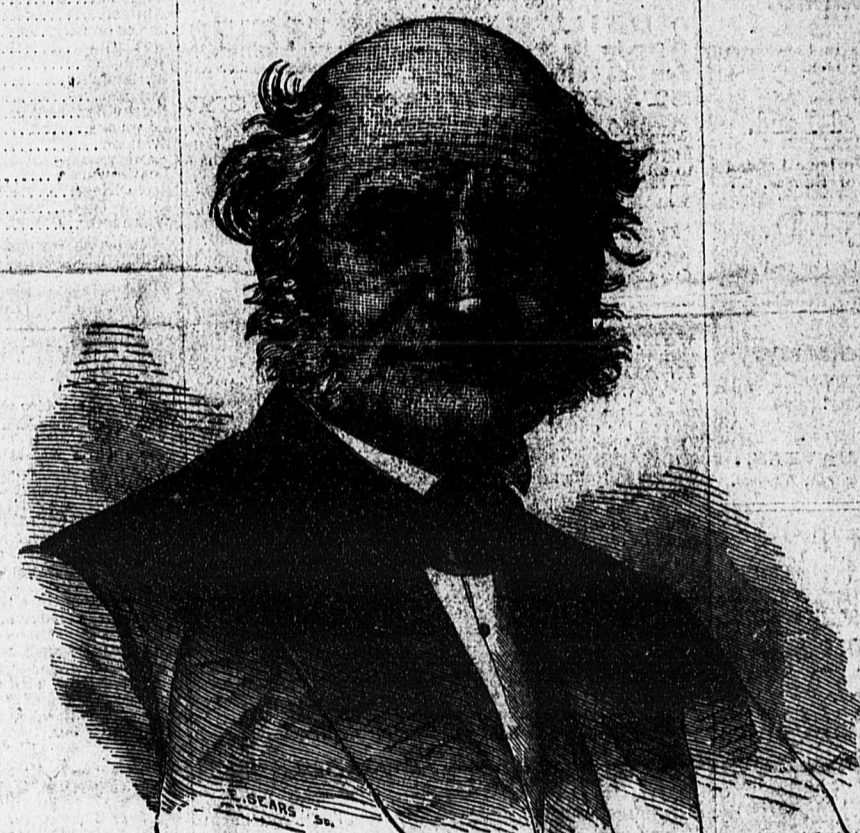


REVOTED THE FARM THE SHOP THE STORE

KANSAS LABOR



MARSHALL P. WILDER, PRESIDENT NATIONAL POMOLOGICAL SOCIETY.



W. S. VAN BUREN, (Successor to Grant & Frost) A. B. HAVENS
VAN BUREN & HAVENS,
 LEAVENWORTH, KANSAS.

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We have for sale Business and Residence Property upon all the different streets in Leavenworth City.
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(Successor to Grant & Frost.)

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SEEDS AND FARMING IMPLEMENTS,

Nos. 141 and 143, Shawnee Street,

Leavenworth, : Kansas.

TO FARMERS AND THE PUBLIC GENERALLY, I would say that I have, and keep constantly on hand, the largest and best selected stock in the West, consisting in part as follows:

Garden City, Moline and Industrial Plows, Vibrator Threshing Machines, Excelsior, Champion and McCormick Combined Reapers and Mowers,

Brown's Illinois Corn Planters, Riding and Walking Cultivators, Buckeye Grain Drill, Bulky and Revolving Hay Rakes, Scotch Harrows, Fanning Mills, Cutting Boxes, Corn Shellers, Wheel Barrows, Hoes, Rakes, Forks, Shovels, Spades, Grind Stones, Scythes, and Snathes, Pruning Knives, Shears, Garden Drills, Reels, Cultivators, and a great variety of other Garden Implements. Grass seeds of every variety, Seed Wheat, Surprise Oats, Black Oats, Osage Orange Seed, Garden and Flower Seeds by the pound, paper or in quantities to suit purchasers. I am prepared to furnish

OSAGE ORANGE PLANTS,

Very fine selected Stock, at low rates. In offering this Cana, I desire to return my sincere thanks to those who have been my patrons from the first; also, for the liberal patronage extended to the house. And would respectfully solicit a continuance of the same, pledging myself, as heretofore, to spare neither pains nor expense in bringing forward all improvements that tend to lighten the labor and expense of the Agriculturalist. In order that every implement I sell, may give as near satisfaction as possible, I shall keep only such as are known to be of an inferior quality.

M. S. GRANT.

NORTH MISSOURI RAILROAD.

TO ALL POINTS
EAST, WEST, NORTH and SOUTH

Trains Leave Kansas City Station as under:
GOING EAST, 7:00 A. M. AND 4:50 P. M.

CONNECTIONS:
AT ST. LOUIS WITH ALL RAIL AND RIVER LINES to all points East and South. At CENTRALIA, with Columbia Branch Trains. At MACON, with Hannibal & St. Joe Railroad. At OTTUMWA, with Burlington & Missouri River and Des Moines Valley Railroads, for Des Moines, Ft. Dodge, and all Iowa points. At BRUNSWICK, with Omaha & Chillicothe Branch, for Chillicothe, &c. At RICHMOND & LEXINGTON JUNCTION, with St. Louis & St. Joseph Branch, for Lexington and St. Joseph. At HARLEM, with Kansas City, St. Joseph & Council Bluffs Railroad, for Leavenworth, Atchison, &c. At ST. JOSEPH, with Kansas City, St. Joseph & Council Bluffs Railroad, for Omaha, California, and Union Pacific and Central Pacific points. At KANSAS CITY, with Kansas Pacific, Missouri River, Ft. Scott & Gulf, Leavenworth, Lawrence & Galveston Railroads, for Ft. Scott, Lawrence, Emporia, Denver, and all points West.

Pullman's Palace Cars
 Run through between St. Louis and Ottumwa, Kansas City, St. Joseph and Council Bluffs, without change.
 The Short Line between St. Louis and Kansas City and St. Joseph, and between Ottumwa and St. Louis, and Ottumwa and Kansas City and St. Joseph.

W. R. ARTHUR,
 General Superintendent, St. Louis.
JAMES CHARLTON,
 General Passenger and Ticket Agent, St. Louis.

The Great Through Passenger Route,
FROM LEAVENWORTH EAST,
 IS VIA THE OLD RELIABLE

HANNIBAL & ST. JOSEPH
SHORT LINE.

THE MISSOURI VALLEY R. R.
 Connects at ST. JOSEPH with

3 DAILY EXPRESS TRAINS,
 Crossing the Mississippi at Quincy on the MAGNIFICENT NEW IRON BRIDGE, with Pullman Sleeping Palaces and Palace Day Coaches running from

ST. JOSEPH TO QUINCY,
 Without Change of Cars,
 Connecting at QUINCY UNION DEPOT with Chicago, Burlington & Quincy and Toledo, Wabash & Western Railroads to all points

EAST, NORTH OR SOUTH.

By this Line, the following Advantages to Time are Gained:
FROM LEAVENWORTH:

8:12 A.M. ATLANTIC EXPRESS ARRIVES 24 HOURS IN ADVANCE of Morning Trains by any other Line out of Leavenworth, to CHICAGO, DETROIT, TOLEDO, LAFAYETTE, TORONTO, FORT WAYNE, MILWAUKEE, MONTREAL, &c., connecting with the celebrated Fast Express that arrives 12 HOURS IN ADVANCE to Philadelphia, New York, Boston, &c.

3:28 P.M. FAST EXPRESS ARRIVES 4 HOURS IN ADVANCE of Evening Trains by any other Line out of Leavenworth, to CHICAGO, DETROIT, TOLEDO, LAFAYETTE, TORONTO, FORT WAYNE, MILWAUKEE, MONTREAL, and other points East too numerous to mention. Pullman Sleeping Cars on this Train.

The above facts will be apparent by comparing the Time-Table of the Hannibal & St. Joseph Railroad Line with those of other Lines out of Leavenworth.

11:25 P.M. FAST CINCINNATI and LOUISVILLE EXPRESS, leaves St. Joseph 11:25 P. M. A through car is run on this Train to CINCINNATI, via QUINCY, LAFAYETTE and INDIANAPOLIS, making this the most desirable route from Leavenworth to Southern cities

Baggage Checked Through to all Points East.

BUY TICKETS BY THIS FAVORITE ROUTE For sale at the Hannibal & St. Joseph Ticket Office, and at the Hannibal & St. Joseph Railroad Depot, St. Joseph.

RATES AS LOW AS BY ANY OTHER LINE.

P. B. GROAT, Gen'l Ticket Agent. **GEO. H. NETTLETON,** Gen'l Superintendent.

Holbrook's Patent Swivel Plows,

For Level Land and Side Hill.



Send Stamp for Circular.

THEY LEAVE NO DEAD FURROWS NOR RIDGES, but an even surface for the Reaper, Mower and Rake. Clear and pulverize thoroughly. Self-adjusting hinged Cutters. Changeable mold-boards for sod and stubble. Manufactured by **F. F. HOLBROOK & CO., Boston, Mass.**

"THE BEST IS THE CHEAPEST!"
BUY THE GENUINE!

PREMIUM CORN 1870. 210 Bushels PER ACRE! Send a stamp for circular, giving full Description, History, and the Testimony—neither "bogus" nor "bought"—from farmers in nearly every State, who have tested it the past season, establishing the fact that it is not a "Humbug," but a decided improvement over all other varieties. One quart, by mail, post-paid, Seventy-five cents; Two quarts, One Dollar and Twenty-five cents. Address **S. B. FANNING, Jamestown, N. Y.**

The Kansas Pacific Railway.

NOW COMPLETED TO DENVER, COLORADO.

The New All-Rail Route Through Kansas and Colorado to all Points in the Territories and California.

WINTER ARRANGEMENT.
 On and after Jan. 22, 1871, Trains run as follows:

LEAVE	Going West:		L. L. & T. ACCOMMODATION
	EXPRESS	MAIL	
Wyandotte	9:50 P.M.	8:15 A.M.	4:35 P.M.
Kansas City	10:45 "	9:30 "	5:10 "
State Line	11:00 "	9:35 "	5:20 "
Leavenworth	11:00 "	9:00 "	4:35 "
Stranger	12:35 A.M.	10:40 "	6:50 "
Lawrence	1:00 "	11:15 "	7:30 "
Ferryville	1:37 "	12:05 P.M.	8:10 "
Topeka	2:30 "	1:00 "	9:05 "
St. Mary's	3:25 "	2:15 "	"
Wamego	4:15 "	3:30 "	"
Manhattan	4:55 "	4:55 "	"
Junction City	5:50 "	5:15 "	"
Ablene	6:55 "	6:35 "	"
Solomon	7:20 "	7:05 "	"
Salina	8:25 "	8:15 "	"
Brookville	9:30 "	9:00 "	"
Ellsworth	10:35 "	"	"
Hays City	1:45 P.M.	"	"
Ellis	3:50 "	"	"
Carson	11:55 "	"	"
Hugo	1:45 A.M.	"	"
River Bend	2:50 "	"	"
ARRIVE AT—	7:00 "	"	"
Denver	"	"	"

LEAVE	Going East:		L. L. & T. ACCOMMODATION
	EXPRESS	MAIL	
Denver	10:00 P.M.	"	"
River Bend	2:00 A.M.	"	"
Hugo	3:10 "	"	"
Carson	5:20 "	"	"
Ellis	2:25 P.M.	"	"
Hays City	3:05 "	"	"
Ellsworth	6:10 "	"	"
Brookville	7:30 "	5:30 A.M.	"
Salina	8:35 "	6:35 "	"
Solomon	9:20 "	7:30 "	"
Ablene	9:45 "	7:45 "	"
Junction City	11:00 "	9:15 "	"
Manhattan	12:02 A.M.	10:05 "	"
Wamego	12:50 "	11:10 "	"
St. Mary's	1:37 "	11:43 "	"
Topeka	2:30 "	1:00 P.M.	5:30 A.M.
Perryville	3:20 "	1:55 "	6:20 "
Lawrence	3:55 "	3:35 "	7:00 "
Stranger	4:30 "	3:10 "	7:35 "
ARRIVE AT—	"	"	"
Leavenworth	6:25 "	4:35 "	10:30 "
State Line	5:50 "	4:25 "	9:05 "
Kansas City	6:00 "	4:35 "	9:10 "
Wyandotte	6:25 "	5:00 "	9:35 "

Mail and Accommodation Trains leave State Line, Kansas City and Leavenworth daily, except Sunday.

Express Train leaves Wyandotte, State Line, Kansas City, Leavenworth and Denver daily.

Connecting at Lawrence with the L., L. & G. Railroad, for Baldwin City, Prairie City, Ottawa, Garnett, Humboldt, Fort Scott, Parker, and all points in Southern Kansas.

At Topeka with the A., T. & S. F. Railway, for Burlington, Emporia, Burlington, Neosho Falls, Humboldt and Chetopa.

At Junction City with the M., K. & T. Railway, for Council Grove, Emporia, Burlington, Neosho Falls, Humboldt and Chetopa.

At Carson with the Southern Overland Mail and Express Co.'s daily line of coaches for Pueblo, Trinidad, Los Vegas, Fort Union, Santa Fe, and all points in New Mexico and Arizona.

At Denver with the Denver Pacific Railway for Cheyenne, Oregon, Salt Lake, San Francisco, and all points in California and the Territories; and with Overland Passenger and Express coaches for Central City, Georgetown, and all points in Colorado.

Tickets for the above points are for sale at the Company's Offices at Leavenworth, Kansas City, State Line and Lawrence.

At Leavenworth with the Missouri Pacific and Missouri Valley Railroads for Atchison and St. Joseph.

At State Line with trains of the Missouri Pacific Road, and at West Kansas City with the North Missouri and Hannibal & St. Jo. Railroads, for Chicago and St. Louis and points South and East.

Pullman's Sleeping Cars are attached to night express trains, and run through between Kansas City and Denver.

5,000,000 Acres of Choice Farming Lands for sale, situated along the line of the Kansas Pacific Railway, at from \$2 to \$6 per acre. For particulars, address J. P. DEVEREAUX, Land Commissioner, Lawrence, Kansas.

A. ANDERSON, General Superintendent.
 R. B. GEMMELL, Gen'l Freight and Ticket Agent.

TIME TABLE OF THE KANS. PACIFIC RAILWAY, FROM LEAVENWORTH TO ATCHISON.

LEAVE	GOING NORTH.		EXPRESS
	MAIL	EXPRESS	
Leavenworth	12:25 P.M.	7:55 A.M.	8:01 "
Fort Leavenworth	12:40 "	"	8:15 "
Kickapoo	12:55 "	"	8:30 "
Port William	1:15 "	"	8:45 "
Sumner	1:35 "	"	8:55 "
Atchison	1:45 "	"	"

LEAVE	GOING SOUTH.		EXPRESS
	MAIL	EXPRESS	
Atchison	2:50 A.M.	1:35 P.M.	1:45 "
Sumner	3:00 "	"	2:01 "
Port William	3:19 "	"	2:17 "
Kickapoo	3:33 "	"	2:30 "
Fort Leavenworth	3:53 "	"	"
ARRIVE AT—	"	"	"
Leavenworth	4:03 "	"	2:41 "

Garden Seeds.
 SEND STAMP FOR MY CATALOGUE OF FRESH Grown Garden Seeds. **S. M. WALCHER,** Seed Grower, Paola, Miami Co., Kansas.

THE KANSAS FARMER

DEVOTED TO THE FARM, THE SHOP AND THE FIRE-SIDE

[ENTERED, ACCORDING TO ACT OF CONGRESS, IN MARCH, 1871, BY GEO. T. ANTHONY, AT THE OFFICE OF THE LIBRARIAN OF CONGRESS, AT WASHINGTON.]

VOL. VIII.—NO. 3.]

LEAVENWORTH, MARCH 15, 1871.

[\$1.00 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 Monthly, 75 Delaware Street, Leavenworth.

FAWKES' STEAM PLOW.

We present our readers herewith a Cut of the Steam Plow invented by JOHN W. FAWKES, of Lancaster, Pa., which we have procured at some

expense, in order to give our readers an idea of what is being done in this direction.

We do not endorse this implement as being adapted to our wants, because we have an idea that there are difficulties yet to be surmounted before steam culture can be economically used; but we do believe that Mr. FAWKES has made a vast stride toward the solution of the problem.

The time is near at hand when the farmers upon these broad prairies will adopt a system of steam culture, and to this end we should have an intelligent idea of what the requirements are and will be of this system of culture.

Those interested in the subject will find a very full and complete paper upon the subject in the

Agricultural Reports of 1867, at page 253. We annex a brief description of the above Plow, from the *Country Gentleman*:

The trial of a new Steam Plow recently took place, near Philadelphia. It is the invention of Mr. FAWKES, of Lancaster. It is attached to an engine 18 feet long, 7 feet wide, and weighing 7 tons, with upright tubular boiler. The engine rests on an iron drum 6 feet in diameter and 6 feet long, inside of which is an axle extending from end to end. The plows are eight in number, and are adjusted so as to lift up when the machine is turning at the end of a furrow, being turned and backed with as much ease as a common carriage. The two fore wheels are iron drums, 3½ feet in diameter and 15 inches face, to prevent the engine from sinking too deeply into the ground. The machine turned over eight furrows at a time, each a foot wide and of ample depth, going at a speed that showed it capable of plowing several acres per hour. The work was perfectly satisfactory to the committee and spectators.

NORTHERN KANSAS DISTRICT FAIR.

We see by the *Atchison Champion* that this Society held their annual meeting at Atchison on Tuesday, February 21st, for the purpose of electing the Board of Directors for the ensuing year. The following gentlemen were elected: GEO. W. GLICK, W. L. CHALLIS, W. F. DOWNS, R. R. EVEREST, W. C. SMITH, THOS. MURPHY, Col. JOHN A. MARTIN, and SAMUEL HIPPLE, Atchison county; B. O'DRISCOLL, F. M. BELL, and A. LOWE, Doniphan county; J. F. WYATT, Jackson county, and PERRY HUTCHINSON, Marshall county.

The new Board met immediately after the adjournment of the Society, and organized by re-electing Mr. GLICK, President; B. O'DRISCOLL, Vice-President, JOHN A. MARTIN, Secretary; DAVID MARTIN, Assistant Secretary, and W. C. SMITH, Treasurer.

On motion, it was resolved to hold the Second Annual Fair at Atchison, on the 3d, 4th, 5th and 6th days of October, 1871.

THE KANSAS FARMER APPLE ORCHARD OF ONE HUNDRED TREES.

It will be remembered that we published, last year, at the request of correspondents, a list of ap-

ple District Agricultural Association, composed of the counties of Osage, Franklin, Miami, Coffey, Anderson, Linn, Woodson, Allen, Bourbon, Wilson, Neosho, Crawford, Montgomery, Labette, and all the counties in the State west of those above named. Such a territory, comprising, as it does, some of the finest soil, and composed of some of our most enterprising citizens, should be able to get up one of the best Fairs in the State.

EARLY PLANTING.

If there is one lesson of more importance than another, in relation to Kansas Agriculture, it is that of early planting of all kinds of Spring grains and

vegetables, with, perhaps, the single exception of the crop of late potatoes; and this is still a matter of doubt in the minds of many.

By a reference to the statistics, it will be found that our greatest rain-fall is from the 15th of March to the 15th of June; and in order that our crops may derive the full benefit of this, it is necessary to get the seed in the ground early.

It is true, we must wait until the ground is in a proper condition to work; but every good farmer will be ready to commence operations as soon as this time arrives.

Very much may be done to forward the process of drying out, and to secure an early friability of the soil, by surface draining, by Fall plowing, by deep plowing, and by manur-

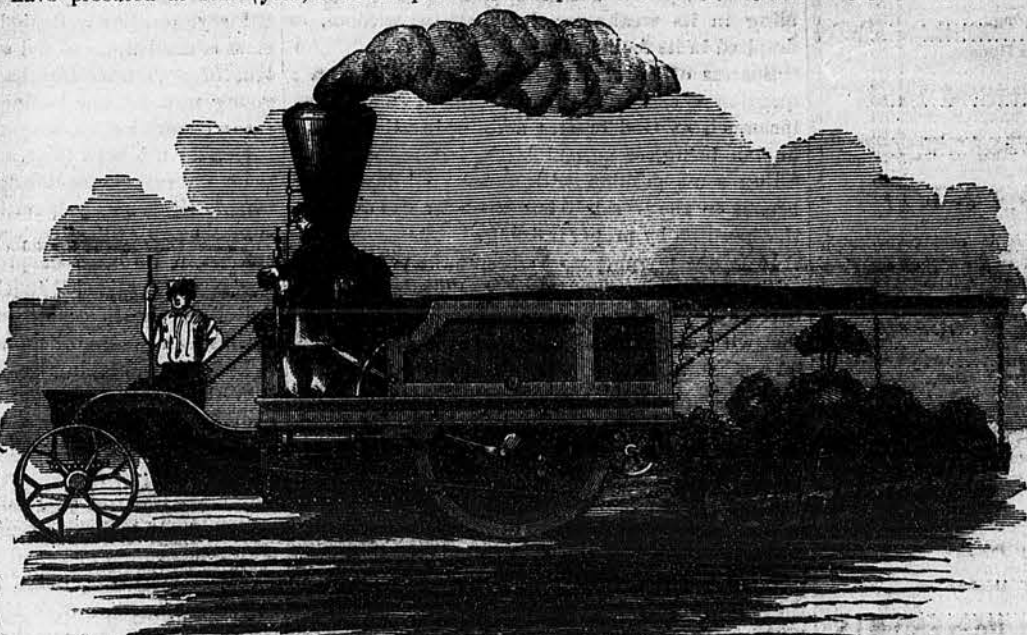
ing. Either of these will make a marked difference in the time the soil will do to work; and if we combine all of them in a given soil, we reach results not to be attained in any other way.

We do not suppose there is a farmer in the State, who has carefully observed the matter, but will agree with us, that the early planting is a necessity; and we think a little reflection, if not already convinced, will show that we have given a remedy above for cold, heavy, sluggish soils, and one which will prepare our lands for early planting.

Then, why, we would ask, can we not have the practice adopted more generally? It costs but little, may be attained gradually, and will work material benefit to all who adopt it.

CAT CHOLERA.

A correspondent asks us to furnish a cure for the above (to us) unknown disease. If there is such a disease, the only cure which occurs to us at this moment is, to kill the cat; and as a preventive, we would suggest the killing of the kittens. But, seriously, is there such a disease? We thought the feline race was peculiarly exempt from disease; and as we do not share in the popular antipathy against cats, we shall be pleased to publish such remedies as any may suggest.



ples for a farm orchard of one hundred trees. After the lapse of another year, we are prepared to submit the same list to our readers, with one single exception.

