THE
"CLEARFIELD REPUBLICAN,"
PUBLISHED EVERY WEDNESDAY, AT
CLEARFIELD, PA.
ESTABLISHED IN 1827.

The largest Circulation of any Newspaper in North Central Pennsylvania.

Terms of Subscription.
If paid in advance, or within 3 months....$2 00
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1 square.....$8 00 | ¼ column.....$50 00
2 squares.....15 00 | ½ column..... 70 00
1 square.....30 00 | 1 column.....120 00
G. B. GOODLANDER,
Publisher.

CLEARFIELD REPUBLICAN.

GEO. B. GOODLANDER, Editor & Proprietor. PRINCIPLES, NOT MEN. TERMS—$2 per annum in Advance.

VOL. 55--WHOLE NO. 2,740. CLEARFIELD, PA., WEDNESDAY, SEPTEMBER 21, 1881. NEW SERIES--VOL. 22, NO. 37.

Lawyers' Cards.

H. W. SMITH,
ATTORNEY-AT-LAW,
Clearfield, Pa.

J. J. LINGLE,
ATTORNEY-AT-LAW,
Philipsburg, Centre Co., Pa. ypd

ROLAND D. SWOOPE,
ATTORNEY AT LAW,
Curwensville, Clearfield county, Pa.
oct. 9, '78-tf.

OSCAR MITCHELL,
ATTORNEY AT LAW,
CLEARFIELD, PA.
Office in "Old Western building," (up-stair).
Oct. 9, '78-tf.

ISRAEL TEST,
ATTORNEY AT LAW,
Clearfield, Pa.
Office one door east of Shaw House.

WM. M. McCULLOUGH,
ATTORNEY AT LAW,
CLEARFIELD, PA.
Office in Masonic building, Second street, opposite the Court House.

W. C. ARNOLD,
LAW & COLLECTION OFFICE,
CURWENSVILLE,
Clearfield County, Penn'a.

S. T. BROCKBANK,
ATTORNEY AT LAW,
CLEARFIELD, PA.
Office in Opera House.

WALLACE & KREBS,
ATTORNEYS-AT-LAW,
Clearfield, Pa.

SMITH V. WILSON,
Attorney-at-Law,
CLEARFIELD, PENN'A.
Office in the Masonic Building, over the County National Bank.

J. F. SNYDER,
ATTORNEY AT LAW,
CLEARFIELD, PA.
Office over the County National Bank.
June 26, '78tf.

FRANK G. HARRIS,
ATTORNEY AT LAW,
CLEARFIELD, PENN'A.
First-class Life and Fire Insurance Companies represented.
Office in the Opera House.

MURRAY & GORDON,
ATTORNEYS AT LAW,
CLEARFIELD, PA.
Office in Pie's Opera House, second floor.

WILLIAM A. HAGERTY,
ATTORNEY-AT-LAW,
OFFICE over T. A. Fleck & Co.'s Store,
CLEARFIELD, PENN'A
Will attend to all legal business with promptness and fidelity.

McENALLY & McCURDY
ATTORNEYS-AT-LAW,
Clearfield, Pa.
Legal business attended to promptly with fidelity. Office on Second street, above the First National Bank.

J. P. McKENRICK,
DISTRICT ATTORNEY,
CLEARFIELD, PA.
All legal business entrusted to his care will receive prompt attention.
Office in the Court House.

A. G. KRAMER,
ATTORNEY-AT-LAW,
Real Estate and Collection Agent,
CLEARFIELD, PA.,
Will promptly attend to all legal business entrusted to his care.
Office in Pie's Opera House.

JOHN L. CUTTLE,
ATTORNEY AT LAW.
And Real Estate Agent, Clearfield, Pa.
Office on Third street, bet. Cherry & Walnut.

Physicians' Cards.

DR. E. M. SCHEURER,
HOMEOPATHIC PHYSICIAN,
Office in residence on First st.
April 24, 1872. Clearfield, Pa.

DR. W. A. MEANS,
PHYSICIAN & SURGEON,
DUBOIS CITY, PA.
Will attend professional calls promptly.

DR. T. J. BOYER,
PHYSICIAN AND SURGEON,
Office on Market Street, Clearfield, Pa.
Office hours: 8 to 12 a. m., and 1 to 4 p. m.

DR. J. KAY WRIGLEY,
HOMEOPATHIC PHYSICIAN,
Office adjoining the residence of James Wrigley, Esq., on Second St., Clearfield, Pa.

G. C. JENKINS, M. D.,
PHYSICIAN AND SURGEON
CURWENSVILLE, PA.,
Office at residence, corner of State and Pine streets.

DR. H. B. VAN VALZAH,
CLEARFIELD, PENN'A.
OFFICE IN RESIDENCE, CORNER OF FIRST AND PINE STREETS.
Office hours—From 12 to 2 P. M.

