your sight.
Spectacles and Surgical operations rendered useless. The
Inestimable Blessing of Sight is made perpetual by the use
of the new

Patent Improved Ivory Eye Cups.

Many of our most eminent physicians, oculists, students
and divines, have had their sight permanently restored for
life, and cured of the following diseases:

1. Impaired Vision; 2. Presbyopia, or Far Sightedness, or
Dimness of Vision, commonly called Blurring; 3. Asthenopia,
or Weak Eyes; 4. Sore Eyes—specially treated with the
Eye Cups—cure guaranteed; 5. Weakness of the Retina, or
Optic Nerve; 6. Ophthalmia, or Inflammation of the Eye and
its appendages, or imperfect vision from the effects of Inflam-
mation; 7. Photophobia, or Intolerance of Light; 8. Over-
worked Eyes; 9. Mydriasis—moving specks or floating
bodies before the eyes; 10. Amaurosis, or Obscurity of Vision;
11. Cataracts, Partial Blindness, the loss of sight.

Any one can use the Ivory Eye Cups without the aid of
doctor or medicine, so as to receive immediate beneficial
results and never wear spectacles; or, if using now, to lay them
aside forever. We guarantee a cure in every case where the
directions are followed, or we will refund the money.

2300 Certificates of Cure.

From honest Farmers, Mechanics and Merchants, some of
them the most eminent leading professional and business
men and women of education and refinement in our country,
may be seen at our office.

Under date of March 29, Hon. Horace Greeley, of the New
York Tribune, writes: "J. Ball, of our city, is a conscientious
and responsible man, who is incapable of intentional
deception or imposition."

Prof. W. Merrick, of Lexington, Ky., wrote April 24th, 1869,
Without my Spectacles I pen you this note, after using the
Patent Ivory Eye Cups thirteen days, and this morning per-
used the entire contents of a Daily Newspaper, and all with
the unassisted Eye.

Truly am I grateful to your noble invention, may Heaven
bless and preserve you. I have been using spectacles twenty
years; I am seventy-one years old.

Yours truly,

PROF. W. MERRICK.

REV. JOSEPH SMITH, Malden, Mass., cured of Partial Blind-
ness, of 18 years' standing, in one minute, by the Patent
Ivory Eye Cups.

E. C. ELLIS, late Mayor of Dayton, Ohio, wrote us Nov. 15,
1869: I have tested the Patent Ivory Eye Cups, and I am sat-
isfied that they are good. I am pleased with them; they are
the greatest invention of the age.

All persons wishing for full particulars certificates of cure,
prices, &c., will please send your address to us, and we will
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return mail. Write to Dr. J. BALL & CO.

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For the worst cases of MYOPIA, or NEAR SIGHTED-
NESS, use our New Patent Myopic Attachments, applied to
the IVORY EYE CUPS, has proved a certain, sure cure for
this disease.

Send for pamphlets and certificates—free. Waste no more
money by adjusting huge glasses on your nose and disfigure
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Improved Ivory Eye Cups, just introduced in the market.
The success is unparalleled by any other article. All persons
out of employment, or those wishing to improve their cir-
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