The exception we make is to place on the list five Willow Twigs, to take the place of the same number of the New York Pippin; so that the list we recommend for a family orchard stands as follows:

- | | |
|--------------------------|---------------------------|
| 5 White Winter Pearmain; | 5 Large Striped Pearmain; |
| 3 Early June; | *10 New York Pippin; |
| 3 Early Harvest; | *4 Cooper's Early White; |
| 2 Fall Pippin; | 5 Jonathan; |
| 2 Bailey's Sweet; | 5 Kirby's Red; |
| 3 Swaar; | *5 Lowell; |
| 3 Northern Spy; | *3 Maiden's Blush; |
| 3 Rhode Island Greening; | *15 Rawles' Genet; |
| 5 Rome Beauty; | *15 Winesap. |
| 5 Willow Twig; | |

As we remarked last year, those marked with a star (*) may be increased to almost any extent, with profit, for those who wish to plant more than one hundred trees.

The above list is made up after careful observation upon our part; and we repeat, we think it the best selection which can be made for the purpose above named.

DISTRICT FAIR.

Southern Kansas has taken steps to organize a

The Kansas Farmer

GEORGE T. ANTHONY, Editor.

**A CHANCE FOR ALL
Who want to Start a Library!**

VALUABLE BOOKS WITHOUT MONEY!

American Watches: Anybody can Get Them!

**Examine the List Below,
AND THEN GO TO WORK!**

In the following table we give the names and value of some very choice Agricultural works. The last column shows the number of subscribers required at one dollar each, to secure the book, which will in all cases be sent post-paid. It is desirable that subscriptions should be sent all at one time, for any given book. On the watch clubs they may be sent at different times. In competing for any of the premiums it is not necessary that the names be all from one postoffice.

No.	Name	Value, \$1 each	No. subscribers
1	Bulst's Family Kitchen Gardener	1.00	4
2	Yonatt on the Sheep	1.00	4
3	Hunter and Trapper	1.00	4
4	Mohr on the Grape vine	1.00	4
5	Dadd's Modern Horse Doctor	1.50	6
6	French's Farm Drainage	1.50	6
7	Henderson's Gardening for Profit	1.50	6
8	Parsons on the Rose	1.50	6
9	Randall's Sheep Husbandry	1.50	6
10	Quincy's Mysteries of Bee-keeping	1.50	6
11	Warring's Draining for Profit	1.50	6
12	Woodward's Cottages and Farm Houses	1.50	6
13	Farming for Boys	1.50	6
14	Fuller's Fruit Tree Cultivator	1.50	6
15	Ten Acres Enough	1.50	6
16	Harris on the Pig	1.50	6
17	Bement's Poultryers' Companion	2.00	8
18	Bu-Bruil's Vineyard Culture, (Warder)	2.00	8
19	Langstroth on the Honey-bee	2.00	8
20	Mrs. Hale's New Cook-book	2.50	10
21	Flint's Milch Cow and Dairy Farming	2.50	10
22	Allen's New American Farm Book	2.50	10
23	De Voe's Market Assistant	2.50	10
24	Flint on Grasses	2.50	10
25	Warder's American Pomology	3.00	12
26	Caldwell's Treatise on Hedging	3.00	12
27	Allen's American Cattle	3.00	12
28	McCullure's Diseases of Horses, Cattle & Sheep	3.00	12
29	Strong's Cultivation of the Grape	3.00	12
30	The Book of Evergreens	3.00	12
31	Thomas's American Fruit Cultivator	3.00	12
32	Tegotmeir's Poultry Book (Colored Plates)	9.00	36
33	Harney's Barns, Out-Buildings and Fences	10.00	40
At the same ratio any larger number of subscribers may be sent. For example, for 14 subscribers we will send any one of the \$3.50 books and either of the \$1.00 books, and so on; or			
All to No. 8, inclusive		7.00	28
All to No. 10, inclusive		13.00	52
For larger clubs we offer some superb American Watches, Elgin manufacture, solid silver cases, upon the following terms:			
3 oz. Silver Case		25.00	70
3 oz. Silver Case		30.00	84
4 oz. Silver Case		35.00	100

AGRICULTURAL EDUCATION!

An Address delivered by GEO. T. ANTHONY, before the Kansas State Agricultural Society, at Topeka, Wednesday, February 22d, 1871. Published by request of the Society, as follows:

TOPEKA, KANSAS, February 22, 1871.

CAPT. GEO. T. ANTHONY — DEAR SIR: I herewith forward you a Resolution, passed at the meeting of the State Agricultural Society, in Representatives' Hall, this date.

On motion of Lieut.-Gov. P. P. ELDER—

Resolved, That Capt. GEO. T. ANTHONY be invited to publish, in THE KANSAS FARMER, his able Address, delivered before the Society this evening.

Very respectfully, J. K. HUDSON, Sec'y pro tem.

Mr. President, and Members of the Agricultural Society:

The subject of Education is one of such magnitude, and of such vital interest to the individual and community, that to approach it for discussion without careful thought and a pure purpose, is to commit a grave offense against society.

What I may say to-night is in full view of this responsibility. You may accept my views as vain or revolutionary; your riper, better balanced judgments may reject every suggestion, even; yet, if I impress upon each word uttered the seal of candor and earnestness wherewith it is spoken; if I convey to your understanding the purpose that has induced

me to appear in this, to me, unusual and embarrassing attitude, of attempting to address a public audience in a formal manner, I shall not regret the effort.

To educate the boy, is to make the man. To make the man, is to fix and determine the measure of his worth or worthlessness to himself, his friends, and the world.

The machinery of education is to the human intellect and moral faculties, what the mechanic arts are to inanimate material.

The ore from a common bed parts company, to assume shape and value according to the skill wherewith it is manipulated. It may rest at the roadside, through neglect, to corrode and lose itself in the earth from which it was dug. It may assume rude shape under the careless hand of the founder or forger, and serve the purpose of weight or ballast, solely for its negative value of gravity. It may become the polished needle in the hands of genius; to elaborate the most exquisite design of embroidery, or be wrought into the ponderous and powerful engine, which drives the ship in face of wind and wave. As an instrument in the observatory, or material in the laboratory, it may become the handmaid of science in the elimination of essential facts. It may be made worth its weight in diamonds, or worthless as dust. In short, it fills the highest or lowest position of possible usefulness, according to the skill of the workman who shapes it.

In like manner, the human faculties are dependent upon the process of education for development; and just in proportion to the perfection of educational machinery, and the skill of the educator, is the value of the result. The raw material of intellect may be made grand in its power, or groveling in its weakness; honored in wisdom, or despised in its foolishness.

Success or failure in life, as I believe, is more a question of education than of original endowment, inasmuch as God creates nothing in vain. Not a human being, of normal birth, but is capable of filling some position with honor to himself and benefit to the world, if but fitted for the duties of that position by proper training.

It is not my purpose to discuss the necessity, or criticize the system, of popular education. It has become apparent to the understanding of all men that without the broad, deep and solid base of mental and moral culture, obtained at the well ordered home and the public school, whereon to build the temple of perfected manhood, it is useless to attempt this structure.

So patent is this necessity that few, indeed, fail to recognize it a paramount duty to the race. The best minds of the country are professionally devoted to it. The first and purest aspiration of the statesman is to aid it; the most cheerful duty of the people is to pay for it. No burden is oppressive to the intelligent tax-payer that is carried in the interest of popular education.

The intelligence and the sentiment of the people are knit together in a grand resolution, which means no less than ample provision for a common school education, free as air, to every child in the land, with a penal statute making it a crime for a parent or guardian to deprive the child or ward of its privileges, by neglect or intent.

Not only has the system of elementary education been brought to a position beyond danger of relaxation or decline, but "liberal" education has become a term more clearly defined, broad in meaning, and generally comprehended, than ever before. The "college course" is assuming a more practical character, and adapting itself to the progressive age in which we live. The grand central idea of the old-time aristocracy of letters was a mastery of the ancient classical languages; and it is still deemed by candid minds that these studies are valuable as a means of improving the intellect; but no one now sustains their study as the grand instrument of liberal education, except he has been so completely covered with the mold and dust of the dead past as to be oblivious of the living present.

The old methods of education are gradually giving place to new and better ones. Learning, as a distinguishing mark between the rich and the poor (a something grand, because peculiar), no longer commands old-time homage. On the other hand, learning, as a power for daily use; learning that blossoms and fruits in works, rises daily in the world's confidence and esteem. Thanks to the genius of progress, our colleges are graduating less men so admirably described by LOCKE, when he said: "Men of much reading are greatly learned, but may be of little knowing."

Experience has determined a necessity for a new element of education. It has been found that neither elementary nor "liberal" education gives to the student what he must know, in order to enter upon the duties of life intelligently, and pursue them successfully.

Professional education, although of modern origin, is fast forcing recognition as a necessity. It has come to be understood that a man, no less than a machine, must be fitted and qualified to perform the specific duties assigned to him. Yet, in this as in many things, execution lags far behind conception, and supply responds slowly to demand. This is peculiarly true in the application of this new element of education to Agriculture.

If I should ask the general question here to-night, Is Agricultural education necessary? every one present would answer, Yes. If I should ask the men who believe the profession of Agriculture exempt from the conditions of skill and science required for success in other pursuits, to stand up, all would remain seated. Educational fitness for this, as for all life pursuits, is theoretically admitted, yet practically denied, by the great majority of men.

I say, practically denied; because no system of class education, no school of special training or system of apprenticeship has been provided, to fit young men for the business of farming, as is the case with mechanics, lawyers, doctors and ministers.

Men do not send their sons to a law school to fit them for carpenters, nor do they put them into a machine-shop as a preparation for the pulpit. No man expects, or desires, his children to enter upon any trade, business or profession, without being first carefully schooled in the principles and practice of the chosen occupation, except in the case of farming and—housekeeping. Girls are supposed to know housekeeping by intuition.

With the single exception we have named, as soon as the elementary education necessary to sustain the structure of intelligent manhood is obtained, the young man is put in special training for the particular trade or profession chosen as a field of life effort. If dedicated to mechanics, he is supplied with the required tools and placed in the charge of a master mechanic, to be instructed in their use and made familiar with the rules and practice of the profession. If a merchant, he goes behind the counter and into the counting-room, there to be molded, day by day, into a man of trade, by the pains-taking labor of an instructor who is confided in as a master of the art of merchandising. If a lawyer, he reads law under the advice of a competent jurist, and is carefully instructed in the application, as well as the nature, of legal principles. "The ways that are dark and the tricks that are vain" are all unfolded to him by the tutor.

What is true of preparation for the professions of mechanics, trade and law, is true, also, of all the grand divisions in the field of human labor, with the single exception of farming. Not only is it true of the clearly defined departments of mental and physical labor, but necessity has separated these into subdivisions equally distinct in their boundaries, so that a student need only master a segment of the great circle of learning involved in his profession.

Not less than a dozen of these subdivisions of mechanics were found necessary in the construction of this edifice. The architect determines proportions, harmonizes ornamentation, and fixes every detail of elevation, projection and interior arrange-

ment. Then come the mason, the carpenter, the stair-builder, the plasterer, the plumber, the painter; and, looking upon these unartistic walls, and those poor mutilated, sorrowful countenances, that look down upon us for sympathy in their evident distress, I regretfully add, the artist. These are separate and distinct elements of mechanical education, either of which is a fruitful field for the study of a life-time. Any man who should attempt to master all, or half of them, even, would prove "a jack at all trades, and good at none."

In the legal profession, one man attains eminence by devotion to criminal practice, while another devotes a life of study to the mastery of civil statutes.

The field of medical science is divided and subdivided into special and limited fields of labor; the eye, the ear, the lungs, or some other portion of the human organism is made a study; and great institutions are built up for the reception of patients and practical education of students in the healing art, in its application to a single organ.

Now, who will tell me that it is less important for the farmer to understand the composition and mixture of soil that produces a given vegetable or grain, than it is for the painter to know how to combine colors so as to produce one unlike either of its constituents, and more desirable than all of them separated? Who will tell me that it is more unfortunate for the farmer to neglect, through ignorance, a vital condition to the perfection of a crop from the soil, than for a lawyer to try his case and send it to the jury in ignorance of the repeal of the statute upon which the claim of his client rests? Will any one tell me how the farmer can guard against or overcome the multitude of diseases that assail vegetable life, without a knowledge of the principles of growth and conditions of health in tree or plant, better than a physician can treat corresponding derangements in the human system, without a knowledge of physiology and the cause and nature of disease?

It seems quite impossible that any sane mind should question the necessity of a special course of training for intelligent husbandry; and when the necessity is admitted, it is both irrational and cowardly to rest, until a want of such magnitude is relieved by an adequate supply. It is certainly inconsistent with the American character, to yield without a mastery of the problem. Above all, it would dishonor us as a State, to ignore or neglect our duty. Kansas is the synonym of Leader, in the history of bold, unflinching progressiveness. We cannot fight in the rear rank, or be held as a reserve. If not at the right of the line, and first in the charge, we are nowhere to our honor.

No State has a deeper interest in this subject than ours. Kansas is, emphatically, an Agricultural State. It is capable of feeding an empire, if its latent powers of production are brought out by scientific methods and skillful manipulations. Our soil is in its purity and strength, neither corrupted by careless nor exhausted by heartless tillage.

In the older States, this natural capital has been impaired, and in many cases nearly squandered, by thriftless, ignorant culture. There, a motive is found, in necessity, quickening the people to action; and, but for the fact that new and cheap soil invites them to the West, we should see prompt, earnest and intelligent work in the interest of Agricultural education.

It is now for us to determine whether the soil of Kansas shall be robbed to poverty, by the same men and means now forsaking the exhausted lands of the East for fresh fields of plunder here; whether we husband the capital a bountiful Nature has given us in the soil, adding to rather than taking from it, as we may do by the prompt inauguration of an enlightened system of culture. It is for the thousands who are daily being allured here by the richness of our virgin soil, to determine whether some system and method are to take the place of brainless cropping, waste and destruction of soil, or whether their children shall be driven out by the poverty of the soil, to seek new homes in a

strange land, even as they have been compelled to abandon the shelter of the sacred old roof-tree for a home here.

It is impossible that any should deny or doubt the great want of practical, efficient training for Agriculture and its kindred pursuits. The *how* to do that which we all know should be done, is the vexed question of the hour, to solve which should be the determined effort of all who hold a relation of sympathy with this important interest.

Assuming no wisdom above others, I am still free to declare it my conviction that we cannot make agricultural training a success, with the present machinery of education. We must have means adapted to the end, or fail. No man takes his horse to the jeweler to get it shod, or buys a sewing machine to thresh his grain with; yet, either would be as consistent as to attempt the making of a farmer with any of our present educational machinery.

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; forms no part of his daily duties, and 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, the mastery of pure science, the higher mathematics, and the classics, cheap accomplishments, to be gladly exchanged for a moiety of learning in the field of applied science.

To make an Agricultural School of real value, it must embrace a course of instruction and a system of teaching radically different from a literary institution.

You cannot pin an Agricultural College to the tail of the old college kite. It must be *the kite itself*, with a tail of its own, kept free from the musty classic rubbish of the old collegiate course.

An Agricultural College can never be run upon Greek and Latin stilts, but must be brought down to the solid footing of plain instruction in the theory, science and practice of Agriculture and Mechanics.

Manual Labor must be a part and parcel of College discipline and instruction. 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*.

The College must be supplied with ample grounds, for the cultivation of fruit, grain, vegetables, ornamental trees, shrubbery and flowers. The studies in school-room and laboratory must be coined into the solid currency of practical results, and sealed with the sweat of the student's face upon the farm.

Botany, zoology, mineralogy, geology and chemistry must be taught with reference to their application to the life-work of the student, and not as pure science, that he may go out unencumbered with unpractical theories and a vague understanding of the uses of his learning.

A shop, well supplied with the needful tools to build rustic arbors and plain trellises; to keep buildings, fences, gates and implements in repair, is an indispensable adjunct to an institution of this kind, and their use a necessary part of duty and discipline for the student; always, however, under proper instruction.

In short, an Agricultural College should be unlike any other college. It should be in close sympathy with the best and much the largest portion of our people—the producers. It must feel every throb of the great public heart, and answer every demand of those who live by labor, and desire to educate

themselves in the most intelligent and acceptable methods of labor. It must graduate *men*, fit for farmers and proud of a life-calling that is elevated and honored by their pursuit of it.

These suggestions may seem wild and impracticable; but it must be remembered that greater innovations than this have been made upon equally time-honored usage, and the change found an immense improvement.

But there are other means of Agricultural education than schools and colleges, that commend themselves to the thoughtful and observing. Such Associations as you, Sir, preside over, with so much dignity and devotion, are efficient educators. They are schools of observation and incentives to study, yielding a rich return for all the labor so generously and disinterestedly bestowed upon them. No other means have been more effective in infusing professional pride, and awakening a spirit of emulation among farmers, than Agricultural Societies. That they should be conducted with a closer reference to the elimination of facts, and the recognition of merit in the *producer*, rather than the thing produced, is a fact patent to all having the benefit of observation, or experience in their management. Yet, in the older States these Societies have become so well organized and thorough, as to issue an annual volume of Transactions, worthy a place in the library as a standard work.

The Agricultural Department of the General Government, now that it has obtained commensurate ability in its management, is rapidly rising in popular confidence and marked usefulness. No Department of the Government has a more important field of labor, or better deserves ample means for its cultivation. In the collection, collation and dissemination of statistics, and in its seed department, the whole country has realized advantage. When the States fully comprehend what the Commissioner of Agriculture is doing for them, unaided except by volunteer correspondents, I am confident that means will be taken to organize in each State, under State authority and patronage, subordinate aids, in some practical form, by which more and better information can be gathered for publication.

Experimental Farms, such as are established in England by private endowment, or in Germany by government patronage, could not fail of accomplishing good here. Had we, in the State of Kansas, ten farms of one hundred acres each, all well stocked with every modern appliance of orchard, garden, grain, hedge and forest culture, and stock-raising, with the best practical talent obtainable at the head of each department, and all under the supervision of a competent head or superintendent, with ample means appropriated annually to carry on experiments with seed and culture, blood and breeding, each county being entitled to its representation of apprentice labor, by which alone the work of the farm should be done; it would, in my judgment, work a perfect revolution in ten years. The young men going out of such schools, would prove a leaven to the whole lump of Agriculture. More capital, more learning and greater success, would accrue to the profession, than the most hopeful have ever anticipated.

It is hardly necessary to mention the Agricultural Press in this connection; yet, to omit it would be to ignore the chief of all means, up to the present hour called into requisition, for the education and elevation of the farmer. At first received with sneers and contempt, then with caution and doubt, it has finally become the source of light and warmth to the system of Agriculture, even as the sun is to the world without. Not a material fact is demonstrated, a promising theory originated, or a worthy suggestion made, that is not multiplied like forest leaves and scattered broadcast for the general good. Not a spark of hope or pride falls upon the farmer's path, that is not fanned to its utmost brightness, to cheer his steps. It is the farmer's mouth to speak, eyes to see, and ears to hear. It carries information to the needy, and brings wisdom from those who have it to spare. It quickens

flask-shaped, with two little tubes extending backward on the hinder extremity, through which exude the superfluous juices of the plants they rob, in the form of a clear, sweet liquid resembling honey. The head and thorax are soldered together, antennae are long and graceful and kept in constant motion, the little round eyes are bright and black, and give the creature an innocently wise look, that is really ludicrous. The head is further furnished with a long, sharp beak, with which it pierces the tissues of the leaves, and extracts the sap. They are gregarious in their habits, and when undisturbed, cluster together in dense masses upon the growing points of plants, the full-grown ones surrounded by their variously-sized offspring, each one with its beak plunged into the leaf, seemingly unconscious of everything but the gratification of the bibacious propensities. When overfull, they become uneasy, throw their legs into the air, and eject through their honey-tubes a minute shower of the sweet fluid which they have distilled from the plants. This substance, when abundant, forms one of the "honey dews" which have puzzled observers so often. It is not, however, the only "honey dew." There is a very similar substance elaborated by the leaves of a variety of plants, under certain circumstances; and the confounding of the two has probably led to all the confusing and contradictory statements made on the subject.

In the open air, the aphid "honey dew" is very attractive to ants and other insects, which hover round the "little kine," and by caresses with their antennae urge them to yield the delicious draught of which they are so fond. Scientifically, these minute insects are very interesting, especially their mode of reproduction, which is after this anomalous plan: Late in the Fall appears a brood of perfect winged males and females, the latter of which fly from plant to plant, depositing microscopic eggs. These eggs hatch, and produce what are called asexual individuals, which give birth to their young viviparously for six or seven, or more, generations, when the winged brood again appears. Were it not for the winged aphids, the insects would not spread very rapidly, as they have no strength in their slender legs for long journeys, and do not ever move from one plant to another unless the two are in contact, or the insects very numerous.

Fumigation with tobacco is the most effectual and easily applied remedy. In a conservatory, which can be closed up tightly, no difficulty is experienced in exterminating or greatly reducing the numbers of the little pests, who quickly succumb to the stifling smoke; and if not continued more than an hour or so, and the plants are syringed immediately afterwards, the latter will receive no injury. When one has but few plants, a good plan, which we have often practiced, is to place those infested in an old trunk, and put a few coals in a plant saucer, sprinkle over them a handful of the strongest smoking tobacco; set this among the plants, with a space around it, so that they will not be hurt by the heat; then close the trunk tightly, and leave for fifteen or twenty minutes, for this makes a dense smoke, and should not be applied too long. When the trunk is opened the aphides will be found stiff and motionless, and at a slight jar will fall to the ground. The plants should then be thoroughly sprinkled or washed, and if there are more, a new set subjected to treatment. Fumigation in this way should be attended to on some mild day, when it can be done out of doors, or where the fumes of tobacco will not be offensive.

THE GREAT GRAIN, SEED AND FARMING IMPLEMENT ENTREPOT OF KANSAS.

Believing the farmers of the State would be benefited thereby, we took occasion to call on M. S. GRANT, of this city, a few days ago, and looked through his extensive warerooms. As many of our readers are new to the State, we must first tell them who M. S. GRANT is.

About ten years ago Mr. GRANT came from New York to Leavenworth, to examine it as a place for

his future operations. The location pleased him, and he opened a small establishment on Shawnee street, between Fifth and Sixth, in connection with Mr. PREST. Here he has continued in business up to the present time, with the important exception that he has gradually added to his warerooms as the demands of his business required, until we now find him occupying rooms seventy-five feet front by one hundred and twenty-five feet in depth, two stories high. This space is packed, from bottom to top, with every conceivable implement which can be used on the farm, garden or orchard, and every variety of seed valuable for cultivation in the Western country. We omitted to state that Mr. PREST retired from the firm two years ago.

In the lower rooms of this immense establishment we found a collection of plows, harrows, reapers, mowers, drills, &c., which to our eye looked sufficient to supply Kansas for the next ten years; and we were somewhat surprised when our attendant informed us that more plows had been sent out within the last ten days, than were now in the house. Upon inquiry, we found that Mr. GRANT is doing a large jobbing business, his sales last year amounting to nearly a quarter million of dollars.