DR. J. P. BURCHFIELD,
Late Surgeon of the 53d Regiment, Pennsylvania Volunteers, having returned from the Army, offers his professional services to the citizens of Clearfield county.
Professional calls promptly attended to. Office on Second street, formerly occupied by Dr. Weeks.

Cards.

HENRY BRETH,
(GEYER P. O.)
JUSTICE OF THE PEACE
FOR BELL TOWNSHIP.
May 8, 1878-1y*

JAMES MITCHELL,
DEALER IN
Square Timber & Timber Lands,
CLEARFIELD, PA.

A. V. HOYT,
Land Survevor and Civil Engineer,
PHILIPSBURG, PA.
All business will be attended to promptly.

REUBEN HACKMAN,
House and Sign Painter and Paper Hanger,
Clearfield, Penn'a.
Will execute jobs in his line promptly and in a workmanlike manner.

FRANK FIELDING
AND
WILLIAM D. BIGLER,
ATTORNEYS-AT-LAW,
CLEARFIELD, PA.
Nov. 17th, 1880-tf.

WEAVER & BETTS,
DEALERS IN
Real Estate, Square Timber, Saw Logs,
AND LUMBER OF ALL KINDS.
Office on Second street, in rear of store room of George Weaver & Co.

RICHARD HUGHES,
JUSTICE OF THE PEACE
—FOR—
Decatur Township,
Osceola Mills P. O.
All official business entrusted to him will be promptly attended to.

HARRY SNYDER,
BARBER AND HAIRDRESSER.
Shop on Market St., opposite Court House.
A clean towel for every customer.
Also dealer in
Best Brands of Tobacco and Cigars.
Clearfield, Pa.

JAMES H. TURNER,
JUSTICE OF THE PEACE,
Wallaceton, Pa.
He has prepared himself with all the necessary blank forms under the Pension and Bounty laws, as well as blank Deeds, etc. All legal matters entrusted to his care will receive prompt attention.

G. H. HALL,
PRACTICAL PUMP MAKER,
NEAR CLEARFIELD, PENN'A.
Pumps always on hand and made to order on short notice. Pipes bored on reasonable terms. All work warranted to render satisfaction, and delivered if desired.

Livery Stable.
THE undersigned begs leave to inform the public that he is now fully prepared to accommodate all in the way of furnishing Horses, Buggies, Saddles and Harness, on the shortest notice and on reasonable terms. Residence on Locust street, between Third and Fourth.
GEO. W. GEARHART.
Clearfield, Feb. 4, 1874.

READ & HAGERTY,
FIRE, LIFE AND ACCIDENT INSURANCE AGENCY.
Office in Graham Building, Market street.
Clearfield, - - - - - Penn'a.
[June 15, 1881-tf.]

THOMAS H. FORCEE,
DEALER IN
GENERAL MERCHANDISE.
GRAHAMTON, Pa.
Also, extensive manufacturer and dealer in Square Timber and Sawed Lumber of all kinds.
Orders solicited and all bills promptly filled.

S. I. SNYDER,
PRACTICAL WATCHMAKER
AND DEALER IN
Watches, Clocks and Jewelry,
Graham's Row, Market Street,
CLEARFIELD, PA.
All kinds of repairing in my line promptly attended to.
Jan. 1st, 1879.

Clearfield Nursery.
ENCOURAGE HOME INDUSTRY
THE undersigned, having established a Nursery on the Pike, about half way between Clearfield and Curwensville, is prepared to furnish all kinds of FRUIT TREES, (standard and dwarf,) Evergreens, Shrubbery, Grape Vines, Gooseberry, Lawton Blackberry, Strawberry, and Raspberry Vines. Also, Siberian Crab Trees, Quince, and early scarlet Rhubarb, &c. Orders promptly attended to. Address,
J. D. WRIGHT,
Curwensville, Pa.

JAMES KERR. CARROLL S. BIDDLE.
Clearfield Insurance Agency.
KERR & BIDDLE, Agents,
Represent the following and other first-class Co's

Companies.	Assets.
Liverpool London & Globe—U. S. Br.	$4,531,89
Lycoming—on mutual & cash plan	3,000,000
Phœnix, of Hartford, Conn	2,634,083
Insurance Co. of North America	3,433,674
North British & Mercantile—U. S. Br.	1,792,863
Scottish Commercial—U. S. Branch	679,143
Watertown	764,315
Travelers (Life & Accident)	4,189,434

Office on Market St., opp. Court House, Clearfield, Pa. June 1, '79-tf.

Insurance Agency
—OF—
WILLIAM C. HELMBOLD,
Patton Block, Curwensville, Pa.
Companies Represented:
Commercial Union Ins. Co., Assets $9,064,702 55
Firemen's Fund Ins. Co., Assets 1,160,017 60
Union Insurance Co., Assets 1,020,037 99
Travelers' Accident Ins. Co., Assets 5,519,194 73
Northern Ins. Co. of New York As'ts 346,990 00
Insurance placed on all kinds of property at equitable rates.
Curwensville, Pa., Feb. 16, 1881-tf.

THE MUTUAL BENEFIT
LIFE INSURANCE COMPANY,
Newark, N. J.
INCORPORATED 1845. PURELY MUTUAL.
Assets, Jan. 1, 1881, as ascertained by Examining Commissioners of Massachusetts, Ohio and New Jersey.....$35,726,315 32
Liabilities, as stated by the same.....31,911,452 89
Surplus by Mass'chu's Standard.....3,813,862 43
Surplus by New York Standard.....5,388,965 69
All policies uncontestable after second year; low expenses; large dividends declared and paid every year since organization; ample surplus; surrender values most liberal; losses promptly adjusted and paid.
OFFICERS:
LEWIS C. GROVER, PRESIDENT.
JAMES B. PEARSON, VICE-PRESIDENT.
ED. L. DUBOIS, Sec'y. THEO. MACKEREY, Treas.
POTTER & REYES, State Agents, 522 Walnut street, Philadelphia, Pa.
R. M. M'ENALLY, Special Agent. Office in Mossop's building, Market Street, Clearfield, Pa.

AGRICULTURAL ADDRESS.

HIGH FARMING AND HOME CULTURE.

THE FUTURE OF EAST PENNSYLVANIA FARMING.

NEW CROPS AND NEW METHODS.

DELIVERED BEFORE THE CUMBERLAND VALLEY EDITORIAL ASSOCIATION AT THE TRI-STATE (PENNSYLVANIA, MARYLAND AND WEST VIRGINIA) GRANGERS' AND FARMERS' PICNIC, WILLIAMS' GROVE, CUMBERLAND CO., PA., SEPT. 2, 1881, BY W. U. HENSEL, OF LANCASTER, PENNSYLVANIA.

FELLOW CITIZENS: *Grangers, Farmers and Editors, Ladies and Gentlemen.*—It it be asked what place has the editorial profession in this celebration, or what right is there for the intrusion of a discussion of agricultural topics in a convention of editors, let it be answered that the function of the press, in the present supremacy of its estate, is to recognize and review every interest which concerns the general welfare, and hence especially to note the progress and the prospects of the oldest and best continuing pursuit of man, that first occupation in which he was engaged, the one by which he chiefly subsists and in which he realizes his greatest dignity, best maintains his independence and most fully realizes his individuality.

Nor need I say how many of the two thousand million printed sheets which fall from the newspaper presses of this country each year find lodgment in its agricultural communities; nor to what extent in turn the great force of average public opinion—to which press and politicians bow—is is moulded and toned among those whose

Days are spent, whose minds are bent
To follow the useful plow.

I shall not yield myself to temptation to indulge in the romance of agriculture. The primary occupation of man and the basic wealth of nations, it is the self-existent pursuit of human activity, in which there can be no disastrous overproduction, into which surplus industry can ever and again be profitably directed, where the resources of capital and the energy of labor can find engagement without friction and the prosperity of which is, on the whole, as sure and certain as its universality is essential to man's moral development and material comfort. In every age and clime and under all conditions of the world's life the farmer has been the corner-stone of the social and the national structure. The statesman and moralist, philosopher and economist have always recognized his vital importance. The plow is pictured on Theban palace, Egyptian tomb, Etrurian vase and Grecian bass reliets. In Utopia, you will remember, that farm houses were built over the whole country and of each family of forty a score were sent in rotation every two years from the cities to farms, that all might acquire some knowledge of the tillage of the soil. Said Daniel Webster, "All national wealth depends upon an enlightened agriculture."

OUR NATIONAL DOMAIN.

To us as a nation has it been left to illustrate this in a peculiar manner and upon a magnitude of scale never before dreamed of. Half of our adult population are engaged in this pursuit, and 71 per cent. of our farms are occupied by their owners. We have a system of landholdings that upholds free government and supplies healthy blood for the body politic, a domain sufficient to supply the whole world's demands for breadstuffs, and so many acres available for wheat culture that even the present enormous yield would not seed all the land. So wide-reaching is that domain that the flour from the first harvested wheat of Georgia reaches us almost before the Spring seeding of the Northwest has begun.

We exhibit an increase in cereal product of nearly one hundred per cent. in the last decade, from a country furrowed so lately with the plowshare of war, and yet we have a home market and domestic consumption for 95 per cent. of what we raise. Swollen as we are with pride in our manufactures, there is nearly as much capital invested in our leather interests as lumber, and the investment in flour mills is greater than the total value of all our iron manufactures.