We were first made acquainted with the fact, on our visit here, that Kansas was using the celebrated Coles Patent Stalk-Cutter—one of the most valuable of the improved farm implements.

In the upper rooms we found a very large assortment of implements, by sample, embracing almost everything known to the trade.

In the seed rooms we found clover, timothy and blue grass, oats, wheat and barley, by the car load, and of a quality which speaks well for the integrity of this house.

In the garden seed department, presided over by Mr. GRANTER, we found an immense stock, embracing every garden and flower seed known to the Catalogues. We found Mr. G. busily engaged in filling orders, from dealers in the interior of the State; and from what we saw in this department, we are led to believe it is by no means the least important.

The seeds we examined were of the very best quality, grown expressly for this house. They put up large quantities of seeds in packages of a dozen each, to suit the wants of the country dealers; and we think this a great improvement upon the old practice of boxes, as by this plan the dealer can order just such seeds as he may want, without buying a quantity he don't want.

Mr. GRANT keeps a gentleman traveling constantly in the interests of his house. At this time Mr. H. C. NOBLE performs this duty, and, we judge, with satisfaction to all concerned.

We are glad to know that Kansas can and does support such an establishment. It is not only an honor to M. S. GRANT to have built up such an establishment, but it is a credit to our farmers; as it indicates that they are progressive enough to buy and use all of those implements which tend to make farm work more enduring and profitable; and we are glad to know that Mr. GRANT has, by his strict integrity and attention to business, secured so large a proportion of their trade. Success to all such establishments.

THE HOG MARKET.

It will be remembered that we advised our farmers to hold on to the hog crop as long as they possibly could, under the impression that prices would be better near the close of the season; and we based this opinion upon observations in former years, that in almost nine times in ten, prices are higher from the middle to the close of the season than they are the first half. The reports of the Chicago markets for February 1st, was seven dollars and fifty cents to seven dollars and eighty cents, gross weight, with strong prospects of another advance. Cincinnati quotes them at seven dollars and fifty cents to eight dollars, and New York eight dollars and thirty-eight cents to eight dollars and sixty-two; and, to our mind, the present price of bacon and mess pork would justify a still further advance.

WANTED.

THE KANSAS FARMER wants the hearty co-operation of every farmer and every lover of Agricultural science in the West, in the improvement of this science, and in disseminating such light and knowledge as will be of material benefit to all cultivators of the soil.

To this end, we want contributions from the farmers themselves, upon every subject connected with farm life that may be of general interest.

WE WANT reports of Agricultural meetings.

WE WANT reports from Farmers' Clubs.

WE WANT reports of experiments made in regard to the culture of any specific crop.

WE WANT friends who will interest themselves in circulating THE FARMER among their acquaintances.

WE WANT Twenty Thousand Subscribers, and we want them at once, in order to perfect improvements we are contemplating.

Will you help us to obtain them?

CORRESPONDENCE.

TIMBER PLANTING.

BY JOHN A. WARDER.

EDITOR FARMER: In the proceedings of the Horticultural Society, as printed on page 188 of THE FARMER, December 15th, it appears that some one, anxious for information and willing to impart his quota, from perhaps a slender stock of knowledge about timber trees, suggested the planting of a certain poplar. This, to most of us readers, is very uncertain teaching, and should not be allowed to pass without remark.

A Mr. HUTCHINSON asked about a tree "known in Northern Wisconsin and Minnesota as the poplar," and stated that it grows tall and straight, and when peeled and nailed upon posts it will last a very long time. He had seen them sound after twelve years." In a note, further information is asked for by the Editor.

Your very intelligent correspondent, JAMES HANWAY, of Lane, offers an explanation in the January number, page 7, in which he refers to the poplar of Ohio, which is an exceedingly valuable timber tree. In this response to the querist, I am satisfied he is wrong, as this poplar does not grow to any extent far to the north—at least, in the States mentioned by Mr. HUTCHINSON—and is not found in the lists of forest trees of Wisconsin.

It is reported that somebody is preparing a handbook of forest trees, for the benefit of those who may be induced to plant in your beautiful Kansas. Let us hope, for the benefit of the gentleman above named, and all others interested, that the forthcoming work will be judiciously prepared, by some one having a botanical, as well as a thoroughly practical, knowledge of trees; so that when he speaks of a poplar, he will show his readers that he knows what he is talking about. Tree-planters have a great work to perform in Kansas, and it is desirable that they should be prevented from making mistakes—if possible, to avoid them.

Thus, in the present case, the difficulty has no doubt arisen from the use of the common names, which are very uncertain in their meaning, and often refer to very different plants in different parts of the country. It would be very desirable that the botanical name should be presented in the discussions and reports of the Horticultural Society, as these would give a certainty and definiteness to the meaning, that could be understood by readers everywhere. Mr. HUTCHINSON, no doubt, referred to a true poplar, or aspen (*Populus*); whereas, Mr. HANWAY writes about a *magnolia*, or the *Liriodendron tulipifera*, the tulip tree, very commonly misnamed poplar by the woodcutters and lumbermen, who also call it whitewood in some parts of the United States.

It is much more probable that reference was made by Mr. HUTCHINSON to one of the many aspens, or true poplars, that abound in the Northern States; most of which grow rapidly when young, though they never make more than second-class trees, and are of little value for timber.

The following is from *Lapham's Report on Forest Trees of Wisconsin*:

There are, native in this State, as many as seven distinct species (of *Populus*). The wood of all is light, and possesses very little durability and value as timber. It checks, warps and springs so much in seasoning, as to ruin it as board or sawed lumber. As fuel, the willows and poplars rank lowest of American trees, bearing the proportion of 40 to 100 as compared with hickory.

Although for a period of ten or fifteen years the poplars may grow with great rapidity, so as to merit the reputation of the most rapid-growing tree we can plant, yet, after about that age, they grow less rapidly.

After stating their several demerits, the authors of the Report

—dismiss this whole class of trees (*Salicaceae*, or white poplars) by stating, that even where rapid growth of trees and shades is desired, the ground had better be planted with other and more valuable trees.

Exception might, perhaps, be taken in favor of the white and yellow willow, and of your native cottonwood, which is a noble tree in Kansas—better, at least, than no tree; and all three should be encouraged for immediate results in a new country, because of their easy cultivation, and as filling the gap while others of slower growth and of infinitely more value, may be coming on to shelter and adorn your exposed homes, and to furnish timber for your prairie farms.

Plant trees for beauty, and for shade and shelter, on every Kansas farm; plant anything that will grow into a tree, but be sure to plant a large proportion of such as will be truly valuable; but plant trees at once, especially in belts around your farms, and as shelters about your homes and orchards. For this purpose I would recommend maples, not only the rapidly growing soft maple (*Acer dasycarpum*), but the sugar tree (*A. saccharinum*); and for ornament, especially as a street tree, the scarlet or (*A. rubrum*). The oaks should not be neglected in our forest planting, nor the ash, beech, locusts; much less the hickories and walnuts. Of the last, however, it is necessary to observe a caution, which is here presented because of the frequent recommendations to plant this tree for profit. It is to be apprehended that many will be disappointed in the results. It should be remembered that in our natural forests the black walnut is fastidious as to site, and is only found in perfection upon deep, rich soils, with an open subsoil, such as occur on the rivers. Because you have noble walnuts on your own Kaw bottoms, it does not follow that this tree will succeed on the beautiful high rolling prairies of your State. They may or they may not do well; or they may grow thriftily for awhile, and produce crops of fine nuts, and yet they may not succeed in yielding satisfactory returns in timber. Then, we must recollect, also, that the walnut requires from one to two centuries to reach its maximum size; and although it be very valuable when fully grown, and should be planted in congenial soils, it is doubtful whether the money returns would not be overbalanced by the interest account and taxes of a couple of centuries; and whether our fast-moving people would not be better satisfied with a timber crop that can be grown and harvested in a much shorter period.

Certain experiments may be cited where walnuts have been planted on prairie soils in another State, which do not afford much encouragement to tree-planters. On the eastern borders of the Grand Prairie of Illinois, a plantation was made in 1837, on good corn land; the adjoining fields have annually yielded sixty bushels per acre. The trees were cultivated for some years; and now, at thirty-four years old, they average only six inches in diameter. At Elgin, Illinois, Mr. SCHOFIELD planted walnuts beside soft maples, larches, spruces and pines; and while the latter have made a noble growth in twelve years, the walnuts are slender and much less promising of satisfactory results.

Of the hickories, you should plant the pecan (*Carya oliviformis*) largely, on bottom lands.

There lies before me a printed circular from some one in your State, who offers young chestnut trees. This is, undoubtedly, a most valuable timber tree, yielding, also, very agreeable nuts. Standing singly, the chestnut is a beautiful object, with fine foliage, and tufted with tassels of bloom in July; but, it must be remembered that few trees are more fastidious as to their soil. Let it be tried in a small

way on stony land, at the outcrop of shales and sandstones particularly, before making large plantations of this species.

Being truly anxious to see my friends on the prairies earnestly at work in the noble pursuit of timber planting, it is a matter of solicitude that they begin right, and proceed with judgment, not only in the selection of varieties but in the mode of setting out and cultivating. This must be my apology for intruding upon the valuable space of THE KANSAS FARMER.

First, as to planting. Nature shows us how to do it, by casting myriads of seeds and producing a thick coppice of young plants. We may imitate her, by setting our trees four feet apart each way, and thus secure an upright growth of timber in our new forests.

Some of the most valuable coniferous trees may next be mentioned, with a selection of those we should plant.

PLEASANT TALK—BY "HARRIET."

EDITOR FARMER: "The Winter of our discontent" (this refers, no doubt, to impatient gardeners) is almost over, and very soon hot-beds will be started and Spring work fairly commenced. It is to be hoped that old Winter will not be thoughtless and forgetful of the propitities, and "linger in the lap of Spring"—the most of us preferring he would hurry up and depart, leaving the coast clear for sunnier influences.

Did you ever observe, in your journey through life, how-like some trees many members of the human family were? I have known ruddy-faced, strong-limbed individuals, who, like the firs and pines of northern climes, seemed to revel in cold winds; and when the quicksilver had contracted and tried to hide itself below zero, these animated evergreens would take in health and vigor with every cold breath, and really enjoy Winter's ice and snow. While these rejoice in frost, there are others who shrink within themselves, and utterly refuse to be comfortable until Summer's suns shine out again. For all such exotics there is, of course, the sunny South, with its warm winds and bright skies; but, alack and alas! the sunny South will not come to us, and we cannot go there; so, we shrink and we shiver from November till May. All the seasons have their delights, but the Spring time alone is typical of the resurrection. What can look more like blasted life and life extinct, than the face of all Nature, as it now presents itself to our view? All that remains of the herbaceous plants is the shrunken, blackened stems and leaves, flattened to the ground; and the gray, bare branches of fruit and forest trees and vines look as if ready for the fire. But the experiences of generation after generation, for thousands of years, teach us that all these things are not dead, but sleeping, and that, after a few weeks of warm Spring weather, all vegetation will wake up to a new life.

While waiting for this change to take place, we can take some crumbs of comfort in reading over the seed and bulb catalogues; but that pastime is similar to that of a hungry man reading a cook book—he can choose his dishes, and it increases his hunger. We can pick out our seeds and bulbs, and imagine the beauties of each, and there it all ends; but when we really get to planting, then we have assurances that are perfectly satisfactory, that we shall soon see our hearts' desire in a fine display of flowers; for the soil in this "Great American Desert" has a way all its own of putting seeds and bulbs through a course of sprouts, that is delightful to behold. And, oh! the roses! how they grow, and how they do blow, in this arid waste!

I have often thought I would like to make a garden on the prairie; it would be so much easier than to make flower-beds with a stump at one end and one in the middle. In my flower-garden only four are left, demanding and maintaining their position, and they are black walnut, proving it to be a durable timber—in stumps, at least. At the foot of one of these persistent hangers-on I planted, six years ago, a Prairie Queen rose. Before doing this,

I had placed in the hollow of the stump, and securely braced, a post about fifteen feet long. The rose, feeding on the decaying roots of the black walnut, grows so rank and rampant that it takes two of us, every Spring, to trim and tie it up to the arms of the post.

At the foot of another one I have a chestnut tree, with cherry trees close by, which is three times as large as one of the same age standing by itself. Although we are on a hill, where draining would hardly seem necessary, these decaying roots must act as drains, as well as enriching the ground; so that unsightly stumps, even, have their bright side. Another way to hide, and make them at the same time ornamental, is to place a pole in the center of the stump, and then tie strings to the top, and bring them down to the ground on the outside, and fasten with pegs; then plant morning-glories, cypress, or maurandia, and in a short time there will be a pyramid of green leaves and flowers. It tries one's ingenuity and patience and love of symmetry, to meet with these unpleasant obstacles; but where there is a will there is a way, and if a wife or daughter craves the fragrant, cheerful flowers enough to try and grow them, she will, if possessed of health and a moderate amount of stamina, have her garden glowing with the reddest rose, in spite of all such little hindrances as roots and stumps. There are door-yards and patches of ground around the houses of thousands of farmers in this State, which I would like to have the managing of for about two years. What a mending of fences, and raking and scattering of corn-stalks, and old boots, and brush, there would be in the Spring; and at a small expense, I would plant some evergreens (always a few of these), some roses, and shrubs, and a few hardy, irrepressible perennials, which would not be killed and which would flourish and blossom under almost any circumstances. And then I should labor with the members of the household, and try to convince them, if possible, that trees and plants do not like to associate with hogs, horses, cattle, or great lumbering dogs. After having it all my own way for two years, I would agree to let the place return to its original simplicity and beauty, if the owner did not admit that his property was worth just one hundred dollars more than it was when improvements commenced.

The feminine portion of the household, I know, would never let the place look so forlorn and homeless again; and I am loth to believe the farmers themselves would, for they are just as easily charmed with gay colors, fine houses, green fields, picturesque scenery, bright eyes and sweet sounds, as the women are; only these farmers labor under the mistaken notion that, because their work is rough, and sometimes dirty, their surroundings must correspond. Would it not be easier to plow in the hot sun all day, if you knew there was a patch of green grass by the house, where you could, at noon and in the evening, rest and refresh yourself in the shade of trees? Do not allow yourself to think it *womanish* to admire flowers. That opinion is fast fading away; for there are too many men of acknowledged ability, and excellence, and influence, engaged in the cultivation of flowers, the demand for them increasing at such a rate that it has become a paying, money-making business.

I really wish the farmers who read this, and the big boys, would take into serious consideration this fixing up of the ground around the house, and have it so attractive that any one passing by will slacken their speed, go slow, and look, and look, until they almost twist their heads off, with trying to see the whole of that pretty place.

Wyandotte County, Kan., February, 1871.

[NOTE.—The above was written for the February number, but reached us too late for publication.—EDITOR.]

OSAGE HEDGES AND HEDGE GROWING.

BY J. H. SHEVER.

EDITOR FARMER: As there has been considerable said about hedging, and having had twelve years' experience, I will give my notion of hedging.

In the first place, plow and harrow your hedge-row, so as to have it well pulverized; plow deep—the deeper the better. Plow your ground twelve feet wide, and let nothing grow within six feet of the hedge. Your ground being ready, the next thing is to have good plants. I have seen plants in the Spring that looked like they were good; but if you would take a knife and cut the bark at the top of the ground, you would find the sprout black between the bark and wood. One trouble in hedging is bad plants; another is bad setting; another is bad cultivation; another, driving stock, and even wagons and teams, over them.

First—the setting. Trim your plants before you go to the field to set. Cut off the long roots, so you can get them in the ground without doubling them up. Don't leave more than three inches of top to the plant. Separate your plants into two lots, so as to have them grow as near alike as possible. To get a good even stand is the one thing essential, to make a good hedge. All things ready, go to the hedge-row with a good horse and long single shovel plow; or if you have anything better, use it. Your row being staked, run your plow straight in the row, until you loosen the ground sufficiently to get in your plants easy. Then stretch a long rope to set by. I have always used a wooden dibble, about sixteen inches long, sharp at one end, to make the holes with. Push it down with one hand, and have your plant ready with the other, and stick in the plant as you take out the dibble. I make a foot measure on my stick, and measure, setting them just one foot apart. Set two inches deeper than they grew. After sticking in the plants, fill up the furrow about level, and tramp down the dirt along the row, leaving about one inch above ground. In or across sloughs, cut stakes of the white willow, about four feet long; sharpen one end, and drive them slanting one over the other; drive them at least half their length into the ground; do this as soon as the ground thaws in Spring, and while the ground is soft and muddy. Stakes about the size of a handspike are best; and they will send up a solid mass of sprouts which will make a fence.

Now, your hedge being set in good order, plow regularly every ten days or two weeks, or when needed; the idea being to keep the ground clean for six feet on each side.

Never let so much as a sucking calf run on the young hedge while growing, during the first or second years. The next Spring after setting, or any time between Fall and Spring, cut back to the ground. From the 1st to the 15th of June, cut again, two inches above the Spring cutting. Cut each year as above, rising gradually. Be governed by the hedge. If it appears thin, keep it back until it is thick. This is the main thing to make a good hedge, as it makes the limbs shoot out of the ground where they ought to be.

Look at most of the old hedges; the older the hedge, the higher the thick part is from the ground, and you can see, if they were sunk in the ground they would be splendid hedges. The idea is, to make the hedge grow at the ground, where it ought to be; that we do by cutting back. Perhaps, you will ask, Why not plant thicker, and save time and labor? You might as well say, Because I plant my corn four feet each way, and thin to three stalks in a hill, you will plant yours two feet, and beat me raising corn in proportion to the amount planted. You may plant your four or six inch hedge, and in twelve years it will be half dead, if you let it grow up, and not be fit to turn cattle. But, take a hedge planted one foot, cut well back, and it can be made to turn anything, from a rabbit to a buffalo, by the time it has twelve years' growth. This is no humbug. I have a hedge. The Winter it was eight years old, a man went into the field to gather corn. He had only just commenced, when the team started to run with the empty wagon. They ran about forty rods, when they came square against the hedge, and right there they stopped. They appeared to think they had run enough. They waited patiently until the driver came up, and backed off, and went back to his corn gathering. I saw that myself, and the man lives in Leavenworth city at this time who owned and drove the team.

I neglected at the start to say, the best time to set a hedge is as soon as the ground gets in good fix for work in the Spring—generally in the month of April. Hedges are usually trained too high. A hedge should not be allowed to grow more than three or three and a half feet at most. No reasonable stock will jump a three feet hedge; for, trained that low, it will get very wide. The best time to

cut a hedge, for ease, is about the first frosts in the Fall. It cuts easier, and the leaves keep it from sticking so bad. In training a hedge, never raise more than from three to six inches at a time, so as to have a solid mat of limbs or brush from the ground; and keep it low, and the bottom brush will live. If you let it grow up, the bottom brush will die, and the hedge become open at the bottom. The sap inclines to flow to the top; so, if the top is allowed to grow, it takes the sap from the bottom.

Now, farmers, if you doubt what I say, come and see my hedges. I think I can convince you that my theory is right. I have one year, two year, three year, and twelve year old hedges; in all, about four miles. No doubt, some of my friends will read this article; and I say to all who may chance to read it, if you are not a subscriber to THE KANSAS FARMER, I earnestly ask you to subscribe at once; for it is the friend of Kansas, and of the farmer and mechanic. People at a distance should take it, to learn what a great young State we have, out here on the Western prairies.

Easton, Leavenworth Co., Kan., March, 1871.

AGRICULTURAL COLLEGE FARMS—WHAT SHALL THEY BE?

BY E. GALE.

EDITOR FARMER: There are difficulties at every step in the successful development of great educational enterprises. It is no easy matter to meet the apathy, the misapprehension and the divided councils of those who should be, or are, the friends of education. Especially is this true of these institutions which are destined, some day, to educate the great masses of society, viz: Agricultural Colleges. Men of the largest experience and broadest culture are only feeling their way to a more settled conviction of what these institutions should be. If we trace their history backward, we see the evidences of failures far oftener than successes. While it may be necessary to bear away from the course upon which many others have been wrecked, we should certainly take our own bearings with the greatest care.

It may not be safe to speak with confidence; and yet it does seem that some plan should be devised, by which the Kansas Agricultural College may be thoroughly identified with the leading Agricultural interests of the State, and thus command the sympathies of the masses. To this end, may we not adopt a system of co-operation, or correspondence, through the Agricultural Department of the College, which shall promote all the great interests of the State, and at the same time open a wide field for instruction to the students of the College?

But before presenting for the consideration of Kansas farmers a system which really involves radical changes, it will be important, first of all, to note that all the departments of Agriculture cannot be properly represented upon any Model Farm which the liberality of the State will be likely to furnish the Agricultural College for many years to come. If great diversity is attempted, then the experiments must be upon so small a scale as to give no satisfactory results; or, if the scale be enlarged, many departments must be neglected. To enter upon this work of experiment upon a scale which will secure intelligent conclusions in relation to profit and loss, in the rearing and handling of all the various breeds of horses, cattle, sheep, goats, hogs, poultry, &c., will demand an outlay in land, in fences, in barns, in stock, and in care, which few have calculated, and which our legislators will be slow in granting.

Another fact we should remember, that the Agricultural College has a farm, for the same purpose that it has a library and a geological cabinet; not for pecuniary profit, but for the illustration of known truths and the development of new ones. While the gain or loss in every individual experiment will be a matter of great importance, it is only a secondary matter whether the Farm, as a whole, has lessened or increased the wealth of the Agricultural College by a few dollars. Hence, judicious and carefully conducted experiments upon the land of private parties in the State may answer the demands of the College, as well as experiments upon its own lands.

We are to remember, also, that in a State like this there is a great diversity of soil, as well as climate. Hence, that system of culture which will succeed in one portion of the State will fail in another. What we wish to know is the probabilities and the possibilities of Kansas soil in every portion

of the State. We must know not only how to cultivate, but what to cultivate. We have opened before us, then, a wide field. To reach this field, or to answer the great demand which the State can reasonably make upon the Agricultural College, let us secure intelligent correspondents, or co-operators, in every part of the State, who shall represent, in the best possible manner, all the departments of Agriculture and Horticulture. To illustrate this plan, let us take, for example, the department of cheese-making. Let a few of the proprietors of the cheese factories of the State be brought in correspondence with the College. One man pursues one course in the feeding of his cows, and in the manufacture of cheese; another man pursues a different course. These various processes must be carefully examined, their comparative merits considered. The dairy farms may be visited by different members of the Agricultural Faculty, and by such students as have a personal interest in dairy farming. The proprietors of these establishments may be induced to render carefully prepared and exact reports of everything which may be of interest to the farmer. These reports, coming from different sections, and representing different modes of procedure, may be unified and presented in the Annual Report of the College, in such a manner that the production shall be a matter of interest to every farmer in the State. These reports might become subjects of study in the College classes. The varied plans adopted in different parts of the State should also be made the foundation of class discussion. Those students who are expecting to invest their capital in cheese-making should visit, at the proper time, several of these factories; not only in their own State, but also, it may be, in other States. And it may not be too bold a flight of the imagination to suggest, that it will not be many years before some of the young men from our Kansas farms and our Agricultural College will not think their education quite complete, until they have visited and patiently examined the dairy and stock farms of England, Switzerland and Germany.