How marvelous the contrast with our rival for the supremacy of nations, once celebrated for the number of its land proprietors, in whose united kingdom now, with its advance of population, the total number of land owners has shrunk from 180,000 in 1688 and 250,000 in 1786 to 170,000 in 1876, where 523 individuals own a fifth of all the land and not one in thirty is a land owner, where half of Scotland is partitioned among a dozen, and all of Ireland scarcely knows as many owners of the soil as a single county in Pennsylvania; with Germany, whose peasantry quit their fatherland by hundreds of thousands for a home here; and with Russia plagued by the problem of her freed serfs! The very branches of agriculture in which we are rising into eminence are decaying in the mother country; and what with the rot in sheep husbandry there, the decline in the profitableness of dairying, the losses in the production of animal food, and the diminution of wheat culture, the prospects of new markets for the American surplus are steadily enhancing.

AGRICULTURAL PROBLEMS.

Glowing as the picture is, it is not to be forgotten that these boundless resourses and this marvelous development are not without their problems. As the original Divine mandate prescribed that the Adamic tiller of the vineyard should only eat his bread in the sweat of his brow and sit under the shelter of his vine and fig tree for the tending of them, so the pursuit of agriculture has ever since been accompanied with toils and beset with difficulties, and every step of its advance has been crossed with new problems worthy of the most intelligent investigation. It is to some of these that I would direct attention now, the more especially as they concern a majority of those gathered here, scarcely venturing however, to more than suggest them for the application of your fuller experience to their solution.

The most casual observer of the drift of population and of agricultural development in this country has noticed that the centre of production has steadily moved toward the Northwest. Seven-tenths of the entire wheat crop is grown in Illinois, Indiana, Ohio, Michigan, Minnesota, Iowa, California and Wisconsin; while Illinois, Iowa and Missouri alone produced in 1879 upward of eight hundred million bushels of corn, or more than the yield of the entire country in 1869. Hanging upon our Northern boundaries are the great wheat fields of the future, those two hundred or more millions of virgin acres in the valleys of the Red river, the Peace, the Athabasca and the Saskatchewan, producing a superior grain, and yielding after thirty-five years the increased production of thirty bushels to the acre, showing no signs of exhaustion after that long use without fertilizers. The immense grazing grounds of the Southwest—where ten thousand herds can feed, no one in anothers sight—and our enormous railroad development, bringing those distant fields closer to market than you were a half century ago, need only be suggested to remind you how successfully the husbandmen of those cheaper fat lands and the herdsmen of that rich grassy domain can excel the farmers of Eastern Pennsylvania in some former special features of agriculture here.

Now, on the other hand, the demand for market supplies is enlarging and coming nearer to our doors. The vastly increasing population of our seaboard cities and the growing manufacturing interests of our own State make the immediate district which I now have in mind the centre of a population comprising many millions, whose tastes for luxuries and the ministry to whose necessities afford opportunity for the successful introduction of new methods and diversified products.

A consideration collateral to the Westward drift of population, enterprise and agricultural development, which has been one of deep concern to intelligent farmers, has been the tendency of the best blood and brains to quit the pursuits of the fathers and let go the plow handles for city life, attracted by the bustle of its business activity, the dash of mercantile speculation or the glitter of social life, too often only to be shipwrecked on the rocks of bankuptcy or ruined in the whirl of fashionable dissipation. I am not unmindful that the country and the farm have been the nursery and training school of many of our brightest and strongest intellects; that the vigor and breadth of mind so essential to the best success in any sphere have been nowhere so well nourished as in the pursuits of agricultural life, and that over and again we must look to it to trace the early steps of some

Divinely gifted man,
Whose life in low estate began,
And on a humble village green;
Who * * * * * * *
* Moving up from high to higher,
Becomes, on Fortune's crowning slope,
The pillar of a people's hope,
The centre of the world's desire.

The fact remains that farm life has too long suffered the reproach from those who might most have adorned it that it is not congenial to the development of social culture.

HIGH FARMING.

To those, then, who seek to find wherein lie the future enhanced profit and pleasure of this pursuit which is your common interest, I answer that the future of farming in this peculiarly favored and advanced region lies in High Farming and Home Culture. They will accompany each other, and their development will be contemporaneous. For whatever tends to give more intelligent direction to agriculture will enhance its profits and hence its pleasures; and with the promotion of scientific regulation there must come greater comforts of living; the necessity for investigation will lead to broader learning, and the application of new methods impel each generation to the elevation of this calling in its moral as well as material aspects.

SMALL FARMS.

Increasing fertility and productiveness, resulting in advanced prices for land, must lead to a subdivison of farms. To no small extent is the perfection of our tillage due to the original Pennsylvania policy of small land grants, and as the years roll on it will be found that fifty acres are more productive than a hundred, and twenty-five more productive than fifty. I am not sure that the time is far distant when we will realize "ten acres enough" as more than the dream of a book farmer. Mississippi, with double as many plantations as before the war, but averaging only half the size, produces twice as much cotton now as then. France, with far less area than Texas, owes her production of wheat, nearly as large as ours, her horses and cattle, almost as many, and her sheep more, to the system of small landholdings. It is to the thrift of her people, their accurate and economical cultivation of small parcels of ground, that she owes the recuperative power which has made her a marvel among nations and the admuration of the entire world. There is no poverty so pitiful as land poverty and no farmer so destitute as one who owns too much. Many a one who might have grown rich on fifty acres, which he could pay for, has starved on a hundred, for half of which he was in debt and paid interest. Indeed, I am far from being convinced that every owner-farmer cannot most profitably work exactly as much land as he can buy and pay for.

CLOSER FARMING.

The subdivision of farms by the future farmer of East Pennsylvania means a change and a diversity of products, no less than the competition of other sections. For it is plain that if an acre can be made to produce $100, where before four acres produced $25 each, the same area will support just four times the former amount of agricultural occupation, whether by new methods and increased care the yield is of the same product as before or by the introduction of a new interest the cultivation of the land is turned to better advantage. Up to a certain point there can be no doubt that two blades of grass may be made to grow where only one grew; and where the farmer who now raises fifteen bushels of wheat to the acre might raise thirty, or who now grows forty bushels of corn might produce eighty or one hundred, he has not yet given such a fair trial to his present opportunities as to entitle him to experiment with an increased acreage or to turn his lands to new crops. The future farmer of East Pennsylvania will first of all, by all methods not exhaustive of the soil, so till his lands as to get the largest available yield of the crops which he now cultivates with profit

NEW CROPS.

Beyond that his interest will be found in the introduction of new crops. Beside a close care for all improved varieties of the present ordinary cereals—and few sufficiently realize the importance of selecting seeds with abundant caution for their qualities of fertility—the Eastern Pennsylvania farmer must be on the lookout for new interests in the selection of his products.

The cultivation of tobacco, now no longer a novelty or experiment, has reached its greatest development in that country which even before its general introduction had reached the front place in American agricultural districts and now far out-ranks all others. Its profits are notably large, and sufficient time has elapsed to dissipate all fears of the most apprehensive for the exhaustion of the soil. The Lancaster county farmer, rejoicing in his gross receipts of from $150 to $600 per acre for his tobacco, has discovered the secret and the sufficiency of amply replenishing all the drain upon his soil by the application of stable manure, the production of which is not unprofitable in itself; and after twenty-five years fair trial I am supported by all the facts when I declare that the strength of th tobacco lands of Lancaster and the general fertility of its farms—on few of which tobacco is not now grown—is far greater than when its culture began. To an audience of intelligent farmers I need not enter into further details than to say that the fair average yield per acre nets to the owner of the soil $100 per season, and the profits to the cropper of one man's labor for six months average $200. Surely no branch of farm labor yet become common in this section can show results commensumte with these. Incidentially the effect of this interest upon the material development of the community, the immense warehouses erected for its handling, the employment furnished to thousands of laborers, the exchange of money and the great stimulus given to trade are an unmixed good. Incidentally the increased number of cattle and horses required to be fed to supply the larger demand for manure has been in itself a source of profit. I cannot look far enough into the future to see when the farmer of Eastern Pennsylvania will abandon so lucrative an interest as tobacco culture.

The cultivation of the sugar beet is slowly but surely making its way to the attention of our farmers. Its ultimate practicability and profit can hardly be doubted. With little over a tenth as great acreage in potatoes in 1880 as of wheat the yield was nearly a third in value, a fact which forcibly illustrates the improved uses to which lands near market may be devoted under the system of high farming. Experiments with onions, for the sale of which there is never dullness—and our increased immigration gives no cause to despair of perpetual markets for potatoes and onions—exhibit much more striking comparisons, and the developed possibilities of seven hundred bushels to the acre point to an industry which will mark a most profitable departure in East Pennsylvania farming.

Of the profits of fruit raising and truck gardening the data are less accessible and the experience of those who engage in them may vary more widely, but of their certainty in the long run there can be no reasonable doubt. With constantly increasing demand, due no more to the increasing population than to improved taste, an enlarged desire for luxuries and a regard for the sanitary uses of vegetables and fruit, the garden and orchard may be widened upon every farm in Eastern Pennsylvania with assurances of a safe investment. No longer need he who plants an orchard wait for another generation to pluck the fruit, but my middle-aged hearer can yet realize for himself the profits from such an enterprise fully equal to the ordinary branches of his agricultural operations. A gentleman who now gathers from 16 acres of orchard 5,000 bushels of apples realizes on his investment a far greater percentage than your wheat raiser, the corn grower or even the tobacco hoer. To a far greater extent than now will the future farmer of Eastern Pennsylvania be a horticulturist.

DAIRYING.

Dairying, perhaps, is an industry, the spread of which may be determined by local causes, though the new and advanced ideas on the feeding of cattle and the institution of the co-operative scheme of creameries seem to be destined to revolutionize the old notions of milk, cheese and butter producing farms. Year by year the radius of the dairy interest has reached further out from the great cities. The cheese-making farms of the country are rapidly increasing in number. There is yet to be found a more profitable system of farming than the milk farms of the Western Reserve or one more conducive to social comfort and intellectual progress, and its imitation on an improved scale may yet be a feature of our local farming.