Now, this same mode of correspondence and observation applies, and may be successfully adopted, with reference to all the departments of Agriculture; and especially is this true with reference to the raising, the feeding and fattening of stock. This is the more apparent, when we consider the amount of funds necessarily involved in this work. The valuable farm of Lieut.-Gov. P. P. ELDER is a good example in point. We see, in the account of Mr. ELDER's place given in the January number of THE FARMER, how he turns his corn and grass into money, and at the same time makes his farm year by year more valuable. There are other men engaged in this business, in different parts of the State. Men of this class can be brought in correspondence with the Agricultural department. The modes of procedure upon these farms may be made the subjects of careful study. Young men who look forward to a similar business, after thoroughly mastering facts and principles in class, should visit such farms, and spend some time upon one or more of them.

The same principle applies to the raising of the various breeds of stock, and to all the departments of Horticulture.

If we adopt this principle, thousands of acres and millions of dollars, in various parts of the State, are in effect as much devoted to the interests of Agricultural education, as though all was the property of the State. There are a large class of experiments which the farmer must work out for himself. And when we remember that his own personal interests are involved, we may be safe in concluding that much of this work will be as well done in his hands as it can be done anywhere. We need to bring these experiments together, study carefully successes and failures, and make the whole the basis of instruction in the Agricultural College.

Again, if we adopt this system, the College Farm will be needed only for that class of experiments which ought, from their nature, their novelty or delicacy, to be carried on under the immediate inspection of the Agricultural Professors. There are many such experiments, and the time of that department may well be devoted to this work. The actual College Farm may thus be reduced to a minimum. A few acres will thus answer all the real demands of scientific investigation; while a hundred thousand acres, in various parts of the State, will be devoted to the interests of Agricultural education as entirely as though these great farms and the immense interests involved, were the property of the Agricultural College.

This article is already too long to dwell upon the influence which a carefully adjusted system of correspondence and observation would have upon the farmers themselves. The result would certainly be good. We will hope, then, that some means may soon be devised, by which the Agricultural Colleges shall reach, mold and educate the masses.

Manhattan, Riley Co., Kan., March, 1871.

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THE KANSAS IMMIGRATION SOCIETY.

This organization is a new and important enterprise, of which our readers, both in and out of the State, will be pleased to learn. Its object is no less than to reduce the cost, increase the certainty, and secure success to all who may desire to visit Kansas in search of homes, or come here to dwell upon locations already determined.

Heretofore the Kansas land hunter has found himself subject to great expense, vexatious delays, and often utter failure, in his efforts to find the desired place. He comes to the State without any adequate idea of its geography or connections with the outside world. He is subject to misdirection by the careless or interested. He listens with confidence to the story of a new acquaintance, and is made to believe that Southern Kansas is unhealthy, Northern Kansas too cold for comfort or culture, government lands all taken up that are worth settling upon, and, in short, no place of promise to the settler remaining unsettled, except a narrow area he describes in glowing words of enthusiasm, born of prospective commissions, or interest in a "Town Company."

This is not strange, when viewed from the narrow point of individual interest, nor is it wrong for men to devote their first and best efforts to the promotion of their own success. But it is true that the best good of the State often suffers by the loss of valuable citizens, who leave our borders confused and disgusted.

What we have wanted, and now have the promise of in the Kansas Immigration Society, is a disinterested and efficient means of placing in the hands of people desiring homes in the West, clear

and accurate general information as to the location of government and railroad lands, together with the cost of reaching and purchasing them. An organization that has the power and the will to aid, protect, and facilitate the immigrant, from the hour he leaves his old home until he is quietly and successfully settled in his new one.

This Society, as we understand it, contemplates a general office in Kansas, where all the data for an intelligent direction of the land hunter will be concentrated. The exact location of all the lands open to homestead and pre-emption, with description of same, so far as field notes of surveyors go, at least. The location, price, and terms of sale, of all railroad lands where the owners thereof will furnish such data; and when they fail to do this, the best facts obtainable from other sources will be supplied.

Contracts have been, and are now being made, with all railroad companies in Kansas, and the principal routes leading here from the East, North, and South, by which reduced passenger and freight rates will be extended to individuals and parties emigrating to Kansas. The order of the Society or its accredited agent, secures the low rate ticket which entitles the holder to passage in first-class cars on all through trains, with double the amount of personal baggage allowed to a first-class ticket under other circumstances.

Not only are such advantages secured on railroads, but contracts are held with hotels in all prominent points of the State, where the letter of the Society secures advantages in greatly reduced charges, and equal care for the traveler's comfort.

We have no hesitation in saying that the Society is abundantly able to do all it promises, and that all who seek its aid will meet with the most prompt and satisfactory action. Those in Kansas who have friends desirous of following them, can do no greater favor than by putting them in connection with the Kansas Immigration Society, whereof A. B. HAVENS, of Leavenworth City, is Secretary, and who will respond promptly to all inquiries.

A REMARKABLE ARTICLE.

Special attention is called to an article upon, "Agricultural College Farms—what shall they be?" from the pen of Rev. E. GALE, which appears in another column of this paper. Coming as it does, from a Regent of the State Agricultural College, it has a significance and force, that may well alarm those who have been looking anxiously to the time when the name of that Institution should no longer be a misnomer.

We have read and re-read this article, only to have our amazement intensified and our anxieties increased. It is not only a complete surrender of all hope and expectation of a perfected system of education in the profession of agriculture, but it is an ingenious and carefully arranged method of surrender without the dishonor of a square defeat.

The idea that farmers of Kansas are to become instructors of the Agricultural College—Faculty and students—is an idea both original and novel. The plan is just as good, and no better, than that of the mother who determined her son should not go into water until he had first learned to swim. To this end he was put upon the bureau and ordered to dive off, which he did with a broken neck as a legitimate result.

We have not the time, or patience, to sift this strange proposition. It is just as reasonable as would be the proposition of a medical college, or law school, that practicing physicians and lawyers of the State communicate the result of their experience in practice to them, as a basis of instruction, and that students be sent out to the offices of doctors and lawyers for light; and no man of sense would entertain such a proposition for a moment.

We feel confident in assuring our readers, that no such idea of abandoning the experiment of agricultural education is entertained by the body of our Agricultural College Regents.

EASY LESSONS IN AGRICULTURAL CHEMISTRY. NUMBER II.

Hydrogen is a highly inflammable gas, colorless, tasteless and odorless, and is the lightest of known bodies. It is easy to obtain, by pouring sulphuric acid over iron filings or small bits of zinc, and collecting it by means of a glass or tin tube, one end of which is inserted in the jar and the other end in a vessel of water, over which a vessel is inverted. In the hands of the unskillful it is somewhat dangerous, as some care is required to obtain it pure. If pure, it is harmless, burns with a steady blue flame, and will give several interesting experiments. It forms the eighth part of water, and does not interest us as a manure; from the fact that plant life obtains an abundance to aid in forming the sap from rain, dew, snow, &c. But the one gas that does interest us as a manure is ammonia. It does not interest us as ammonia, but because from it plant life obtains its nitrogen. It is composed of nitrogen and hydrogen, but can rarely be found in this shape, as it unites readily with many other bodies, and, like the Irishman's flea, when you go to put your finger on it, it ain't there. For practical purposes, this quality is no objection, as it is the nitrogen we want, and we can use it as well or better when united with inorganic substances as we could if we could obtain and retain it in a distinct body. It is for this element, ammonia (and remember, we want ammonia for the sake of its nitrogen), that we save our manure principally; and manure is valuable just in proportion as it contains ammonia.

It is ammonia that forms the muscle of the animal; and the object should be to furnish all grain and forage plants with just as much of this substance as it will take up. To the reader who recollects that the air we breathe, and which surrounds the plant, is composed so largely of this gas, nitrogen, it may be surprising that the plant requires any other source of obtaining this food; but the surprise will be removed when we state the fact that the plant obtains its nitrogen only by way of its roots. This is substantially true. Water is one of the best absorbents of the ammoniacal gas that we have, being capable of taking up six or seven hundred times its bulk of ammonia, and when it has taken up this amount, it is what you buy of the druggists as hartshorn.

Ammonia is produced in the atmosphere by the decay of vegetable and animal matter. The moisture of the air absorbs it, and it is returned to the soil by the rain, dew and snow. A moment's thought here will explain why snow has been called the poor man's manure. During the Fall, Winter and early Spring, the decay of matter is greatest, and consequently the atmosphere is more heavily laden with ammonia; and this returns to the soil in the snow. Probably the early Spring rains are as valuable in this respect as the snow. The revivifying effect of a Summer shower has probably been noticed by every reader of this article, and that effect is due entirely to the ammonia which it carries into the soil. The same effect will be produced if you take a portion of hartshorn, diluted with water, and moisten the ground around a plant with it; but you cannot enliven it if you use spring or well water without the hartshorn. This will explain why your cabbage and tomato plants have continued to drag out a sickly existence, after the most faithful waterings, during a drouth. If, with the water, you had mixed stable manure, which contains the ammonia largely, your plants would thrive and grow as thriftily as after a rain.

Ammonia plays such an important part in the chemical economy of the plant, from the fact that it is almost the only source from which nitrogen is derived. Nitric acid yields a portion in certain soils, and from certain limited sources, but not sufficient to be of much interest to the agriculturist. The ammonia is our sheet-anchor, and any source which will yield this is an object of interest to the farmer. All forms of excrement are capable of producing it; and this fact should be sufficient to

insure the careful husbanding of all manures. All dead animals yield it largely; and for this reason, the body of every dead animal should be divided and buried in the fields, that the soil may take up the ammonia.

Ammonia has an affinity for many organic and inorganic substances; but unslaked lime is an exception, and should never be applied to any manure exposed to the atmosphere, as it drives out the ammonia. But it may be applied with advantage to the soil to which manures have been given, as then the soil takes up the ammonia which is expelled by the lime from the manure; and indeed this thought might be of advantage when we desired to get the immediate nitrogenous effect of manure.

We have now considered some of the organic bodies, and we shall next refer to some of the inorganic substances, which play an important part in the economy of the plant. One of the most common of these is potash, and which is easily obtained by leaching wood ashes and evaporating the lye to dryness. Potash unites readily with several substances—carbonic and sulphuric acids, chlorine, &c.—and thus becomes carbonate, sulphate and chlorate of potash.

Potash, in some form, enters into the constitution of nearly or quite all plant life, and possesses a quality, in common with sulphate of lime or gypsum, of roughening the smooth, round particles of silicic acid, and thus preventing the soil from becoming compact.

Lime is another substance which enters into all vegetable life, and is one of the most important elements of animal life. As found in nature, it is always combined with other substances. Our common limestone is a combination of lime and carbonic acid, and therefore is carbonate of lime. As such, it cannot be used to any considerable extent by the plant, but must undergo certain transformations. As sulphate of lime, or gypsum (plaster of paris), it is an important element. This, as we have said above, has the property of roughening the particles of silicic acid in the soil, thereby causing the soil to be loose and friable; and this property would indicate to the farmer, if he has a piece of heavy, compact soil, it is an indication of a lack of this element; and it will be found that an application of gypsum will remove it, if it is not due to water.

Another valuable property possessed by this article, is its ability to take up and hold, for the use of the plant, the manurial gases, which might otherwise escape; and if this property were known and appreciated as it deserves, gypsum would be in general use. It will hold moisture to an almost unlimited extent, carrying a crop through a protracted drouth if the soil is supplied with it.

Prof. MUDGE, of the Agricultural College, stated, in a lecture before the Farmers' Institute, that the corn crop of Kansas would have been largely increased the past season, had this article been used by our farmers. In another place of this number of THE FARMER, we have alluded to this article at greater length.

In our next paper, we shall continue the examination of other inorganic manures.

ANSWERS TO A CORRESPONDENT.

J. J. WEAVER, Vienna, Kansas, in sending in his subscription, asks: "How is Osage Orange seed sprouted? Where can mulberry seed be obtained? and, How is the yellow poplar (*Liriodendron tulipifera*) propagated?"

The seed of the Osage Orange is sprouted by placing in a sack and suspending in water, which should be kept as near milk-warm as possible. It requires from two to four weeks to sprout it, owing somewhat to the degree of heat maintained. Some persons use boiling water at the start; but we can see no necessity for this, as the seed is not to be used until late in the season.

If our correspondent means our common mulberry (*Genus morus*), we presume any nurseryman living in the more heavily timbered portions of the State, could procure it for him.

The yellow poplar is propagated from the seed, mostly; but a friend, in whose judgment we have a good deal of confidence, thinks it can be propagated by cuttings. We should like to hear from others upon this point. If they can be so grown, we should advocate the early introduction of this, the most valuable, in our estimation, of the soft wood trees, save the pine.

We never gathered the seed, nor saw it gathered, but had thought there was considerable difficulty attending it. Kansas would prove a good market for it, if any of our Eastern friends would gather it.

PRESIDENT WILDER.

We present our readers this month with a truthful likeness of MARSHALL PINCKNEY WILDER, President of the American Pomological Society.

Col. WILDER was born in New Hampshire, September, 1798. In 1825 he moved to Boston, and engaged in mercantile pursuits, to which he is still attached, as senior partner of the firm of PARKER, WILDER & Co.

There is no man, perhaps, in this country who has done more than he, in developing our Horticultural interests. Long may he live to enjoy the fruit of his labors, and may his end be peace, and his future glorious.

WILL IT PAY?

We are a powerful, because a practical, people. Nothing of earth or air is permitted to escape our intensely utilizing propensities. No undertaking is too venturesome, nor too absurd either, when once this question, "Will it pay?" has been affirmatively answered in relation to it, to command our best energies.

There is no use in warring upon this, and moralizing upon the degrading results of coining all our energies, hopes and ambitions, into the word "pay." It is far better to urge that, whatever should be done for the best good and greatest comfort of the race "will pay," and endeavor to enlist men in the effort to do it under this all-sufficient incentive, than to drive them from the task by an effort to prove that it should be done from a higher, purer motive.

We are about to urge upon every man who has a home to inaugurate, now, a system of adornment and beautifying of that home. We are about to demand of him that, this Spring, a portion of his labor and means be used in surrounding his house with a neat fence, and filling the yard with trees for shade, and shrubs for beauty.

In making this demand, we shall not dilate upon the beauty and comfort of a home thus surrounded, shaded and beautified. We shall not urge, as a reason for the work and outlay, the influence it will have upon his own better nature and the home-loving sentiment of his children, preserving them to the parents when age needs youth to lean upon, and without which support life's decline is a bleak, cheerless waste; although these reasons are higher, and should have more force by far than the most conclusive evidence that it will "pay."

We put the demand upon the single, narrow ground of "pay," and in that light say to every farmer, or owner of a home, that to neglect such ornamentation is a stupid refusal to make money, and securely invest it, by the same act. The intelligent farmer looks for his gains in increased value of his land, and can afford to invest all his earnings in such increase. Hence, whatever adds most to that value, and does not absolutely cut short his means of subsistence, is just what he should most desire and promptly work for.

A small, thrifty orchard; a neat, well fenced front yard, well set to shade trees, ornamental shrubs and vines; a good kitchen garden, in proper cultivation, and all the surroundings of house and barn to correspond, will make a farm worth twenty dollars an acre, when an adjoining one, equal in all respects except the items named, will not command a purchaser at half that price.

No one will claim this to be an over estimate. The difference between a rose-bush and a hog-pen in

the front yard, is often dollars on every acre of the farm in market. It is with farms as with merchant dice—the finish has as much to do in creating its value, as the material, and often more. Not only does this course directly add to the farmer's wealth in his farm, but its indirect effect is hardly less marked. It excites emulation and like enterprise with neighbors, or results in displacing them for those more enlightened and enterprising, and each beautifies to his neighbor's advantage.

We say, then, to you, reader, if you have a home, set trees and vines for fruit, shade and ornament, this Spring. Do it, because it "will pay," and pay better than any investment of like amount can possibly do. If you can invest the labor with a hue of sentiment, it will serve to lighten the task; but do it for the love of gain, and it will prove your best effort for the year 1871.

A MULTITUDE OF QUESTIONS.

J. O. HOTTENSTEIN, Humboldt, Kansas, writes to us, asking the following questions, premising his letter by saying he thinks THE FARMER is "all right":

I want to know how to grow good onions from seed. What is the best soil to plant a vineyard on, and how should it be done? Will pie plant grow this far south? (I planted seed, but failed to get any plants.) Will currants grow here? Where can I get crab apple seed? Is there a strawberry by the name of Jucunda, and if so, what are its qualities? Will the larch grow here? And finally, What is your opinion of a herd law for a prairie country?

ANSWERS.—The onion requires rich, warm soil, clean cultivation, and plenty of manure. Spade up your beds, working in at least two inches of well rotted manure, no matter how rich the ground may be by nature. Pulverize finely, raking the surface several times, till the clods are all removed. Make your selection of seed (we prefer the large Red Wethersfield), put it in a vessel and pour boiling water over it; let it stand two or three minutes, then pour off the water and mix fine dry ashes with it, to absorb the moisture, so that you can sow it well. Mark off your beds in rows about fourteen inches apart and three-fourths of an inch deep, and sow the seed thick—two or three to the inch. As soon as it comes up so that you can see the rows, loosen the ground slightly; and in about ten days thin out about two-thirds, leaving the plants an inch apart. They must be hoed once a week; keep the ground about level, and as the onions grow, keep thinning until they grow four inches apart. We have sometimes mulched the ground with well-rotted manure, after they got up to a pretty good size, and we believed with benefit.

The second question cannot be answered in the limits of an article like this. The grape adapts itself wonderfully to a variety of soils and conditions. If Mr. HOTTENSTEIN will send us four subscribers, with the money (four dollars), we will send him free a work, *Mohr on the Grapevine*, which will give him all the information he needs.

The pie plant will certainly succeed well. In growing from the seed, it needs a location somewhat sheltered from the direct rays of the sun; otherwise, the same treatment given to ordinary vegetable seed is sufficient.

We cannot answer in regard to the currant. It does well in this county.

Crab apple seed can be obtained, we suppose, from almost any nurseryman. Write to some of those who advertise in THE FARMER.

There is a strawberry named Jucunda, said to be a good market berry on account of its size, but not as fine flavored as some.

So far as we have known it tried, the larch has succeeded well, and we advise our readers to plant it.

The last question is a poser. We have had our columns open upon this question for a long time; in fact, until we thought our readers were tired of it. We are free to say, however, that in those districts which are fast being settled up, we think a herd law judicious and advantageous. How long that should remain, we are not prepared to say.

CONDENSED CORRESPONDENCE.

N. S. CLOUD, Parallel, Kansas, writes: "Am interested in the question of heavy and light seeding for wheat. In the Spring of 1865 I sowed a little over two bushels per acre, in corn ground, without plowing, harrowing well, and got twenty bushels per acre. In the Spring of 1866, sowed sixteen bushels on $7\frac{1}{2}$ acres of sod ground, and threshed from it two hundred and forty bushels—a little over thirty bushels per acre. The two following years, grasshoppers injured the crop. In the Spring of 1870, sowed $1\frac{1}{2}$ bushels per acre, and harvested between eight and nine bushels; but I attribute this light yield to the drouth. Am strongly in favor of heavy seeding, as the crop ripens more evenly. Would like to hear from others on this subject." We desire this very much ourselves, especially in relation to Fall wheat.

E. N. MOREHOUSE, Dover, Kansas, sends us a quarterly report of the Dover Farmers' and Stock-Raisers' Club. The following officers were elected for the first quarter of the year: E. M. HARRIS, President; T. K. THOMPSON, Vice-President; E. N. MOREHOUSE, Secretary; H. A. KELLAM, Treasurer; DAVID SHIPMAN, Corresponding Secretary. The following subjects have been discussed during the quarter ending February 5th, 1871: 1st. *Resolved*, That it is more profitable to feed corn to hogs than to sell it. [NOTE.—Price not stated.—ED. FARMER.] 2d. *Resolved*, That it is advisable to pasture Fall wheat. 3d. *Resolved*, That additional settlements would not pecuniarily benefit the present inhabitants. 4th. *Resolved*, That smut corn is injurious to stock. 5th. Which is the most profitable—Stock-raising or dairy farming? [NOTE.—There should be no distinction as to the profitableness of these two branches of farming, as they ought to go together; that is, stock-raising should be connected with the dairy farm, to make the most profit out of the latter.—ED. FARMER.] 6th. What is the best method of cultivation to subdue noxious weeds? 7th. *Resolved*, That it is to the interest of stock-raisers to herd their stock in Fall and Spring. Our Club was reorganized November 1st, 1870, and has held weekly meetings, to the edification of all who have attended; and we heartily commend the system of Farmers' Clubs to our agricultural brethren of Kansas."

H. C. B., Effingham, Kansas, writes: "I see an error in the Census Returns, which I wish to correct, in relation to sheep and wool in Atchison county. It gives us only 1,026 sheep and 2,966 lbs. of wool. I have before me the account of sales of my own clip last Spring from 450 sheep, of 3,465 pounds of wool. [NOTE.—Did you give that item to the Deputy Marshal?—ED. FARMER.] My flock are from Spanish Merinoes, mostly wethers. I have fed sheep in Kansas three Winters, and have found them very healthy at all seasons of the year; and with tame grasses, Kansas is one of the best sheep States in the Union.

S. H. DOWNS, Topeka, Kansas, says: "How is it that you can furnish so much useful and interesting reading matter for one dollar? I neglected to renew my subscription, and was only reminded of the fact by not receiving the January number. I at once wheeled my chair and table to the fire, to perform a neglected duty; after which I took up the December number, and with it spent a pleasant and profitable evening." He then gives quite an interesting article on the subject of "Fence vs. Herd Law," which we regret our space will not permit us to publish.

WM. DEWITT, Toronto, Kansas, asks when is the proper time to sow Chinese wheat. Can any of our readers inform him, through THE FARMER?

MRS. T. DUNLAP, Abilene, Kansas, writes: "I think the people in Douglas county will be glad when that man goes back to Canada, or some other place." She thinks, probably, it is the first time he ever lived among decent folks, and, therefore, has but little pleasure. We concur in that opinion.