SILK PRODUCTION.

Despite the ridiculous memory of the *morus multicaulis* movement of a generation ago I am hopeful that before your sons die many a farm in this vicinity will be crowned by successful efforts at silk culture, realizing the early colonial idea when the Virginia Assembly offered a prize of fifty pounds of tobacco for each pound of wound silk produced, when every land owner was required to plant and fence twelve mulberry trees for each 150 acres, and when Gov. Law, of Connecticut, arrayed in the fine dress of a hundred and thirty years ago, had a silk coat and stockings of domestic manufacture.

Thus far I have dealt mainly with the variety of productions and the increased yield of the future farmer on these lands. More immediately is he concerned about the application of improved methods to his present interests.

FENCING.

The subdivision of the lands implies an increase of fencing, a consideration involving largely unappreciated and often unmeasured expense. With the increasing scarcity of material, the item of fencing has really become an enormous one, the total value of fences in this State alone footing up two hundred million dollars and the annual cost of them being estimated at ten millions. In part the rapidly introduced barbed wire fence meets this problem, but in the main I am satisfied that the future farmer will abolish inside fencing. Even if pasturing does not become a lost art with the improved science of farming, a portable fence will meet all its requirements, and except this inside fences will become a relic of stupidity; the land occupied by them will be devoted to profitable production, unsightly "corners" or leaning lines of drunken rail fences will no longer offend the eye and mar the landscape, and nought save boundaries of contentious neighbors, in name alone, will require to be thus marked.

ENSILAGE.

Theoretically and practically the novel scheme of ensilage seems to recommend itself to the approbation of those who have given it fair minded attention. Its effect upon stock, for beef or dairy product, is not only not deleterious, but highly beneficial, increasing the wholesomeness of milk, cheese and butter, while in practical operation it presents the remarkable exhibit of supporting a largely increased herd on the former number of acres; and their increased manure in turn vastly strengthens the land and supports increased productiveness. The astonishing claim of Mr. Mills, the exponent of the system in this country, is to support on a given number of acres from five to ten times the same number of dairy cows, at the reduced expense of scarcely one-seventh that of the old system. Even should these claims upon an average trial have to be discontinued by two-thirds, ensilage must be a feature of future farming in Eastern Pennsylvania.

IMPROVED MACHINERY.

To an audience, the memories of many whom run back to the flail and sickle, and in the presence of this splendid display all about us of improved farm machinery, I need not speak of the importance to well-directed and profitable farming of the best appliances. The economy of power, of time and material in farm labor has stimulated the native genius of Yankee inventive power to his best efforts in behalf of better mechanical agencies for those who till the soil. In 1826 two men and five horses were engaged continuously for twelve weeks in threshing 1,300 bushels of wheat; forty years later, on a California farm, 40,318 bushels of grain were harvested, threshed, cleaned and stored in thirty-six days by twenty-two hands; and in the wheatfields of the Red River counties a steam thresher and gang now count the threshing of 2,000 bushels per day fair work. I need not pursue this vivid comparison to depict the part which improved machinery will play in the development of Eastern Pennsylvania farming in the years near at hand. Under the same head I beg you to consider the great number of details which are sometimes classed as "conveniences," though such features of improved farm life as ice houses, wind mill pumps or other devices to supply water constantly and abundantly without manual labor, the application of horse or steam power to all practical branches of labor, and the countless devices of the tool house, carriage house, barn and field which do the work of an hour in five minutes, are now necessities to successful farming in this section. A late traveler in the South watched with a curious interest which taught him the lesson of a great page in our national history three men who spent a whole afternoon twisting a rope for a well, and used in the work thread that had cost more than the required rope could have been bought for.

FERTILIZERS.

The nature and value of fertilizers, the analysis of all commercial manures and the relative cost and worth of animal fertilizers will be a subject to engage the intelligent attention of the farmer. A recent statute of Pennsylvania enactment will greatly aid him, but he needs to be on the careful lookout none the less to secure the really valuable and nutritious material than to avoid the fraudulent and worthless. The coming farmer on this soil will be a chemist in his way; and no element of his success will be of greater efficiency than his discrimination in this respect. You have read of Dunston Pillar on the Lincoln Heath, the only light house ever known on land, set there in the middle of the last century to guide belated travelers over the long stretch of dreary wasteland. Now it stands in the midst, of a fertile and highly-cultivated region with no barren moors in sight from its top—made to blossom by the culture of turnips and the application of phosphates. The successful return to the soil of the sewage and excrement of our great cities is an unsolved problem as yet and 100 sewage farms on trial in England give no satisfactory report. The ultimately certain solution of this vexed question can have no more promising field to be worked out upon than in this dependency upon four cities of the first rank.

GOOD STOCK.