G. M. BLOWERS, Beloit, Mitchell county, Kansas, writes: "I agree with your correspondent from Glasgow, when he says the Solomon valley is the finest part of Kansas; but I think he is mistaken when he says Cloud county is the finest part of the valley. That honor belongs to Mitchell county. We have here a soil not excelled in richness, good water, a reasonable amount of timber, and scenery unsurpassed. We have no abrupt bluffs, but a gradual slope from the bottom lands to the high prairie. We have an abundance of good building stone. Our cattle have run on the range all Winter, and there have been only about ten days in which they would eat hay. We have a population of about fifteen hundred in the county. Beloit, the county seat, was started last Fall, and has a population of eighty. It is located on the Solomon, and we have here a good water-power, a saw-mill running, and a grist-mill which will be in operation in time for the coming crop. Mr. HERSEY is building the mill, and is the proprietor of the town. He is an active, energetic man. He gives a lot to all who want to build, except for the purposes of selling whisky."

MARTIN MANERHAN, Mayer's Valley, Pottawatomie county, sends us an interesting letter. He says: "I did not get the January number of THE FARMER until the 4th of February, and I think I am right in ascribing the delay to the miserable excuse we have for a road law. We, the people, are to blame for that law. We don't attend the Spring elections, and allow men to be elected Supervisors who don't know anything about working the roads. I like your suggestions about a road law, with one exception; and that is, allowing three dollars a day. I think two dollars enough. Our township paid, last Spring, \$66 to the road overseers, for guarding the men while at work, to keep them from killing themselves! This money is lost for ever. Two good men, in a month's time, will make better roads than we have.

"MONMOUTH," Shawnee county, writes us a long and interesting letter, upon the same subject. He says: "I have been backward in speaking upon the subject of public roads; but as you have opened the subject, and condemned, to some extent, the present system, in your January number, I feel more confidence in speaking. I consider any poll-tax an injustice upon those laborers and working men who own no property. I think it would be a great improvement if all road tax was paid in money, and all road working let by contract, requiring sufficient security to insure the faithful performance of the duty. This is the system adopted in Great Britain; and it is a fact that their artificial roads are the best, and their natural roads the worst, that can be found. In Kansas, our natural roads are best, and I might with truth say, the artificial roads are the worst."

DAVID ARCHER, Ashton, Dane county, Wisconsin, writes as follows; and we have no comment to make, except that we think the country he describes a good one to move—from: "I have received THE KANSAS FARMER, and like it. I have lived in Wisconsin over twenty years, and have seen snow nine months in the year, and frost every month. Seven pigs, one week old, froze to death on the 10th of June, 1853; had my wheat cut off by frost in June, 1857; had my corn cut off in July, 1862, and in August, 1863; and young timber killed in June. Can you say as much for Kansas? If not, I would like to change for a climate more congenial to life and health than Wisconsin is."

FROM the way in which the letters have been pouring in upon us lately, we shall either have to enlarge THE FARMER, or curtail many very excellent communications still more. Here is one from Arvonis, Kansas: "CYMRA" wants to tell us how he came to be a subscriber. He says: "I accidentally saw a copy, and became so much interested that I resolved to possess it. To accomplish this, I cut down my tobacco bill twenty-five cents per month, and now I am a subscriber." CYMRA will appreciate it all the more for making some little

personal sacrifice to obtain it. He further says: "We have one or two men in this settlement who think THE FARMER is of no use to any except store-keepers, doctors, lawyers, &c., who turn farmers; but I am glad to say that all of our most intelligent farmers think THE KANSAS FARMER and kindred journals are a necessity to good farming." He says it does not necessarily follow, because a man has been raised in the East, or in the old country, that he knows all about the business. He thinks every man and woman can learn a lesson from each number of THE FARMER. Our correspondent concludes his letter by asking the best time to break land, and we presume he means sod land. We have proved conclusively, to our own mind, that the best time is from the 1st of July to to the 10th of August, if the desideratum is the rotting of the sod simply. If you wish to raise a crop of sod corn, we would recommend breaking ten or fifteen days earlier, as the shade of the corn facilitates decay.

H. B. WILLARD, Neosho Falls, writes that he sends in a subscription for his uncle, and one for a friend in the East. He asks about the whereabouts of our correspondent, "JONAS CRABB, Esq.," and hopes that JONAS has not returned to "Vermont." He speaks a good word for Neosho Falls and the surrounding country, all of which we can heartily endorse. He says wheat is looking well, and stock coming through in fine condition, except Texas cattle, which are dying in large numbers. He asks which we would prefer to invest in, native or Texas cattle. Native cattle, always.



MO. VALLEY GRAPE-GROWERS' ASSOCIATION.

[REPORTED FOR THE FARMER, BY C. H. CUSHING.]

The Winter Meeting of this Society was held in the Council Chamber, in this city, the first session opening on Tuesday morning, February 14th.

The President of the Association, Z. S. RAGAN, of Independence, Mo., occupied the Chair, and opened the meeting with a few appropriate remarks as to the object of the organization. Its aim was to promote and develop grape-growing in the Valley of the Missouri. This Valley is one of no small extent and resources, and is believed to be well adapted to the culture of the grape. The members come together mainly to compare notes of their experience, whether of success or failure.

As many of the members had not yet arrived, the meeting adjourned until 2, P. M.

AFTERNOON SESSION.

The first business taken up was the Terminology of the Vine; and the Terminology of the Illinois State Horticultural Society was adopted entire.

The subject of pruning being next in order, Mr. SELLS, of Lawrence, inquired whether it was proper to prune vines when frozen.

Mr. GRANT—Is in the habit of pruning all Winter, whether frozen or not, and finds no difference in the effect, except that the cane is liable to be splintered if cut when frozen, and hence does not heal over well. The cut should not be very near a bud. The canes being brittle, are liable to be broken, also, unless carefully handled. The best crop he ever had followed pruning in cold weather.

RIVARD—Always prunes in Winter. Had seen no harm come of it.

TANNER—Does not favor the practice. Pruned some vines once in cold weather, and they have never done well since. Prefers Spring pruning to either Fall or Winter.

RIVARD—Had tried experiments in pruning at different times. Found that pruning after the leaves are out diminished the crop of the succeeding year, though it did not affect it that season.

STAYMAN—Thinks there is a decided difference

in the time of pruning. Last year his vines, pruned in the Fall, bore a partial crop; those pruned in the Spring bore none; while those not pruned at all bore full.

SELLS—Wanted to know how that would work, if followed up several years.

GODDARD—Does not prune in Winter. If it is desired to guard against late frost, prune late in Spring. This will cause the vines to bleed, and retard them.

MADINGER, of St. Joseph—We never prune in freezing weather. Don't believe in short pruning. Plants eight feet apart, and prunes so as to meet. Leaves three canes, with say fifty to seventy-five buds.

GRANT—Leaves four or five canes, trained in fan form.

RIVARD—If pruned too short, the fruit will not ripen well. About three or four feet is right.

GODDARD—Prunes according to the strength of the vine. If weak, cuts it back severely.

TANNER—First planted close; but now favors wider planting.

MADINGER—Never had a good crop while his vines were close, but took out every other row, and had splendid crops.

A GENTLEMAN—Some varieties require much more room than others. They send their roots to a great distance, and are gross feeders.

CADOGAN—Has vines at different distances—four, five, six and ten feet apart. Those four feet apart have done the best. Still, he has often extended a vine to fill a vacant space, and obtained a great crop from it.

RIVARD—Would plant six by twelve, and at six years take out every other one.

MADINGER—The exposure makes a difference. On level land, ten feet is none too much; on a steep southern slope, they may be much nearer.

CADOGAN—It makes a difference, also, what use is to be made of the grapes. For wine, they should be planted close, so as to starve each other, and the grapes will be richer in saccharine matter. If for the table, plant wider, so as to produce large, handsome fruit.

A gentleman inquired if it wasn't proposed to give us rich as well as showy fruit for the dessert.

It was moved that the sense of the meeting be taken on the distance for planting in vineyard, which was done. The roll was called, and each gave the distance he preferred, with the following result: Six named 8x8; four, 6x8; one, 12x12; four would take out every other one after about six years.

DEEP OR SHALLOW PLANTING.

RIVARD—Would plant fifteen inches deep; cut off the top roots, and keep them cut off for a year or two, till the lower roots get a good start. If they were not cut, the lower series of roots would not start at all.

A vote was taken on the depth of planting a Concord vine, with the following result: Two were in favor of 6 inches; one, 8 inches; seven, 10 inches; two, 12 inches, and one, 15 inches. Several not voting.

The practice of cutting surface roots was next discussed.

TANNER—In removing old vines, found that only the set of roots near the surface had grown. One set of roots is as good as more.

STAYMAN—Plants deep, so as to cultivate without disturbing the roots. Only wants one set of roots.

HOWSLEY—Don't see why the vine should be an exception among all plants. Trees planted deep do badly.

GRANT—Plants ten inches deep, and cuts surface roots. If planted in the Fall shallow, the roots will be thrown out by frost; if in the Spring, a drouth may destroy them.

WELLHOUSE—By planting deep, you secure a growth below, and the vine readily forms new roots above.

STAYMAN—Wild vines always run their roots

near the surface. Tall trees send down roots deep. **CADOGAN**—Had been digging ditches in the vineyard, and finds no roots in the subsoil. Adjourned.

EVENING SESSION.

Varieties of the Grape was the principal topic of discussion, which branched off upon a discussion of hybrids, and consumed considerable time to little profit. Among the sorts proposed for market, the following were rejected: Clinton, Union Village, Diana, Anna, Arkansas, Cassidy and Creveling.

The following were adopted:

For Market—Hartford Prolific, Concord, Ives and Rogers No. 1.

For Wine—Clinton, Cynthiana, Ives, Concord, and Catawba with special treatment.

For Amateurs—Delaware, Wilder and Iona.

WEDNESDAY MORNING.

The morning session was devoted principally to the completion of the list recommended as above. After some remarks on vineyard sites, the meeting adjourned till afternoon.

AFTERNOON SESSION.

The place of the next meeting was fixed at St. Joseph; and the time, the second Tuesday in September next.

The subject of vineyard sites was again brought up, and caused much discussion, as between high and low, wet and dry, slopes and level land. Evidently the high, dry land came out ahead. A committee, consisting of Messrs. RAGAN, STAYMAN, SELLS, HOWSLEY and GRANT, was appointed, to report at the next meeting on the relative temperature of high and low situations.

It was stated by Dr. STAYMAN that the temperature increased as we ascend, up to one hundred and sixty feet—above that it decreased.

Mr. CADOGAN stated that, in considering the question of the relative moisture of a climate, not only the total rain-fall should be considered, but the number of days in which it fell. A great deal of heavy weather, in which little rain fell, was much more prejudicial to the grape than heavy rain-falls, which ran off rapidly.

Dr. STAYMAN figured up the number of degrees Fahrenheit used up in ripening the grape; but stated that the greater the rain-fall during the growing period, the more heat was required to bring the fruit to perfection.

Mr. SELLS inquired as to the best direction for trellises.

Mr. GRANT prefers north and south, that the sun may reach and dry all the ground.

CADOGAN—East and west trellises place the leaves in the most natural position, facing the noon-day sun; and the best authorities in this country now recommend that direction.

GODDARD—It don't make any difference on level ground, but on a slope they should run abreast of the hill.

A resolution to that effect was adopted by the Society.

The relative value of slopes and level land for grape-growing, was next discussed.

Dr. STAYMAN liked a northwest slope.

Mr. GRANT thought it depended on whether the grapes were grown for the table or for wine. Level land produced the largest, handsomest grapes; but the hillside gave fruit richer in saccharine matter.

Mr. HALL preferred level land thoroughly under-drained.

Dr. STAYMAN don't believe in under-draining for grapes, at all.

CADOGAN—Surface-draining carries off the fertilizing material of the soil, and is also liable, on our soil, to cut deep gullies in a few years.

Mr. RAGAN spoke of a method of draining slopes practiced in his section. By carrying the ditches around the slope, with a very slight fall, the water is got rid of without damage.

A resolution was finally offered, and adopted, to this effect: "That level table-lands, thoroughly under-drained, are as suitable for the cultivation of the grape, as slopes." A resolution, that "Hill-

sides with equal drainage, will produce the best grape for wine," was lost.

EVENING SESSION.

The subject of wine-making was taken up, and several experienced wine manufacturers gave their processes, which only differed in details. After the grapes were crushed, they were allowed to ferment on the skins for one or two days; then pressed, and the juice placed in casks—the larger the better—filling full. Some leave the bung out, and allow the fermentation to throw off the impurities at the top. Mr. RIVARD preferred closing tight, and inserting a siphon in the bung, with the outer leg in a vessel of water, which allows the gas to pass, and does not permit the air to enter. The time required to complete the fermentation is longer or shorter, according to the temperature. When it ceases (which may be ascertained by the ear) the cask should be closed tight, and left till it becomes clear. It may then be racked off carefully, so as not to disturb the lees, the cask thoroughly cleansed, and the wine returned. It must be kept full, and occasionally examined; and if fermentation again sets in, rack off again. The lees are the cause of the fermentation, and often very small particles left in a cask will set it to fermenting. Hence the necessity of making it perfectly clear. If it does not become so, a little white of egg, mixed with water and stirred in, precipitates the floating particles. It may then be drawn off, and returned as before.

BOYS AND GIRLS.

PEA NUT (ORACHIS HYPOGÆA).

From personal experiment, we can offer the pea nut as a profitable crop for THE KANSAS FARMER boys and girls, and any others who may choose to try them.

The pea nut is so common that it needs no description here; but a few words as to its culture will be of benefit, if it induces any to attempt its cultivation. We have cultivated it for two seasons, here in Kansas, and can speak with confidence as to the ability of Kansas soil and climate to produce it, of a quality unknown in the markets; growing to twice and three times the size of those ordinarily offered in the shops.

The ground should be prepared as for any garden crop, and with the hoe make low, broad hills, about three feet apart each way. Plant from the 1st to the middle of April, putting four nuts to the hill. We usually crack the shell between the thumb and finger before planting.

When the vine gets up to the height of three or four inches, give the hills a light dressing with the hoe, and as often thereafter as may be necessary to keep the surface level and free from weeds.

As soon as the plant blooms, cover it up with earth, leaving the end of the vine out, if possible; though it is not essentially necessary. The plant will continue to grow, and soon throw out other blooms, which must be treated in like manner, covering it as often as it blooms throughout the season.

It will be found necessary to go over the patch five or six times through the season, to cover the blooms. At the end of the season the hills should be about the size of a sweet potato hill—a little larger at the base, if anything.

We ordinarily put about an inch of fine, loose earth over the bloom, at each covering. They must be dug before severe frost in the Fall, and spread thinly over a floor to dry, turning occasionally. They sell at from ten to twelve or fifteen cents per pound, at wholesale, when dry; and a single hill, carefully cultivated, will yield from three to five pounds.

It wants a loose, dry, sandy soil, as rich as you can get; but it succeeded very well with us, two years ago, upon a piece of bottom land which had been cultivated in garden crops for twelve years without manure.

The nuts can be obtained in all towns of any size; but care must be taken that they have not been roasted, as they usually are when offered for sale. Ask for the green nuts, and try them.

Our Corner.

Thanks.—We are under obligations to Maj. J. K. HUDSON, member of the House from Wyandotte county, for valuable documents, consisting of Reports of officers of the State Normal Schools at Leavenworth and Emporia; Report of officers of the Blind Asylum, at Wyandotte; Report of the Insane Asylum, at Osawatomie; and the Annual Message of Gov. HARVEY. In this connection, we take the liberty of saying that, as a matter of information, the Report of the Insane Asylum ought to specify where the Asylum is located.

California Quail.—Mr. E. L. BIRD, of this city, brought seven pairs of these birds, and will turn them out this Spring, to propagate the species in Kansas. They are a beautiful bird, and deserve our fostering care until they can get a foothold upon Kansas soil. An act of the Legislature has been passed to protect them for five years; but we trust none would be so short-sighted as to molest them without this. We understand they are to be turned out upon the farm of Mr. McWHIRN.

Washburne College.—We have understood that Rev. PETER McVIGAR has accepted the Presidency of the above Institution. As Superintendent of Public Instruction Mr. McVIGAR achieved great success, and made hosts of friends, both public and private; and under his skillful guidance, Washburne College must attain a proud position, as he brings to the task great scholarly attainments, executive ability, a Christian character, and a well ripened mind. Success to him, and the institution he represents.

To Protect Trees from Rabbits.—CHAS. C. WRIGHT, Barrett, Kansas, asks for a remedy to prevent rabbits from barking the trees. Take one pound of sulphur and three pounds of soft soap; mix together, and apply to the bodies of the trees, as high as the rabbits can reach. This is said to be a perfect preventive.

Pure Bred Poultry.—M. A. ASHTON, Sunman, Ind., deals in pure bred Poultry, as will be seen by his card in another place. We have evidence before us that Mr. ASHTON will deal on the square with all his customers. Try him.

The Apiary.—NOAH CAMERON, of Lawrence, one of the most prominent Bee-keepers in the State, will furnish us with a monthly report of the Douglas County Bee-keepers' Association, and answer all questions through THE FARMER in relation to the subject.

Chester Whites.—We call the attention of our readers to the card of D. L. HODLEY, Lawrence, Kansas, who has some of the above breed of hogs for sale.

State Fair.—The State Agricultural Society have located the Fair for this year at Topeka. We think they have made a wise choice.

Newspapers of Kansas.—The following was omitted in our last issue:

Journal, Osage Mission, SCOTT & HOWARD, Publishers, Weekly.

Journal, Fredonia, PEPPER & WELLMAN, Publishers, Weekly.

Meteorological Report for the month of February,

1871, by Prof. B. F. MUDGE, of the State Agricultural College:

Maximum height of the Thermometer (2d, 2, P. M.)..... 71

Minimum height (12th, 7, A. M.)..... 4

Average height..... 35.97

Total range..... 76

Number of days on which rain fell..... 11

Number of inches of snow..... 4

Rain and snow reduced to water, inches..... 2.48

Rivers open and frost out of the ground, 19th. Farmers plowing during the last week. Four days cloudy. No days cloudless.

BOOKS AND PAPERS.

Scribner for March.—This elegant magazine is fast winning its way to popular favor, and its circulation is probably not equaled by more than one or two publications in the country. In the number before us, we have the second article by Prof. MAURY, several short stories, and interesting papers by popular authors. We hope that those of our readers who patronize the magazines, will try *Scribner*, as in our estimation it is one of the best.

The Little Corporal.—We see by the March number of this children's "pet," that Mr. SEWELL has sold his interest in it to his partner, JOHN E. MILLER, who, in connection with his accomplished wife, will assume the editorial control. Mr. SEWELL will, however, continue to contribute to the editorial department, for a time at least. The March number well sustains the enviable reputation it has already attained as a child's magazine. Send \$1.50, and try it a year.

The Ohio Farmer.—Until recently, this old and sterling Agricultural publication has not been upon our exchange list; but we have always recognized it as one of the very best journals published. It is a weekly, of the same size of THE FARMER, ably edited, and furnished at the very low price of \$2 per annum. Send to Cleveland, Ohio, for a sample copy.

The Western Pomologist, Des Moines, Iowa. The February number of this sterling Horticultural journal has just reached us, showing great improvement, both in external appearance and in reading matter. It is one of the most valuable of our Horticultural exchanges, and specially adapted to the Western country. Terms, \$1.50 per annum.

Evans's Advertising Hand-Book.—We call the attention of advertisers to this very complete work, issued by that large Advertising House of T. C. EVANS, Boston, Mass. It contains information that no advertiser can afford to do without.

Catalogues.—We have received the following: Catalogue and Price List of J. K. HUDSON, Kansas City, Mo. Gives prices of all the new varieties of potatoes, corn, oats and barley, Kansas grown and quality warranted. Maj. HUDSON is one of our most reliable dealers.

Vegetable and Seed Catalogue of R. D. HAWLEY, Hartford, Conn.—one of the most complete we have seen anywhere. His prices, too, are in many respects remarkably low.

Hovey & Co., Gardeners and Seed Growers, Boston, Mass., have favored us with one of their mammoth Illustrated Guides to the Flower and Vegetable Garden.

R. H. ALLEN & Co., of New York, have sent us their splendid Catalogue of Garden and Flower Seeds, which we are safe in saying is not excelled by any.

Received, also, a very complete Catalogue of Fruits and Flowers, from the Nurseries of JAMES TRUITT, Quincy, Lewis county, Kentucky.

VETERINARY DEPARTMENT.

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.]

Scratches.

EDITOR FARMER: Two questions to ask. First. What will cure a bad case of scratches in a horse? Second. Cure for a sick calf. Symptoms: Stiff in its limbs; can hardly walk without falling down; stiff neck; carries its head sideways. Eats and drinks well. Yours, respectfully, M. PECKARDS.

ANSWER.—First. Do not wash the legs of your horse, but clean the parts by rubbing with your hands; after which, take a half-ounce carbolic acid, mix with one pint rain water, and bathe once a day for three days. Then apply friar's balsam, three times a day, until cured. The balsam is made as follows: Take gum benzoin three ounces, balsam tolu one and a half ounces, gum styrax and myrrh, of each one ounce, aloes one and a half ounces, alcohol four pints; macerate for fourteen days, and pour off for use. You may make a smaller quantity, by using the same proportion of the ingredients; and you may use it sooner than the fourteen days, but it will be better to let it stand for that length of time. You will find it one of the best remedies you have ever used.

Second. From the symptoms, I think your calf is afflicted with palsy, or paralysis. It is a nervous disease. Palsy may be partial or complete. Cause—Tumors on the brain; injury to or softening of the spinal cord.

We have but one drug which is of service in curing this disease, and that depends on whether the paralysis be from reflex action of the nerves of motion, or from entire suspension of feeling. If the case be from reflex action, then this medicine had better not be given; but if the nervous feeling be entirely lost, strychnine may be given in one fourth grain doses once a day, in the feed, and continued for a week. Perhaps, bathing with warm vinegar and mustard, mixed, might be serviceable.

Enlarged Glands.

EDITOR FARMER: A few days ago I discovered that one of my cows has a hard lump on her lower jaw, about the size of a hen's egg, and sore to the touch. This enlargement is on the side, and well back. I have noticed no debility. All who have examined it call it "big jaw." Will you please prescribe a remedy, and give the name and cause of disease? Respectfully yours, I. O. HARSH.
Garnett, Kansas, February 26, 1871.

ANSWER.—I know of no such disease as big jaw. It is possible the lump is caused by inflammation of some of the glands. I cannot determine the disease from your description. If matter be formed, open it; if not, poultice it with slippery elm, and bathe with mullen steeped in vinegar two or three times a day.

Hollow Horn.

EDITOR FARMER: I would like very much to have the opinion of Mr. CHASE upon the disease known as "hollow horn" in cattle. I have a cow which was troubled with it last year. The hair at the roots of the horn stood up on end, the horn felt cold, and she seemed to suffer pain at times. I bored a gimlet-hole in each of her horns, and rubbed the back of the head and roots of the horns with spirits turpentine, as recommended by some large stock-owners; but it has not made a perfect cure, as the hair stands up this Winter again, but she does not seem to suffer pain as formerly.

Respectfully yours, MONMOUTH.
Monmouth, Shawnee Co., February 23, 1871.

ANSWER.—The diseases called hollow horn, horn ail, hollow tail, &c., in cattle, have an existence only in the fertile brains of quacks, or in the minds of men who have learned of a class that abound in every neighborhood, who (never having read a word) are prepared to prescribe for any sick animal which may come in their way. And there are a great many good farmers so well satisfied in their own minds, that it would be almost impossible to convince them that we have no such disease, except in name. Because we can bore into an animal's horn and find a hollow place, it is conclusive that the disease is hollow horn; not knowing that the gimlet enters a natural cavity or sinus.

Rubbing the back of the head and horns with turpentine was right, but boring the horns was all wrong. Cows are subject to ephemeral fever; or, more plainly speaking, a fever of a day's duration, which passes off without any trouble. After the fever is off (which you may determine by the temperature of the horns and ears), give your cow three drachms powdered sulphate of iron, with an equal quantity of powdered gentian, in chopped or cut feed, twice a day. You can get them to eat it with a little care. This should be continued for a week. Do this, and you will have no more trouble with this cow.

Abortion in Cows.

EDITOR FARMER: Can you, or your Veterinary contributor, tell me of any remedy or antidote for the fungus on corn-stalks? My cows are dropping their calves prematurely, and I apprehend, from eating corn-stalks. There was a large quantity of smut, or fungus, on the corn this year. I cut my corn up, and at the time tried to have all the fungus cut off; but presume more or less escaped. Fed my cattle three or four times a week with corn fodder, and the balance of the time with hay and straw; salted regularly, and in all respects treated as usual.

On the 27th of January two cows dropped calves. One lived two or three hours, but was dropped a month too soon; the other was dead, and was still less natural. The cows were in good, fair condition as to flesh, and after a few days were well as usual from appearance. I immediately stopped feeding corn fodder. Yesterday, another cow dropped a dead calf, a month too soon.

I cannot account for these abortions, unless they are caused by this fungus; and I did not suppose there was enough left on the stalks to affect them. The corn fodder was ricked up each side of a pole, and the ricks were some four or five feet wide at the bottom; but it was very wet in the Fall, and they molded considerably. Would that make any difference? The cattle have not been in the field where the corn grew, this Winter.

Do you think I am right in my conjecture, as to the cause of the abortion? and, is there any remedy, or must I stand idly by, and see the whole thirty or forty cows go the same way?

I have been feeding for a few days past meal, or cracked corn, to all my cattle, and shall continue to do so until grass grows, so I can feed my cows anything with it in the shape of medicine. If you can help me, I shall feel very much obliged; and if this is not in time for this month's issue, will you give me the desired information by mail? and by so doing, greatly oblige yours, truly, J. B. QUIMBY.
Madura, Clay Co., Kansas, Feb. 13, 1871.

ANSWER.—Abortion in cows is not common in the agricultural districts, but attacks cows chiefly which are kept near large towns and cities.

In your cases, it seems to resemble an epizootic (epidemic) disease. If I am right in this conjecture, there will be a short, audible, involuntary cough, and it will be accompanied by weakness and debility of the body. This debility and weakness, to most persons, will prove deceptive, because the blood is or has undergone a morphological change, and then, and then only, do the calf attachments to the womb or uterus of the mother separate. The

cow brightens up, and feels as it were a new life, though carrying her dead offspring, which she will continue to do till the fresh stimulus given by the blood, which formerly gave life to the calf, enables her system to contract the womb, and thereby expel the foreign body.

The true causes of abortion are: 1st. Feeding on slop, or other milk-secreting materials; 2d. Insufficient feed, of whatever description; 3d. The attempted reproduction of the species, while at the same time a drain is being made upon the system by an excessive and unnatural demand for milk; 4th. Irritation of the white membranes of the wind-pipe, changing and weakening the blood; 5th. Exudation, pleuro-pneumonia, or other debilitating disease.

Any of the above-named causes, singly or combined, when acting upon an animal placed at so great a disadvantage, as we have shown, will necessarily result in outraged nature choosing her great prerogative between life and death and the perfect propagation of her progeny.

For prevention, I would say: 1st. Feed substantial feed, and enough of it, but not excessively sloppy or wet; 2d. Gradually increase the quality of feed, as the cow approaches the time of calving; 3d. Dry up the milk in all cows which do not naturally stop secreting milk two or three months before their time of calving. This may be done by giving sulphate of iron in powder three drachms, powdered gentian one-half ounce, mixed in feed once daily for ten days. No milking should be done, other than to prevent injury to the udder. If they have a cough, add one-half ounce ginger to the iron and gentian.

My advice would be to discontinue the corn fodder; and as cows having once aborted are much more likely to abort again, I would dispose of or fatten those which have already lost their calves.

Distemper.

EDITOR FARMER: What is the best remedy for the disease called distemper in horses?

WILLIAM DE WITT.

Toronto, Woodson Co., February 12, 1871.

ANSWER.—Feed your horse on soft feed. If a bad case, smoke him with gum guaiacum, using a lump as large as a walnut. Lay it on a shovel of coals, and hold it so that the horse will inhale the smoke. If it is necessary to hasten the formation of the abscess, rub in a little of the ointment of Spanish fly, which is made as follows: Powdered Spanish fly one drachm, hog's lard six drachms; mix, and apply with the hand to the part intended to be blistered.

Blood Spavin.

EDITOR FARMER: I have a horse afflicted with what I suppose to be the blood spavin. It has been about twelve months since it first made its appearance. It is a swelling on the inside of the hock joint. It is soft to the touch. Exercise reduces the swelling, but increases the lameness. I have tried different remedies, but to no purpose.

If you can give me any information as to what will cure him, I will be very thankful.

Respectfully, yours, JOHN RICHARDSON. Labette, Kansas, February 22, 1871.

ANSWER.—You have rightly named the disease of your horse. After this lapse of time, it is incurable.

STRAYED OR STOLEN.

TWO HORSES. ONE MEDIUM LIGHT BAY MARE, 7 years old, branded on the shoulder with a letter T, heavy mane, tail and foretop, a white spot or two on her withers. The other, a dark or nearly black Horse Pony, 5 years old, branded with letter H on shoulder, light mane and much worn where the collar fits. JAMES BARLOW, mh-1m* Leroy, Coffey County, Kansas.

STRAYED OR STOLEN.

FROM THE SUBSCRIBER, LIVING IN NEWBERRY township, Wabasha county, Kansas, December 14th, 1870, one HORSE and two COLTS, described as follows: One bay Gelding, 18 years old, 15 1/2 hands high, black mane and tail, one hind foot white, lame from soft spongy frogs in fore feet, upper part of shoulder sore from collar; \$5 reward. Also, one cream-colored Gelding, 4 years old, 14 1/2 hands high, light mane and tail, face long, straight and narrow, a short heavy body, trots easy, wasn't broken to ride or work; \$10 reward. Also, one dark iron-gray, almost black, stud Colt, 3 years old, about 15 hands high, roman nose, not broken; \$10 reward. I will give the above rewards for information that will enable me to get the Horse or Colts, as stated above. Address J. C. P. MALONE, St. Mary's Mission, Kansas. mh-8m

STRAYED.

FROM THE SUBSCRIBER IN JUNE, 1870, THREE Yearling Mares, half-bred Ponies, all bay; one has white nose and face up to the eyes, glass or watch eyes; the other two have small stars in their foreheads. All three are branded on the left thigh with the letter O, with a F in the side of the O. Any person having seen them during the past Fall or Winter, or any person knowing where they are at present, shall be properly rewarded if they will send me word, directed to OLIVER PHILLIPS, Postmaster, Waterloo, Lyon County, Kan. mh-1m*

SCHENCK'S PULMONIC SYRUP,

SEAWEED-TONIC AND MANDRAKE PILLS, FOR THE cure of Consumption, Liver Complaint, Dyspepsia, and all Diseases arising from a torpid state of the Liver and Stomach. The success of my medicine in curing Pulmonary Consumption is too well established to admit of skepticism. I do not wish to be understood to say that when lungs are destroyed, any medicine can create new ones; but I do say that when a patient has a violent cough, night sweats, creeping chills, is emaciated, confined to bed, a cure may be effected. I will venture to say that two-thirds of the cases of Consumption are caused by liver complaint and dyspepsia. The mucus membrane of the bronchial tubes sympathize with the liver and stomach, and frequently light colds hasten into Consumption.

Schenck's Pulmonic Syrup is one of the most powerful purifiers of the blood known. It collects and ripens all the morbid matter in the lungs, and expels it by expectoration, or by the formation of gatherings, which break into the bronchia, and are spit up in large quantities, the lungs being thereby restored to health.

In order to do this, the stomach must be prepared, so that digestion will go on. The Mandrake Pills cleanse the stomach, liver and bowels of all mucus slime and vitiated matter, that clog up the system and prevent digestion. The Seaweed Tonic mixes with the food, and strengthens it so that it does not sour, and it goes through the process of chylification, and is made into good blood. When the stomach has got into this condition, the Pulmonic Syrup soon ripens the matter in the lungs, and a cure is effected.

Many years ago I was in the last stages of consumption, confined to my bed, and at one time my physician thought I could not live a week. Then, like a drowning man catching at straws, I heard of and obtained the preparations which I now offer to the public, and they made a perfect cure of me. It seemed to me that I could feel them penetrate my whole system. They soon ripened the matter in my lungs, and I would spit up more than a pint of offensive yellow matter every morning for a long time.

As soon as that began to subside, my cough, fever, pain and night sweats, all began to leave me, and my appetite became so great that it was with difficulty I could keep from eating too much. I soon gained strength, and have grown in flesh ever since. I was weighed shortly after my recovery (then looking like a mere skeleton), and weighed only ninety-seven pounds; now my weight is two hundred and twenty-five (225) pounds, and for years I have enjoyed uninterrupted health.

J. H. SCHENCK, M. D., No. 15 North Sixth Street, Philadelphia, Pa.

Price of the Pulmonic Syrup and Seaweed Tonic, \$1.50 per bottle, or \$7.50 per half-dozen; Mandrake Pills, 25 cents per box. For sale by all druggists and dealers. mh-ly

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, notice containing a complete description of said strays, 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 MARCH.

Allen County—W. F. Waggoner, Clerk. COW—Taken up by D. L. Hutton, Iola tp, Jan 3, 1871, one Cow, 7 years old, white sides and belly, brindle spots on neck, back and hips, white face, left horn drooped, branded J on left hip. Appraised \$30.

STEEB—Taken up by H. Gergin, Salem tp, Dec 28th, 1870, one red Steer, 2 years old, white on face, ears and hind legs, crop off right, underbit in left, and small slit in each ear. Appraised \$15.

MARE—Taken up by A. Coonrod, Iola tp, Jan 19, 1871, one bay Mare, 2 years old, 14 hands high. Appraised \$50.

STEEB—Taken up by J. W. Hays, Iola tp, Jan 21, 1871, one roan yearling Steer, red head and neck. Appraised \$20.

HORSE—Taken up by A. J. Romine, Iola tp, Jan 20th, 1871, one bay Horse, 8 or 9 years old, 16 1/2 hands, white spot in face, shod all around. Appraised \$75. Also, one black mare Pony, 3 years old, star in face, white on hind feet, shod all round. Appraised \$30.

HEIFER—Taken up by W. H. Butler, Humboldt tp, Jan 2d, 1871, one white Heifer, 2 years old, roan sides and neck, black spots on back and hind legs. Appraised \$15.

FILLY—Taken up by F. M. Power, Deer Creek tp, Jan 17, 1871, one dark brown Filly, 2 years old, 14 hands high, left hind foot white, a few white hairs in face. Appraised \$30. Also, one black Filly, 2 years old, 13 1/2 hands high. Appraised \$30. Also, a brown horse Colt, one year old, 13 1/2 hands high. Appraised \$30.

COW—Taken up by W. E. Avery, Iola tp, Jan 23, 1871, one black Cow, 8 years old, 2 slits in right ear, swallow-fork in left, branded JIM on left side. Appraised \$18. Also, one small light brown Cow, 4 years old, underbit in left, branded T. Appraised \$18. Also, one white yearling Steer, red ears. Appraised \$12. Also, one red and yearling Steer, star in forehead, smooth crop off each ear. Appraised \$14.

HEIFER—Taken up by G. W. Williams, Humboldt tp, one red Heifer, 2 years old. Appraised \$17.50.

HEIFER—Taken up by James Wilson, Humboldt tp, one black and white spotted Heifer, crop off right ear, underbit in left ear, dewlap cut upward. Appraised \$15. Also, one red Texas Steer, 4 years old, crop and underbit in right ear, smooth crop in left, branded S on right hip. Appraised \$20.

COLT—Taken up by C. C. Squires, Humboldt tp, one sorrel roan horse Colt, three years old, blaze face, hind feet and fore foot white, branded L on left hip. Appraised \$30.

COLT—Taken up by Jos Carter, Iola tp, Jan 21, 1871, one bay Colt, 1 year old, white on right hind foot. Appraised \$30. Also, one bay Mare, 2 years old, some white on right hind foot. Appraised \$50.

COLT—Taken up by J. H. Spicer, Geneva tp, Dec 26th, 1870, one bay mare Colt, 3 years old, black mane and tail, small star in the face. Appraised \$40.

BULL—Taken up by A. Myers, Elsmore tp, Dec 21, 1870, one roan Bull, 13 or 15 years old, large horns, gullet hole near point of left horn, underbit on right ear. Appraised \$14.

STEEB—Taken up by John Thompson, Cottage Grove tp, Jan 31, 1871, one pale red Steer, 3 years old, crop off right ear, underbit in left, branded IO on right hip. Appraised \$23.

MARE—Taken up by B. A. Longstreth, Deer Creek tp, Feb 2d, 1871, one iron-gray Mare, half-pony, 15 hands high, left hind foot white, saddle marks. Appraised \$45.

PONY—Taken up by A. S. Fisher, Geneva tp, August 20th, 1870, one chestnut sorrel mare Pony, 5 years old, 13 hands high, white

strip in face, saddle marks, a small white spot on right hip. Appraised \$30.

COLT—Taken up by D. W. Boatwick, Deer Creek tp, Feb 4, 1871, one bay pony horse Colt, 1 year old, hind feet white, white spot in forehead. Appraised \$30.

HORSE—Taken up by J. Overmyer, Cottage Grove tp, Jan 27, 1871, one sorrel Horse, 3 years old, 15 1/2 hands high, white spots on face, left hind foot white. Appraised \$27.

MARE—Taken up by J. D. Finch, Cottage Grove tp, Jan 23, 1871, one gray Mare, 13 years old, harness marks. Appraised \$25. Also, one dun Pony, black mane and tail, saddle marks and forehead. Appraised \$25.

Bourbon County—U. Fitch, Clerk.

PONY—Taken up by S. Kennison, Scott tp, Jan 25th, 1871, one bay gelding Pony, 3 years old, branded R on the left shoulder. Appraised \$15.

PONY—Taken up by Wm Stone, Freedom tp, Jan 12th, 1871, one sorrel mare Pony, 4 years old, 13 hands high, white face, with red spot in forehead, white hairs on right jaw. Appraised \$35.

PONY—Taken up by W. Stone, Freedom tp, Jan 12th, 1871, one brown mare Pony, 5 years old, 13 hands high, a star in forehead, white spot inside of right hind foot. Appraised \$35.

HEIFER—Taken up by Denis Stover, Marion tp, Jan 1, 1871, one red roan yearling Heifer, spot in forehead, small. Appraised \$—.

HEIFER—Taken up by Wm Lowe, Freedom tp, Jan 20th, 1871, one red yearling Heifer, a star in forehead, white between fore legs. Appraised \$—.

Chase County—William Bookwood, Clerk.

STEEB—Taken up by Geo. Nichol, Drummond Creek tp, one black and white spotted Texas Steer, 4 years old. Appraised \$25.

STEEB—Taken up by N. J. Shellenberger, Toledo tp, Jan 4, 71, one brown or brindle spotted Texas Steer, 4 or 5 years old, dim brands on left hip, piece cut from left ear, part of brush of tail gone. Appraised \$25.

Coffey County—Allen Crocker, Clerk.

STEEB—Taken up by J. W. Jones, Ottumwa tp, one small red yearling Steer, white on forehead, tall, rump, belly, and all legs white. Appraised \$15.

COLT—Taken up by Jacob Hoover, California tp, one small white mare Colt, two years old, black spot under tail. Appraised \$37.50.

OXEN—Taken up by Saml Bates, Burlington tp, one yoke of Oxen—one, white back and brindle sides, 14 hands high, a square cross and under cross off right ear. The other brindle, 15 hands high, same earmarks, left horn drooped, star in forehead, each 7 years old. Appraised \$81.

PONY—Taken up by John Griffin, Ottumwa tp, one bay mare Pony, two years old, medium size, white stripe in forehead. Appraised \$40.

STEEB—Taken up by E. D. Roberts, Avon tp, one brindle Steer, 3 years old, white mixed, crop and slit in left ear, half-crop under right. Also, one roan Steer, 3 years old. Appraised \$30.

COW—Taken up by D. Hoover, California tp, one black and white spotted Cow, 6 years old, swallow-fork in right ear, crop in left. Also, one black and white spotted Calf. Also, one black Cow, eight years old, white on belly, under half-crop in right ear, crop and underbit in left ear. Also, one roan Calf. Texas brand on both Cows. Appraised \$60.

Cowley County—T. B. Ross, Clerk.

FILLY—Taken up by Joseph Brown, Jan 5, 1871, one dun Filly, 2 years old, blaze face, pony stock. Appraised \$25.

Crawford County—F. B. Russell, Clerk.

HEIFER—Taken up by A. E. Warner, Baker tp, Dec 24, 1870, one brindle Heifer, 2 years old, white face, crop off each ear, slit in right ear. Appraised \$13. Also, one white yearling Heifer, red belly, crop off each ear, right horn droops. Appraised \$13. Also, one red Steer, 2 years old, white belly, crop in each ear. Appraised \$11. Also, one brindle Steer, 2 years old, white back and belly, bob tail. Appraised \$12.

STAG—Taken up by Thos Safford, Dec 3, 1870, one white Stag, seven years old, red neck and head, points of horns sawed off. Appraised \$30.

COW—Taken up by W. T. Hoggart, Crawford tp, Jan 13th, 1871, one deep red Cow, branded B on right hip. Appraised \$12. Also, one brown, red and specked Cow, branded B on right hip. Appraised \$15. Also, one yellow Cow, blaze face. Appraised \$15. Also, one red Steer, 2 years old, swallow-fork in left ear, underbit in right. Appraised \$12.

MULE—Taken up by A. T. Gifford, Feb 27, 1871, one black mare Mule, 3 years old, 11 hands high. Appraised \$25.

HORSE—Taken up by H. C. Chancellor, Lincoln tp, one light bay horse Colt, 2 years old, star in forehead, left hind foot white. Appraised \$25.

COW—Taken up by John Braley, Sherman tp, a spotted brown Cow, branded 1153 on right hip. Appraised \$15.

Dickinson County—E. S. Wiley, Clerk.

PONY—Taken up by Jas Sexton, Jan 25, 1871, one bay Pony, 7 years old, 13 1/2 hands high, white spot in forehead, both hind feet white, underbit in right ear. Appraised \$15.

Doniphan County—John T. Kirtwan, Clerk.

COW—Taken up by Fred Kleinhoff, Marion tp, Jan 6, 1871, one pale red Cow, white spots on face and back, three legs and belly white, left ear rounded, underbit in right ear. Appraised \$20.

HEIFER—Taken up by Jas Crewitt, Wayne tp, Jan 7, 1871, one red Heifer, 3 years old, white on belly and tip of tail, a crop and underbit in right ear. Appraised \$12.

FILLY—Taken up by H. Jenkins, Wolf River tp, Jan 7th, 1871, one dark bay Filly, 1 year old. Appraised \$30.

MARE—Taken up by Chas Hardy, Wolf River tp, Jan 15, 1871, one black Mare, 3 years old, 14 1/2 hands high, white spot on nose. Appraised \$50. Also, one bay Horse, 2 years old, right hind foot white, blaze face. Appraised \$50.

STEEB—Taken up by I. T. Ladd, Iola tp, Jan 12, 1871, one roan and red yearling Steer, half-crop in left ear. Appraised \$15. Also, one white yearling Heifer, red ears. Appraised \$15.

Franklin County—Geo. D. Stinebaugh, Clerk.

PONY—Taken up by Wm Sutton, Ottawa tp, Dec 23, 1870, one light brown gelding Pony, 12 years old, 13 hands high, white spot on left nostril, saddle marks. Appraised \$15.

COW—Taken up by H. Reed, Harrison tp, Jan 2, 1871, one brown Cow, 4 years old, white on shoulders, forehead, belly and legs, slit in left ear, crop off right, branded M on left shoulder. Appraised \$19.

COW—Taken up by J. P. Usher, Appanoose tp, Jan 9, 1871, one white Texas Cow, 9 years old, red spots on sides, crop and slit in each ear, defaced brand on left hip. Appraised \$18.33.

STEEB—Taken up by Asa Harris, Greenwood tp, Jan 16, 1871, one white Steer, 3 years old, red ears, and underbit in each ear. Appraised \$25.

BULL—Taken up by Nathn Reed, Franklin tp, Jan 21, 1871, one white Bull, 2 years old, red ears, red spots on neck, crop and slit in left ear. Appraised \$12.

MARE—Taken up by W. E. Crum, Greenwood tp, Jan 11, 1871, one bay pony Mare, 4 years old, mule-shoe brand on left shoulder. Appraised \$30.

STEEB—Taken up by F. Bledsoe, Franklin tp, one red and white speckled Steer, one year old, underbit and slit in ear. Appraised \$13.

STEEB—Taken up by Robt Hawkins, Harrison tp, Jan 5, 1871, one brown Steer, 3 years old, white on face and withers, crop off right ear. Appraised \$20.

HORSES—Taken up by J. W. Davis, Appanoose tp, Jan 14, 1871, one bay mare Colt, 2 years old, hind feet white. Appraised \$25. Also, one light sorrel Mare, 6 years old, 9 feet white, white stripe in face. Appraised \$30. Also, one brown horse Pony, 2 years old, star in forehead, white on right hind foot. Appraised \$22. Also, one sorrel mare Colt, 1 year old. Appraised \$12. Also, one dun mare Pony Colt, 1 year old, black mane and tail, black stripe on back. Appraised \$16.