Regarding the value of improved stock in such a plan of farming as I have in view, I am sure I need not occupy much of your time and mine. Time and experience have fully vindicated the marked tendency of the advanced American farmer to introduce better blood into his barnyard and stable. I need not now speak of the monumental examples of $40,000 paid in this country for a single cow or $14,000 for a sheep, nor of the princely prices of our race horses, nor of the marvellous number whose record distances those figures which once stood as a synonym for speed, nor of the total value of the live stock on American farms, alone far out-topping the colossal figures of our war debt—enough to assert the demonstrated fact that careful breeding of good stock is in the interest of profitable farming to suggest another important direction in which the energy and enterprise of the coming farmer of Eastern Pennsylvania must and will be devoted. It is in the near future that the mild-eyed Alderney, the spirited Hambletonian, the stanly Percheron, the fat and fleecy Cotswold, the sleek and shapely Berkshire and the hard-fleshed and steady-laying Plymouth Rock will be the delight of our farmers as the rule and not the exception.

Drainage, irrigation, subsoiling, the rotation of crops and nutrition of animals, the quality of seeds, the growth, the nature, the contagious spread and the extermination of weeds, the utilization of wastes, and a few of many other questions in methods of farming, to which its foremost exponents are gradually turning profitable attention, and in the settlement of which the advanced agriculturist will find great gain. With all of these the successful farmer will unite the general principles of methodical business management, a system of closely kept accounts, a debtor and a creditor statement of every interest, a balance sheet for each department, so that gains may be computed and losses detected, leaks stopped and breaks mended.

HOME CULTURE.

Under such conditions there cannot fail to be a marked advance in the social life and in the development of what may not inaptly be designated as "culture" in those whose lines are cast in the pursuits of the farm. The quality of the labor which will engage the farmer's attention and the improved modes of doing it, are bound to lead him to habits of study and the enjoyment of refinements, which will contribute to the comfort and dignity no less than they will enhance the profits of his occupation. The accumulation of wealth, the spread of intelligence, the lighter employments and the quicker association of man and man will all tend to make more musical "the song of the sower" and more congenial the life of those

"who tear
The matted sward with spade and share."

FORESTRY.

Closely related with what I have hitherto referred to, and strongly conducing to the higher view of farm life, is the comprehensive subject of "tree planting," whether considered with a view only to the profits and pleasure of fruit production or in regard to forestry, the preservation and replenishing of wasting timber lands. I have only time to refer you to certain well established facts to demonstrate the necessity for greater attention to this interest. Mahomet said: "The tree is father of the rain." With the extinction of the forests the power of the springs and the regularity of the streams, vital elements of agricultural prosperity, have visibly been most unfavorably affected; the Winters have become more open and the Summers less moist; the climate more variable, the winds more destructive and orchards less prolific. Ensuing climate severities are as fatal to the farmer as feebleness or sterility of soils; while the removal of the protection once afforded him by timber belts on elevated ridges, to break the force of the storms, has often more than offset increased fertility or greater acreage under cultivation. The maintenance of provision of proper shade in pasturing places, by waters, around shed and stable, have invariably been found to be compensated by a saving or increase of strength, milk, fat and fleece. In short, I venture the opinion upon competent authority that in any considerable area of cultivated country the net productiveness of a given acreage will be increased rather than diminished by leaving or planting one-fifth of it in good timber growth; and this proportion it should be the aim of the coming farmer to maintain or establish. Experiments with the maple, catapa, locust, the black walnut, the wild cherry and a large variety of other trees show that abundant and sufficient profits may be realized at least twice in every generation for the farmer, who, of all men, lives most for the morrow and can bide his time for return to any safe investment. "Woodman spare that tree," is with him a sound business principle no less than a matter of healthy sentiment. I have the greater confidence that the success of this interest lies in individual care of it, stimulated by the universal recognition of its importance. It has however been the subject of governmental protection and patronage in nearly all advanced states for many years, since at least 1770 when Frederick the Great established a course of theoretical instruction in forestry. Since then Germany, Austria, Hungary, Switzerland, Italy, France, Spain, Portugal, Sweden, Russia and Denmark have erected schools of forestry, and England sends pupils to the French school at Nancy, to be trained for the management of forests in her colonies. In our own country the older States like Massachusetts and Connecticut, sensitive to the loss of their timber lands, give paternal care to their restoration, and many western States enjoin and encourage tree planting, and their people have made "arbor day" a festival of general observance. The State and National Government can largely aid and must be depended upon for the dissemination of information on the subject, especially as regards the adaption of soil and climate and the introduction of exogenous trees. I look with confidence to the day when, as has been suggested, it shall be the aim of railroads everywhere to mark their lines by continuous belts of trees, thus improving and making profitable their right of way, erecting shelter for the adjoining fields, and heightening the beauty of the landscape. Nor would it be an unprofitable duty of the township roadmaster to plant such greatful shade along every dusty highway. Decaying Spain sets an impresive example by the beautiful custom of her people to plant by the roadside the cast-off seed of fruit there eaten.

Above the commercial view of this question is the sentimental consideration, which must appeal with force to every lover of nature, from the dullest clod that every rested in the noon shade to the farmer enthusiast who delights in the rugged beauty of the gnarled and lightning-defying oak, who watches each year with new interest the wonder of the flowering chestnut, its fruitage and the fall of the leaf; whose every sense of the æsthetic is gratified in the matchless beauty of the single drooping elm, most picturesque of all our trees, and who, in the vernal freshness of the woodlands or the gorgeous autumn glory of the forests reads over and over the miracle of nature. In my own county I knew a farmer whose eyesight had been gratified for many years by a splendid tree which stood in a little knoll upon a neighbor's field. At last, when cupidity and the calculation of its worth by the cord had resolved upon its destruction, the subject of my admiration paid the owner his full price of the wood it might realize to let it stand, a crown to the landscape and a memorial to the right sense of a Lancaster county farmer. You may believe me he was no mere sentimentalist when I tell you that his butter always brought the highest price in the market and the plough never struck a stone on his land. The coming farmer here will be a forester.

LOCAL POLITICS.

He will be a politician too, in the best sense of the word, watchful for the dignity, the honor and the prosperity of all public administration. Realizing the beneficence of local self-government he will appreciate and banish the baleful spirit of partisanship from the selection of local officials. For no such curse has fallen upon our political system as the prevailing ideas that the lines of local and National politics run parallel, whereas they should cross at right angles. The abundant care of and most intelligent provision for the public schools, regardless of what, alas! we call "politics"; and honest, capable and progressive supervision of the public roads will be the objects of chief political concern to the future farmer. It is my opinion that in the intelligent laying-out, grading, mecadamizing and smoothing of roads, the erection and protection of free bridges, the general employment of road scrapers, the arrangement of breaks and water courses, the erection of finger boards, and other duties of the supervisor our eastern counties show most lamentable lack, and that the resulting losses and wear and tear aggregate double the increased road tax that would ensue from a proper discharge of these duties, by better men than are usually elected to perform them. Indeed it is a matter of conviction that, for the advanced state of the leading counties of Eastern Pennsylvania, toll bridges and turnpikes are relics of primitive conditions and should speedily be abolished. The public should now support these ways of travel necessary for the public convenience. In the richest rural county in the Commonwealth it is the reproach of its capital city—a centre of trade and population before the revolution—that almost every road leading into it is obstructed by a toll-bar, the rates being nearly as high as railroad fares; and so general is the embargo on trade that even on one of the public streets, within the limits of Lancaster, a corporation, by the grace of legislative deformity, swings its gate across the highway, and public sentiment is dull to an imposition which is as great as that for which our fathers raised the tempest in a tea-pot in Boston a century ago.

BROADER LEARNING.

The study of no science nor art within the whole range of liberal culture will be inconsistent with, or lack opportunity for development in the experience of the educated and advanced farmer of the future. Most of all, plainly, will the very extended study of the natural science claim his attention and serve his practical purposes. Botany, no less than chemistry, is a study which must engage the attention, and it will soon enchain the interest of the scientific farmer; and to him who, in the long Winter nights of leisure or in the gray dawn of an early rising, instinctively turns his eyes to the beauties and wonders of the heavens, the science of astronomy, now made popular and full of poetry and legend, will be a source of entertainment and profit. Walking with his head among the stars and his feet amid the flowers, inhaling the fragrance of nature, awed by her grandeur, inspired by her eloquence and entranced by her beauty, the farmer feels his lordship over nature and his kinship with its creator.

The employment of steam power for farm work opens a wide field of interesting and practical education; geology may teach the constituents of the soil and chemistry dissolve them; scientific forecasts of the weather are a development of meteorology, the dim of possibilities of which are of tremendous importance to the agriculturalist, involving not only the probabilities" of the weather, but its measurable control. He may yet ride the whirlwind and direct the storm. Partial relief from drouth and regulation of rain-fall are not beyond the dream of our modern science which sets its ladders against the sky.

COMFORTS OF LIVING.

The selection of eligible locations for buildings; their proper arrangement and most convenient construction; the sanitary regulation of their relative position, so that foul odors and ill drainage may not offend the senses and poison the atmosphere; the erection of farm houses with a view to proper architectural effect, for the beauty of the landscape and the comfort and economy of their occupants; the encouragement and practice of floriculture; the refinements of home life, in the cultivation of music, literature and the fine arts; the accumulation of private libraries; the diffusion of local and agricultural newspapers and periodicals, are a few of many other signs of the higher agricultural life, now happily outcroping in this community and calculated to bear rich fruit in early generations. To them may be added the liberal patronage and earnest maintenance in every section of regular associations and exhibits calculated to disseminate agricultural information, to test new and competing implements, to investigate and relieve diseases of stock or failure of crops, to discuss and pass judgment upon new methods, to expose frauds, and, in general, to promote all the ends of agriculture.

Secure as the past of the East Pennsylvania farmer is, his future may yet