Greenwood County—L. N. Fancher, Clerk.
STEER—Taken up by Fred Norton, Lane tp, Jan 5th, 1871, one red and white spotted Steer, 2 years old, dim brand on right hip, points of horns off. Appraised \$25.
COW—Taken up by J. W. Walters, Pleasant Grove tp, Jan 11th, 1871, one red and white Cow, 2 years old. Appraised \$25.50.
HORSE—Taken up by N. F. Pruden, Janesville tp, Dec 24, 1870, one light bay Horse, 8 years old, 15 1/2 hands high. Appraised \$60. Also, one bay Horse, 4 years old, 14 hands high. Appraised \$30.
STEER—Taken up by H. G. Branson, Eureka tp, Jan 21st, 1871, one deep red Steer, 4 years old, white on back and belly, split in right ear, crop off left, white on tip of tail. Appraised \$35.
PONY—Taken up by Robt Loveland, Lane tp, Jan 20, 1870, one bay mare Pony, 3 years old, 13 hands high, white hairs on forehead, mane, tail and legs. Appraised \$40.
CALVES—Taken up by J. E. Criswell, Janesville tp, Jan 20, 1871, three Calves—2 Steers, one red and the other white, and a white Heifer. Appraised \$10 each.

Howard County—Charles S. King, Clerk.
HEIFER—Taken up by W. A. Rodgers, Elk Falls tp, Jan 12, 71, one red roan Heifer, 3 years old, red ears, white head, of native stock. Appraised \$25.
STEER—Taken up by Wm Lorange, Elk Falls tp, Dec 30, 1870, one roan Steer, 4 years old, 2 underbits in right ear, branded O on right hip. Appraised \$30.

Jewell County—J. A. Scarborough, Clerk.
HORSES—Taken up by G. A. Sorick, Jewell tp, Jan 18, 1871, one gray Mare, 10 years old, 18 hands high, branded EM on left shoulder. Appraised \$20. Also, one sucking horse Colt, 8 months old, chestnut sorrel or iron-gray. Appraised \$20. Also, one sorrel Mare, 3 years old, 12 hands high. Appraised \$40.

Johnson County—J. T. Taylor, Clerk.
HEIFER—Taken up by R. Nichols, Lexington tp, one roan yearling Heifer, half-slope off each ear. Appraised \$12.
MARE—Taken up by R. B. Fulton, Springhill tp, Jan 18th, 1871, one bay Mare, 6 years old, 15 hands high, scar on left hip. Appraised \$75.
HEIFER—Taken up by John Moser, Springhill tp, Jan 1, 1871, one red and white yearling Heifer. Appraised \$12.

Leavenworth County—O. Diefendorf, Clerk.
COW—Taken up by G. W. Church, High Prairie tp, Jan 10, 1871, one red and white spotted Cow, 10 years old, branded G on right hip. Appraised \$17.

Linn County—J. W. Miller, Clerk.
STEER—Taken up by C. Looy, Lincoln tp, one red Steer, 2 years old, square crop on right ear, underbit in left. Appraised \$14.
PONY—Taken up by John Moore, Scott tp, Dec 26th, 1870, one black mare Pony, 7 years old, 14 hands high, right fore and hind feet white, small white spot in forehead, branded on the left hip. Appraised \$30. Also, one bay Horse, 10 years old, 13 hands high, hind feet white, white in forehead, saddle and harness marks. Appraised \$30.
CALF—Taken up by J. B. Broadhead, Mound tp, Dec 7, 1870, one white yearling heifer Calf, red ears, and red spot on top of head. Appraised \$15.
STEER—Taken up by A. N. Molden, Potosi tp, Dec 19, 1870, one brown muley Steer, mottled face, smooth crop off right ear, underbit in left, branded JHL on right hip, white on shoulders and belly. Appraised \$30.
STEER—Taken up by Wm Berry, Lincoln tp, Dec 19, 1870, one red roan yearling Steer, hole in right ear. Appraised \$20.
COW—Taken up by A. Thompson, Potosi tp, Dec 26th, 1870, one brown Cow, 12 years old, crop off each ear. Appraised \$12.
STEER—Taken up by Jas. Driskill, Paris tp, Dec 27th, 1870, one black and white speckled Steer, crop and slit in each ear. Appraised \$12.
STEER—Taken up by D. E. Corey, Liberty tp, Jan 13, 1871, one red yearling Steer, white spots in forehead, swallow-fork in left ear. Appraised \$15.
STEER—Taken up by R. R. Smith, Mound tp, Jan 18th, 1871, one spotted roan Steer, 2 years old, ears torn by dogs. Appraised \$14.

Lyon County—D. S. Gilmore, Clerk.
HORSE—Taken up by F. E. Moon, Pike tp, one bay Horse, 15 1/2 hands high, 15 years old, star in forehead, snip on nose, blind in one eye, heavy mane and tail. Appraised \$20.
STEER—Taken up by E. Bollinger, Jackson tp, Jan 21, 1871, one red Steer, white on belly and tail, right hind foot white. Appraised \$18.
MARE—Taken up by L. G. Anderson, Fremont tp, Jan 19, 1871, one light sorrel Mare, 3 years old, 15 hands high. Appraised \$70.
COLT—Taken up by G. O. Toplin, Jackson tp, Dec 27, 1870, one sorrel horse Colt, 2 years old, star in forehead. Appraised \$35. Also, one strawberry roan mare Pony, 5 years old, a sore on left side of nose. Appraised \$30.
STEER—Taken up by Phillip Davis, Jackson tp, Dec 26th, 1870, one white and pale red spotted yearling Steer, swallow-fork in each ear. Appraised \$12.
COW—Taken up by F. E. Gilbert, Waterloo tp, Dec 20, 1870, one blue roan Texas Cow, 5 years old, a square crop off left ear, half crop off right ear, branded O on right hip. Appraised \$20.
COW—Taken up by Curtis Hyatt, Emporia tp, Dec 20, 1870, one red Cow, 10 years old, crop off point of left ear, dim brand upon right hip. Appraised \$22.50.
HORSE—Taken up by J. R. Walkup, Emporia tp, Jan 24th, 1871, one bay Horse, 5 years old. Appraised \$75.
PONY—Taken up by Saml Warner, Jackson tp, Jan 21st, 1871, one bay Pony, 3 years old, white stripes on face, three feet white. Appraised \$25.
MARE—Taken up by L. H. Hick, Jackson tp, Jan 21st, 1871, one brown Mare, 12 years old, branded 5 on left shoulder and TA on left hip. Appraised \$30. Also, one bay horse Colt. Appraised \$30. Also, one gray mare Pony, 3 years old, branded M on left shoulder. Appraised \$50.
COW—Taken up by Lydia Bethuren, Emporia tp, Dec 21, 1870, one red and white Cow, 2 years old, tail cut off. Appraised \$15.
PONY—Taken up by J. H. Thomas, Pike tp, Feb 7th, 1871, one sorrel horse Pony Colt, 1 year old. Appraised \$15.
STEER—Taken up by David Plumb, Fremont tp, Jan 3d, 1871, one red and white yearling Steer, a slit and underbit in each ear. Appraised \$12.
COW—Taken up by David Frost, Fremont tp, Feb 3, 1871, one spotted roan Cow, 4 years old, medium size, right horn drooped, and point broken off. Appraised \$35.

Marion County—T. W. Brown, Clerk.
HEIFER—Taken up by F. J. Prosper, Doyle tp, one red yearling Texas Heifer, branded DD on right hip. Appraised \$8. Also, one red yearling Texas Steer, branded S on right hip. Appraised \$8. Also, one red Texas Heifer, 2 years old, branded BS on right hip. Appraised \$10. Also, one white and red Texas Heifer, two years old, branded CT on right hip. Appraised \$11.
STEER—Taken up by J. H. Taylor, Center tp, Jan 23, 1871, one red and white Steer, 2 years old, line back. Appraised \$17.50.
Montgomery County—S. M. Beardley, Clerk.
PONY—Taken up by —, Dec 20, 1870, one bright bay horse Pony, four years old, black mane, tall and legs, star in forehead. Appraised \$30.
COW—Taken up by Joseph Miller, Liberty tp, Jan 31, 1871, one white Cow, 6 or 7 years old, left horn off, branded JWOX on right horn, slit in left ear. Appraised \$25.
Morris County—J. Hammond, Clerk.
HORSE—Taken up by C. R. Edwards, Diamond Valley tp, one sorrel Horse, 6 years old, 14 1/2 hands high, left hind foot white, saddle marks. Appraised \$40.
MARE—Taken up by J. M. Edwards, Diamond Valley tp, one bay Mare, 2 years old, 15 hands high, a stripe in forehead, right hind foot and left fore foot white. Appraised \$70.
HEIFER—Taken up by Thomas Teadston, Diamond Valley tp, one red Heifer, 2 years old, line back. Appraised \$25.

Nemaha County—J. W. Tuller, Clerk.
HEIFER—Taken up by Jacob Nicholson, Valley tp, Dec 30, 70, one yearling Heifer. Appraised \$15. Also, one brown horse Colt, 1 year old. Appraised \$35. Also, one sorrel horse Colt, one year old, left hind foot white, some white in face. Appraised \$45.
HEIFER—Taken up by Martin Boasio, Nemaha tp, Jan 12, 71, one pale red yearling Heifer, face, hind feet and end of tail white. Appraised \$15.
BULL—Taken up by Jacob Hance, Nemaha tp, Jan 20, 1871, one brindled yearling Bull, white spot on inside left hind foot, heavy horns. Appraised \$12.50. Also, one pale red yearling Heifer, hind feet and tail white, star in forehead. Appraised \$12.50.
HEIFER—Taken up by U. Haigh, Granada tp, Jan 7th, 1871, one red Heifer, 2 years old, brocked face, ears cropped, white spots on legs. Appraised \$25.
COLT—Taken up by F. H. Boyer, Richmond tp, Jan 26, 1871, one black mare Colt, 2 years old. Appraised \$40.
MARE—Taken up by N. Morris, Granada tp, one bay Mare, two years old, blaze in face. Appraised \$60.
BULL—Taken up by S. Anderson, Granada tp, Jan 2d, 1871, one brown yearling Bull, star in forehead, a little white on root of tail. Appraised \$13.
STEER—Taken up by Joseph Boys, Granada tp, Jan 20th, 1871, one light red yearling Steer, white on bricket and brush of tail. Appraised \$13.50.

Pottawatomie County—H. P. Smith, Clerk.
STEER—Taken up by J. P. Leclair, St. Mary's tp, Dec 12th, 1870, one red and white Steer, 2 years old, white ring around left fore foot. Appraised \$17. Also, one pale red Texas Steer, 4 years old, crop off right ear, swallow-fork in left, hind feet white, indistinct brand on right hip. Appraised \$17.
HEIFER—Taken up by John Winter, Pottawatomie tp, Jan 4, 1871, one red Heifer, 2 years old, white spots on belly, branded P R on right side. Appraised \$20.
HEIFER—Taken up by L. Vandegrift, Blue tp, Jan 2, 1871, one red yearling Heifer, brush of tail gone. Appraised \$12.
BULL—Taken up by Pat O'Farrell, St. Mary's tp, Jan 2d, 1871, one red and white Bull, 2 years old, crop and slit in right ear, slit in left. Appraised \$17.
PONY—Taken up by R. F. Wooley, Vienna tp, Dec 19, 1870, one bay horse Pony, 15 years old, 18 hands high, saddle marks. Appraised \$30.
MARE—Taken up by J. R. Smalley, Vienna tp, Dec 24, 1870, one bay Mare, 3 years old, 13 1/2 hands high, hind feet and right fore foot white, star in forehead. Appraised \$35.
MARE—Taken up by J. L. Huggins, Louisville tp, Jan 7th, 1871, one black Mare, 2 years old. Appraised \$50. Also, one dun bay Mare, 3 years old, branded V, star in forehead. Appraised \$35.
PONY—Taken up by Wm Robbins, Clear Creek tp, Jan 16, 1871, one roan mare Pony, 3 years old, a large white spot in face. Appraised \$35.
COLT—Taken up by M. A. Repp, Pottawatomie tp, Dec 19, 1870, one bay mare Pony Colt, 2 years old, a white stripe in forehead. Appraised \$25.
COLT—Taken up by A. Brown, Pottawatomie tp, Dec 12, 1870, one dun mare Colt, 2 years old, dark mane and tail, white spot in forehead. Appraised \$30. Also, one light bay horse Colt, 2 years old, white spot in forehead, dark mane and tail. Appraised \$30. Also, one iron-gray mare Colt, 2 years old, white spot in the forehead. Appraised \$30.
COLT—Taken up by S. V. Lee, Blue tp, Jan 8, 1871, one bay mare Colt, 2 years old, medium size. Appraised \$45.
COLT—Taken up by G. L. Merryman, Louisville tp, Dec 6, 1870, one sorrel horse Colt, 2 years old, 8 feet white, a star in forehead, white strip on end of nose. Appraised \$30.
COLT—Taken up by L. Ringley, Louisville tp, Dec 15, 1870, one bay horse Colt, 2 years old, star in forehead. Appraised \$30.

Riley County—Samuel G. Hoyt, Clerk.
COW—Taken up by Chas. Larson, Jackson tp, one red Cow, 5 years old, white on legs and forehead, slit in each ear. Appraised \$30. Also, one red Cow, 3 years old, white spots, white face, slit in left ear. Appraised \$28.
STEER—Taken up by H. Condray, Jackson tp, Jan 24, 1871, one small red and white spotted Steer, 2 years old. Appraised \$25.
PONY—Taken up by J. E. Willets, Jackson tp, Nov 17th, 1870, one sorrel Pony, 1 year old 12 hands high, blaze in face, right fore foot and left hind foot white. Appraised \$30.
Saline County—D. Beebe, Clerk.
COW—Taken up by D. Sullivan, December 15th, 1870, one black Cow, 7 years old, points of horns off. Appraised \$25.
Shawnee County—P. I. Bonebrake, Clerk.
MARE—Taken up by G. W. Hamilton, Williamsport tp, Jan 17, 1871, one light bay Mare, 3 years old, 14 1/2 hands high, dark mane and tail, white on hind feet. Appraised \$65. Also, a brown horse Colt Pony, 2 years old. Appraised \$30.
PONY—Taken up by C. B. Streeve, Topeka tp, Jan 20, 1871, one mare Pony, 7 years old, 14 1/2 hands high, black mane and tail. Appraised \$40.
COLT—Taken up by J. S. Stansfield, Monmouth tp, Dec 31, 1871, one bay stallion Pony Colt, 3 years old, 14 hands high, a star in forehead. Appraised \$22.
MARE—Taken up by Robt Onions, Monmouth tp, Jan 18, 1871, one domestic claybank Mare, dark mane and tail. Appraised \$30.
COLT—Taken up by M. Stanford, Topeka tp, Feb 2, 1871, a black mare Colt, 18 months old, 13 hands high, white hairs in forehead. Appraised \$25.
COW—Taken up by A. McCarger, Soldier tp, Jan 2d, 1871, one white Cow, 7 years old, red ears and nose. Appraised \$22.50.
STEER—Taken up by Eli Snyder, Auburn tp, Jan 20, 1871, one one deep red Steer, 2 years old, crop off left ear, 2 swallow-forks and crop off right ear. Appraised \$30.
COLT—Taken up by S. J. Yager, Auburn tp, Jan 18, 1871, a light bay mare Pony Colt, 2 years old, star in forehead, white stripes on nose, dark mane and tail. Appraised \$15.
PONY—Taken up by G. W. Woodman, one brown mare Pony, 12 years old, 13 1/2 hands high, white spot in forehead, collar and saddle marks. Appraised \$45. Also, one bay mare Pony, 3 years old, 14 1/2 hands high, star in forehead, hind feet white. Appraised \$40.
COW—Taken up by W. M. Haynes, Topeka tp, Feb 7, 1871, one red Cow, 4 years old, white on belly and end of tail, lump behind left shoulder. Appraised \$40.
MARE—Taken up by M. M. Briery, Silver Lake tp, Jan 14, 1871, one bay Mare, two years old, 14 1/2 hands high, white feet, star in forehead, blind in right eye, white on nose. Appraised \$50.
STEER—Taken up by P. B. Kanaga, Topeka tp, Feb 15, 1871, one speckled Steer, 2 years old, has large white spots, swallow-fork in right ear. Appraised \$15.
PONY—Taken up by John Hale, Silver Lake tp, Feb 15th, 1871, one black horse Pony, 2 years old, 12 hands high, white stripe in face, hind feet white. Appraised \$30.

Wabunsee County—J. M. Matheny, Clerk.
PONY—Taken up by D. A. Woodard, Wilmington tp, Jan 19, 71, one bay mare Pony, 7 years old, 13 1/2 hands high, hind feet white. Appraised \$40.
PONY—Taken up by H. Volland, Alma tp, Jan 24, 1871, one bay mare Pony, 2 years old, star in forehead. Appraised \$25. Also, one bay Pony, 2 years old, star in forehead, white hairs on right hind foot. Appraised \$25.
COLT—Taken up by W. S. Earnest, Wilmington tp, Jan 31, 1871, one sorrel mare Colt, 1 year old, right fore foot and left hind foot white, star in forehead, a white strip in face. Appraised \$40. Also, one sorrel mare Colt, 2 years old, light mane and tail, star in forehead. Appraised \$40.
MARE—Taken up by J. W. Bishop, Newbury tp, Jan 20th, 1871, one light bay Mare, five years old, 14 hands high, white spots on belly, scar on nose. Appraised \$30.
Washington County—G. W. Shriner, Clerk.
MARE—Taken up by G. W. Wendell, Hanover tp, one bay Mare, 4 years old, 15 hands high, star in face. Appraised \$30.

Woodson County—W. W. Sala, Clerk.
STEER—Taken up by D. G. Stulman, Owl Creek tp, one white Steer, 2 years old, black ears and nose, swallow-fork in right ear, slit in left ear. Appraised \$25. Also, one white yearling Steer, red ears and nose. Appraised \$12.
COW—Taken up by C. A. Mullenix, Levant tp, one roan Cow, crop off right ear, crop and underbit in left, ears dewlapped, dim brands. Appraised \$20.
FILLY—Taken up by P. B. Spawr, Neosho Falls tp, one bay Filly, 2 years old, 14 1/2 hands high, hind feet white, white spot on left fore foot. Appraised \$35.
COLT—Taken up by G. T. Ellis, Neosho Falls tp, one bay horse Colt, 18 hands high. Appraised \$65.
PONY—Taken up by J. W. Hereford, Owl Creek tp, one bay Pony, 14 hands high, Texan brand on each hip, left fore foot white, star in forehead, saddle marks. Appraised \$30.
STEER—Taken up by L. R. Rose, Liberty tp, one red and white yearling Steer, mule shoe brand on side. Appraised \$14.
COW—Taken up by M. Redy, Owl Creek tp, one black Cow, six years old, dim brands on both hips, swallow-forks in both ears. Appraised \$12.
COLT—Taken up by J. S. Landes, Kalida tp, one bay Colt, two years old, branded HB on shoulder. Appraised \$20.
MARE—Taken up by A. J. Row, Toronto tp, one bay Mare, one fore foot white, black mane and tail, shod in front with old shoes. Appraised \$30.

STRAYS FOR FEBRUARY.
Allen County—W. F. Waggoner, Clerk.
MARE—Taken up by H. C. Bray, Iola tp, Dec 13, 1870, one sorrel Mare, 8 years old, light mane and tail, right hind foot white, star in forehead. Appraised \$30. Also, one sorrel Mare, 2 years old, light mane and tail. Appraised \$25. Also, one sorrel Mare, two years old, star in face. Appraised \$25. Also, one dun horse Colt, 1 year old, silver mane and tail. Appraised \$25. Also, one black horse Colt, 1 year old, white spot on right hind foot, and same between nostrils. Appraised \$30.
STEER—Taken up by John Freeman, Iola tp, Dec 40, 1870, one black Steer, 3 years old, underbit in each ear, branded W on right hip, and JH on left hip and left side, some white in forehead. Appraised \$25. Also, one white and red Heifer, two years old, underbit in left ear, crop in right. Appraised \$15.
HORSE—Taken up by John Willet, Iola tp, Dec 27th, 1870, one brown Horse, three years old, 16 hands high, white in face, saddle marks. Appraised \$50. Also, one red gray Mare, two years old, 15 hands high, hind feet white. Appraised \$30.
HEIFER—Taken up by A. J. McCarter, Iola tp, Dec 26, 1870, one red roan yearling Heifer, white under belly, left horn drooped and point off. Appraised \$14.
HEIFER—Taken up by R. Perkins, Iola tp, Dec 27th, 1870, one pale red Heifer, 2 years old, white under belly, crop off right ear. Appraised \$30.
STEER—Taken up by William Leech, Geneva tp, one pale red Steer, white on belly, swallow-fork in left ear, crop and split in right ear, branded on right hip. Appraised \$15.
Anderson County—J. H. Williams, Clerk.
MARE—Taken up by H. Nimrick, Jackson tp, Nov 1st, 1870, one roan Mare, 7 years old, 14 hands high, ringbone on both hind feet. Also, one Spring Colt, all four feet white, star in forehead. Appraised \$30.
MARE—Taken up by Geo. West, Ozark tp, one sorrel Mare, 3 years old, 14 1/2 hands high, star in forehead, white stripe on nose. Appraised \$45. Also, one sorrel Mare, 3 years old, 14 hands high, white on hips and loins, left hind foot and leg white, blaze face, light mane and tail. Appraised \$35.
HORSE—Taken up by Wm Vess, Temeolin tp, one sorrel Horse, 2 years old, right fore foot and hind feet white, blaze face, flax mane and tail. Appraised \$45.
STEER—Taken up by Squire Werrell, Ozark tp, Nov 1st, 1870, one white Steer, red spots on jaws, neck and on tip of left ear. Appraised \$16. Also, two red Steers, white and bellies. Appraised \$16 each. Also, one roan Steer, white on belly and end of tail. Appraised \$12.
STEER—Taken up by Jos. Wilhite, Washington tp, one black Indian Steer, 5 years old, white spots on neck and sides, Indian brand on right hip, underbit in right ear. Appraised \$40.
MARE—Taken up by J. W. Paul, Washington tp, one bay Mare, 3 years old, 15 hands high, black legs, mane and tail, branded W on both shoulders, saddle marks. Appraised \$50.
HEIFER—Taken up by A. Simons, Dec 8, 1870, one white Heifer, red nose and ears, roan neck. Appraised \$20. Also, one red Heifer, white face, white spots in body, crop off left ear, underbit in right ear. Appraised \$16. Also, one white Stag, red spots all over body. Appraised \$16. Also, one white Ox, black mane, dark all around the eyes. Appraised \$15.
STEER—Taken up by Robt Miller, Nov 28, 1870, one white Steer, 3 years old, red hairs on head, neck and ears, branded FP on right horn. Appraised \$30. Also, one pale red Steer, 3 years old, white on belly, slit in right ear. Appraised \$25.
HEIFER—Taken up by Virgil Hollaman, Nov 25, 1870, one red Heifer, 5 years old, white spots on neck and sides, Indian brand on right hip, underbit in right ear, crop off right. Appraised \$40.
MARE—Taken up by J. W. Paul, Washington tp, one bay Mare, 3 years old, 15 hands high, black legs, mane and tail, branded W on each shoulder, saddle marks. Appraised \$50.
MARE—Taken up by G. Doxie, Nov 1, 1870, one sorrel bay Mare, 4 years old, 14 hands high, white hairs in forehead, lump over saddle marks, branded 22 on left shoulder. Appraised \$22.
PONY—Taken up by M. Reddington, Jan 2, 1871, one bay horse Pony, 3 years old, three feet white, black mane and tail. Appraised \$18.
HEIFER—Taken up by Robt Malone, Jan 4, 1871, one red Heifer, white on belly, face and legs. Appraised \$30.
PONY—Taken up by John Poole, Oct 18th, 1870, one bay mare Pony, 3 years old, 13 hands high, hind feet white, smooth crop off right ear, half-crop in left ear, branded on right hip, white in forehead. Appraised \$40.
PONY—Taken up by Daniel Doll, Nov 30, 1870, one black gelding Pony, 4 years old, 13 1/2 hands high, blaze face, fore feet and right hind feet white, saddle marks. Appraised \$25.
STEER—Taken up by Wm Hopkins, October 14, 1870, one roan yearling Steer, red on neck and head. Appraised \$16.
STEERS—Taken up by John Horn, Dec 10, 1870, two Steers, 3 years old—one blue or black, white spots, the other red, white spots on back and legs, both branded FP on right horn. Appraised \$70.
PONY—Taken up by Jos. Buchanan, one black mare Pony, 3 years old, stripe in forehead, right hind foot white, white spot on forehead. Appraised \$55. Also, one white horse Pony, 2 years old, 13 hands high, fore legs black. Appraised \$15.

Atchison County—C. W. Rust, Clerk.
HEIFER—Taken up by J. M. Hale, Center tp, Dec 14, 1870, one white yearling Heifer, red ears. Appraised \$12.
BULL—Taken up by John Halligan, Grasshopper tp, Dec 10, 70, one dark red or whitish roan yearling Bull, spots on left shoulder and left hip, white on belly. Appraised \$17.
HEIFER—Taken up by Geo. Ousley, Walnut tp, Dec 24, 1870, one white Heifer, 2 years old, red ears, red spots on neck, medium size, smooth crop off left ear, underbit in right. Appraised \$14.
STEER—Taken up by N. Graham, Center tp, Dec 29th, 1870, one roan Steer, 2 years old, medium size, white face. Appraised \$30.
STEER—Taken up by J. Wallace, Center tp, Dec 29th, 1870, one red spotted Steer, 2 years old, neck and shoulders red, white face, notch in left ear. Appraised \$30.
COLT—Taken up by Wm Mosier, Center tp, Jan 6th, 1871, one light brown mare Colt, 1 year old. Appraised \$30.
HORSE—Taken up by Ed King, Mt Pleasant tp, Dec 30th, 1870, one red yearling Heifer, belly and bush of tail white, underbit in left ear. Appraised \$12.
MARE—Taken up by H. Baker, Center tp, Jan 7th, 1871, one bay Mare, 10 years old, white strip in face, hind feet white, has sucking Colt. Appraised \$25. Also, one bay mare sucking Colt, star in forehead. Appraised \$12. Also, one dark bay or brown Mare, 2 years old. Appraised \$45. Also, one black horse Pony, very old, white feet and face, saddle marks. Appraised \$15.

MARE—Taken up by T Cookley, Grasshopper tp, Jan 4th, 1871, one claybank Mare, 2 years old, white on right hind foot. Appraised \$45. Also, one sorrel Mare, 2 years old, a white spot in forehead, snip on nose. Appraised \$50.

STEER—Taken up by G H Hawkins, Center tp, Jan 21, 1871, one light roan medium sized yearling Steer, small fork in each ear, lame in right shoulder. Appraised \$11.

STEER—Taken up by J W Culver, Center tp, Jan 21, 1871, one white and black spotted Steer, 2 years old. Appraised \$28.

HEIFER—Taken up by B C Cleaveland, Grasshopper tp, Jan 22, 1871, one dark red yearling Heifer Calf, right eye blind, a slit in each ear. Appraised \$16.

HEIFER—Taken up by O A Ellison, Shannon tp, Jan 26th, 1870, one small black and white yearling Heifer. Appraised \$12.

STEER—Taken up by Jas Keats, Mt Pleasant tp, Jan 26, 1871, one red Steer, 2 years old, white on back, belly and bysh of tail, smooth crop in right ear, underbit in left. Appraised \$25.

HORSE—Taken up by Alex Eaton, Center tp, Jan 28, 1871, one black yearling Steer, mottled face, white spots on body, indistinct brand on left hip. Appraised \$30.

Bourbon County—C. Fitch, Clerk.

COW—Taken up by J M Chapman, Marion tp, one roan Cow, 10 hole and crop and slit in left ear. Appraised \$15.

STEER—Taken up by E Parker, Scott tp, one red Steer, 2 years old, crop and underbit in left ear, underslope in right, white on back. Appraised \$14.

FILLY—Taken up by One black 2 year old Filly, left hind foot white, star in forehead. Appraised \$45. Also, one cream-colored horse Colt, one year old, black mane and tail. Appraised \$30.

HORSE—Taken up by J C Johnston, Franklin tp, Jan 2d, 1871, one bay Horse, 8 years old, 15 hands high, white on left hind foot. Appraised \$50. Also, one dark bay Mare, 2 years old, 14 hands high. Appraised \$35.

STEER—Taken up by S Ramsey, Marion tp, one roan Steer, 2 years old. Appraised \$14.

HEIFER—Taken up by John Bohringer, Marion tp, one deep red Heifer, 2 years old, line back, roan face, white on belly and legs. Appraised \$18.

STEER—Taken up by Pat Hegan, Franklin tp, one black and white spotted Texas Steer, 7 years old, right ear off. Appraised \$30.

COW—Taken up by O Shoup, Scott tp, one black Cow, 8 years old, half crop in right ear, underbit and upper slope in left ear. Appraised \$18.

HEIFER—Taken up by C Bollinger, Mill Creek tp, one red and white spotted Heifer, 2 years old, tip of ears red bush of tail off. Appraised \$20.

HEIFER—Taken up by L Moran, Freedom tp, one red yearling Heifer, white stripe on back, white head, red ears. Appraised \$15.

FILLY—Taken up by A Stewart, Timberhill tp, one bay Filly, 1 year old, hind feet white, white on nose. Appraised \$55. Also, one iron-gray Filly, 1 year old, right hind foot white, other feet dark. Appraised \$50.

HEIFER—Taken up by J Funderberger, Marmaton tp, one red Heifer, 8 years old, swallow-fork in left ear, heavy crop off right, brush of tail gone. Appraised \$30.

MARE—Taken up by Saml Osborne, Scott tp, one sorrel Mare, 6 years old, 14 1/2 hands high, star in forehead, left hind foot white, branded JB on left shoulder. Appraised \$65. Also, a bay Mare, 4 years old, 14 1/2 hands high, white spots on forehead and nose, hind feet white. Appraised \$60.

HEIFER—Taken up by Carroll Dobbins, Osage tp, one yellow yearling Heifer, white face, hips and under part of body. Appraised \$15.

Brown County—E. N. Morrill, Clerk.

FILLY—Taken up by Thos Miller, Irving tp, November 9, 1870, one brown Filly, 3 years old, medium size. Appraised \$30.

COW—Taken up by W H Babcock, Irving tp, one small light red Cow, 5 years old. Also, one small dark red heifer Calf. Appraised \$20.

PONY—Taken up by Wm Shortridge, Claytonville tp, October 24, 1870, one bay filly Pony, 4 years old, 13 1/2 hands high, scar on right ham, lame in right shoulder. Appraised \$16.

HEIFER—Taken up by G B F Roberts, Walnut Creek tp, Nov. 6, 1870, one white Heifer, 2 years old, underbit in each ear. Appraised \$15.

COLT—Taken up by Jos Kirk, Walnut Creek tp, November 8, 1870, one bay horse Colt, star in forehead, hind feet white, white on off fore foot. Appraised \$100.

HEIFER—Taken up by Jacob Haywood, Walnut Creek tp, November 23, 1870, one large roan yearling Heifer, hole in right ear. Appraised \$15.

PONY—Taken up by John Gaston, Walnut Creek tp, Nov. 20, 1870, one bay mare Pony, 4 years old, star in forehead. Appraised \$40. Also, one red yearling Steer, face and hind feet white, a slit in left ear. Appraised \$15.

STEER—Taken up by Robt Gaston, Walnut Creek tp, Nov. 26, 1870, one red roan Steer, 2 years old, crop off both ears, underbit in left ear, white on belly. Appraised \$22.

HEIFERS—Taken up by J W Bemis, Walnut Creek tp, Nov. 28, 1870, two roan yearling Heifers, mostly white. Appraised \$13 each. Also, one white yearling Steer, branded C on right hip. Appraised \$18.

PONY—Taken up by Benj Winkles, Walnut Creek tp, Nov. 20, 1870, one black mare Pony, 2 years old, heavy mane and tail. Appraised \$40. Also, one red Steer, 2 years old, white on back and belly. Appraised \$25. Also, one red yearling Steer, white between fore legs. Appraised \$15.

PONY—Taken up by C C Grubb, Lochrane tp, Novr 15th, 1870, one claybank mare Pony, 10 years old, a white spot in forehead, dark mane and tail, dark legs. Appraised \$30.

HEIFER—Taken up by F Marak, Claytonville tp, Nov 17, 1870, one white yearling Heifer, underbit off left ear, crop and 2 slits in right ear. Appraised \$12.

COLT—Taken up by J W Walking, Claytonville tp, Dec 2, 1870, one black horse Colt, 14 hands high, a white strip on face. Appraised \$40. Also, one bay horse Colt, 14 hands high, raw-boned. Appraised \$35. Also, one bright bay mare Colt, 13 hands high, a star in forehead, left hind foot white, blind in left eye, smooth built. Appraised \$30.

STEER—Taken up by John Simpkins, Irving tp, Dec. 2d, 1870, one red and white spotted yearling Steer. Appraised \$11.

FILLY—Taken up by M Larson, Claytonville tp, Dec. 1st, 1870, one bright bay Filly, 3 years old, 16 hands high, black mane, tail and legs, white hairs in forehead. Appraised \$100.

PONY—Taken up by H Higginoffler, Claytonville tp, Dec. 1st, 1870, one red roan Pony, 4 years old, black legs, mane and tail, a star in forehead. Appraised \$30.

COLT—Taken up by T J Marlon, Irving tp, Dec 1, 1870, one bay mare Colt, 7 month old, small white blotch in forehead, right fore foot, and left hind foot white. Appraised \$33.

STEER—Taken up by A A Frink, Lochrane tp, Nov. 29th, 1870, one red Steer, 2 years old, white spots on forehead, left shoulder and hips, tail and hind legs partly white, small notch in each ear. Appraised \$20.

STEER—Taken up by J K Dickinson, Claytonville tp, Nov. 3d, 1870, one red and white spotted yearling Steer, smooth crop off left ear. Appraised \$15.

HEIFER—Taken up by R P Smith, Walnut Creek tp, Dec 3, '70, one light red yearling Heifer, star in forehead. Appraised \$14.

CALF—Taken up by Wm Gaston, Walnut Creek tp, Nov 17, '70, one white Spring heifer Calf, white face, side of head and neck and right hip red. Appraised \$11.

STEER—Taken up by John Walters, Irving tp, Dec. 17th, 1870, one small roan yearling Steer, crop off left ear, underbit in each ear. Appraised \$12.

MARE—Taken up by John Bunk, Claytonville tp, Dec. 12, 1870, one brown Mare, 7 years old, star in forehead, white on both left feet, saddle marks, 12 hands high. Appraised \$22. Also, a brown Colt. Appraised \$10.

MARE—Taken up by R M Tucker, Irving tp, Nov. 26, 1870, one small iron-gray Mare, 2 years old, spot in forehead. Appraised \$40. Also, one small sorrel horse Colt, a spot in forehead. Appraised \$15. Also, one pale red yearling Steer, of medium size.

Appraised \$14. Also, one dark red yearling Steer, white on tail and belly, underbit in each ear. Appraised \$14.

PONY—Taken up by A Leonard, Walnut Creek tp, Dec. 20, '70, one bay horse Pony, 3 years old, right hind foot white, white on end of nose. Appraised \$50.

FILLY—Taken up by G G Stumbo, Irving tp, Dec 15, 1870, one bright sorrel Filly, 1 year old, white spot in forehead, left hind feet white, strip on nose. Appraised \$45.

STEER—Taken up by J G Leavitt, Irving tp, Dec 8th, 1870, one red Steer, 2 years old, hind legs white, belly and fore legs red, a crop off right ear, branded OC on right hip. Appraised \$14.

HEIFER—Taken up by H Cheal, Claytonville tp, Dec. 30, 1870, one red and white yearling Heifer, white on back and belly, red sides. Appraised \$15.

PONY—Taken up by J F Babbitt, Irving tp, Dec 16, 1870, one bay mare Pony, 6 years old, white spot in forehead, left hind foot white, sway back. Appraised \$25. Also, one light brown mare Colt, star in forehead, white stripe on side of face, all feet white. Appraised \$30.

HEIFER—Taken up by Sarah Smith, Lochrane tp, December 5, 1870, one white yearling Heifer, red on ears, nose and fore legs. Appraised \$15.

STEER—Taken up by Saml Scantlin, Lochrane tp, Dec 19, 1870, one brown Steer, 2 years old, white spots on head, belly and each thigh. Appraised \$15.

MLUR—Taken up by David Blenis, Irving tp, Dec 10, 1870, one small sized brown mare Mule. Appraised \$70.

Chase County—William Rockwood, Clerk.

MARE—Taken up by H S Hicks, Bazaar tp, Nov. 17th, 1870, one bay Mare, 4 years old, 14 hands high, branded H on left shoulder, left hind foot white, blaze in face, saddle and harness marks, shod before. Appraised \$45. Also, one medium size bay Filly, 1 year old, blaze in face, left hind foot white. Appraised \$25. Also, one dark iron-gray horse Colt, 1 year old, medium size, left hind foot white. Appraised \$25.

PONY—Taken up by H C Snyder, Diamond Creek tp, Dec. 1st, 1870, one brown Filly, half-pony, 2 years old, 14 hands high. Appraised \$30.

STEER—Taken up by H Hahn, Kimrod tp, Dec. 23d, 1870, one roan Steer, 3 years old, red head and neck, branded C on left hip. Appraised \$20.

Crawford County—F. B. Russell, Clerk.

COLT—Taken up by Nelson Smith, Sherman tp, Dec. 24d, 1870, one bay mare Colt, 2 years old. Appraised \$25. Also, one bright bay horse Colt, 1 year old, right hind foot white to pastern joint. Appraised \$20.

OX—Taken up by F Gates, Sheridan tp, one red and white Ox, medium size. Appraised \$30.

OX—Taken up by H M Scott, Sheridan tp, Nov 23, 1870, one red Ox, 10 years old, white spots, swallow-fork in right ear, split in left. Appraised \$24.

COW—Taken up by W J Long, Sherman tp, Dec 17th, 1870, one red and white spotted Indian Cow, 13 years old, branded BH on left shoulder, and MCBH on left hip. Appraised \$20.

STEER—Taken up by Samuel Walcott, Lincoln tp, one black Steer, 7 years old, star in forehead, white on belly and left fore foot, white on left thigh, crop off right ear, swallow-fork in left. Appraised \$30. Also, one bay horse pony Colt, 1 year old, hind feet white, fore foot white, lump on right foreleg. Appraised \$25.

Davis County—Daniel Mitchell, Clerk.

COLT—Taken up by J C Clemons, Davis tp, January 3d, 1871, one black horse Colt, 3 years old, 15 1/2 hands high, white spot in forehead. Appraised \$50.

Doniphan County—John T. Kirwan, Clerk.

MULE—Taken up by L Davis, December, 1870, one black mare Mule, 18 hands high. Appraised \$60. Also, a sorrel mare Mule, 12 hands high. Appraised \$40.

STEER—Taken up by L Mochela, Wayne tp, Dec 15th, 1870, one red Steer, 2 years old, crop and underbit off right ear, face and brush of tail white, white on back. Appraised \$15.

MARE—Taken up by W A Lancaster, Wayne tp, Nov. 30, 1870, one iron-gray Mare, 10 years old, both hind feet and left fore foot white. Appraised \$30. Also, one red roan Mare, hind feet and left fore foot white. Appraised \$30.

COLT—Taken up by John Cauley, Wolf River tp, Nov 26, 1870, one iron-gray filly Colt, white spot on upper lip. Appraised \$50.

STEER—Taken up by F Chrystal, Washington tp, Dec. 23, 1870, one red Steer, 3 years old, small size, swallow-forks in each ear, white on belt. Appraised \$15. Also, one brown Steer, 3 years old, small size, under half-crop off each ear, branded No 12 on right hip, white on belly and legs. Appraised \$15. Also, a brown Steer, 3 years old, small size, swallow-fork and underbit in each ear, a little white in forehead. Appraised \$15.

HEIFER—Taken up by Aug Goat, Wolf River tp, Dec. 19, 1870, one red Heifer Calf, line back, red sides, white belly, face and tail, red circle about eyes, red noser. Appraised \$15.

Franklin County—G. D. Stinebaugh, Clerk.

PONY—Taken up by A Huddleton, Greenwood tp, Dec 11, 1870, one black horse Pony, 5 years old, white face, white spot on left knee and above left fore hoof, saddle marks. Appraised \$30.

HORSE—Taken up by J T Miles, Appanoose tp, Dec 5, 1870, one red roan mare Pony, 6 years old, glass eye, ball face, neck and hind feet white, dim brand on left shoulder. Appraised \$20. Also, one brown Pony 12 years old, saddle marks, white spot in forehead. Appraised \$20. Also, one bay mare Colt, 1 year old, star in forehead, black mane and tail. Appraised \$20. Also, one sorrel mare Colt, 1 year old, blaze face, light mane and tail. Appraised \$20.

COW—Taken up by J Moore, Franklin tp, Dec 1, 1870, one line back Cow, 5 years old, left horn broken, had bell on. Appraised \$20. Also, one light red Heifer, 2 years old, a large star in forehead. Appraised \$16.

COLT—Taken up by J Biggs, Greenwood tp, Dec 6th, 1870, one brown mare Colt, 2 years old, 14 hands high. Appraised \$40. Also, one bay horse Colt, 3 years old, 13 1/2 hands high, some white hairs in forehead. Appraised \$30.

PONY—Taken up by J Farris, Centropolis tp, Dec. 17, 1870, one bay mare Pony, 3 years old, 12 hands high. Appraised \$25.

CALF—Taken up by L B Dyer, Greenwood tp, Dec 23, 1870, one roan yearling heifer Calf, red head and neck. Appraised \$14.

PONY—Taken up by E Hunter, Ottawa tp, Dec 10, 1870, one sorrel Pony, 2 years old, left hind foot white, white spot in forehead. Appraised \$20. Also, one roan mare Pony, 1 year old, hind feet white. Appraised \$15.

PONY—Taken up by A Woodworth, Greenwood tp, Dec 23, '70, one bay mare Pony, 7 years old, white stripe in face, right hind foot white, shod before. Appraised \$30.

PONY—Taken up by G H Rigdon, Pottawatomie tp, Dec 19, '70, one bay mare Pony, 3 years old, 11 hands high, heavy mane and tail. Appraised \$15.

HORSE—Taken up by Ira Connor, Franklin tp, Dec 12th, 1870, one light 9 years old, 16 1/2 hands high, dark mane and tail. Appraised \$60.

MARE—Taken up by J B Stinebaugh, Harrison tp, Jan. 6, 1871, one bay mare Colt, 1 year old, blaze face, hind feet white, small size. Appraised \$20.

Greenwood County—L. N. Fancher, Clerk.

MARE—Taken up by A Pincock, Pleasant Grove tp, Dec 17, '70, one light bay American Mare, 7 years old, 15 hands high, saddle black mane, tail and legs. Appraised \$75.

BULL—Taken up by J B Henley, Madison tp, one roan Bull, 4 years old, branded 61 on left horn and left hip, crop and slit in right ear. Appraised \$30.

Howard County—Charles S. King, Clerk.

COW—Taken up by D L Chamberlain, Liberty tp, Dec. 8, 1870, one black and white Texas Cow, 15 years old, branded IX upon right hip, ears badly up. Also, one red Texas Cow, 4 years old, branded 8. Also, one yearling Texas Steer, ears badly cut. Also, one red and white yearling Steer, crop off right ear.

STEER—Taken up by John McBe, Union Center tp, Dec 9, '70, one white Steer, 3 years old, red ears, red spots on neck, sides and shoulders, branded OT on left hip. Appraised \$20.

Jackson County—E. D. Rose, Clerk.

MARE—Taken up by J A Pierce, Grant tp, one dark bay Mare, 5 years old, 15 1/2 hands high, dark mane, black legs. Appraised \$40

STEER—Taken up by T McCurt, Jefferson tp, one white roan yearling Steer, red neck. Appraised \$18.

HORSE—Taken up by G W Mayhall, Douglas tp, one light bay Horse, 3 years old, left hind foot white. Appraised \$75. Also, one dark bay Horse, 2 years old, 3 white spots in forehead. Appraised \$35. Also, one brown Mare, 1 year old, snip on nose, white on inside of left thigh. Appraised \$30.

STEER—Taken up by J W Taylor, Franklin tp, a white Steer, 6 years old, crop off right ear, left horn broken. Appraised \$35.

COLT—Taken up by S R Jones, Douglas tp, one bay mare Colt, 1 year old, star in forehead, white on nose. Appraised \$15.

COLT—Taken up by Wm Sumner, Jefferson tp, one black horse Colt, 1 year old, hind feet white, star in forehead, lame in right hind leg. Appraised \$25.

BULL—Taken up by Jas Rule, Jefferson tp, one red and white yearling Bull, white face. Appraised \$30.

MARE—Taken up by W B McClain, Franklin tp, one bay Mare, nine years old, black mane, tail and legs, hind feet white, saddle marks. Appraised \$35.

STEER—Taken up by F Schermer, Franklin tp, one red roan Steer, 2 years old, long slim horns. Appraised \$30.

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Wilson's Albany
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**THREE AMERICAN
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The most hardy and productive Raspberry I know.
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DWARF AND CRAB APPLES, unequalled in quality;
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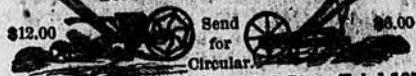
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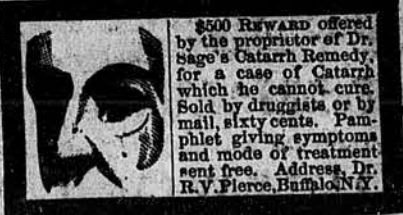
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sep-17

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All Seeds Guaranteed True to Name.

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