A Scholarly Discourse By Rev. Dr. A. D. Carlile. fer filte affeatiffe affeatiffe afte affeatif value afte afte afte afte after after

Brooklyn, N. Y. - The Rev. Allan Douglas Carlile, D. D., who has re-ceived a unanimous call to the pastorate of the Throop Avenue Presbyterian Church, in this borough, made vacant by the death of Dr. Louis Ray Foote in December last, preached for the first time to the congregation of that church Sunday morning He is now the pastor of the Tabernacie Presbyterian Church in Pittsburg, Pa., where he is highly esteemed. The subject of his discourse was "Christian Growth." His text was II. Peter III:18: "But grow in grace, and in the knowledge of our Lord and Sa-viour, Jesus Christ," and he said:

In the Greek the arrivle is before the

noun in both cases: "Grow in the grace and the knowledge." Grace is defined, theologically and abstractly, as "God's loving favor; unmerited by us." The "grace" of our text is definite and spe cific: "the grace of our Lord Jesus, and, for our purpose this morning, may be taken as the sum total of the grace that make up Christ's matchless character, our development in Christ's like ness, and not by the acquisition of new graces, but by a growth of those within us already received. Growth, nor mad growth, is necessary to health; is life be checked it argues serious mai Christian maturity is nothing short of Christ-likeness. This we have not yet attained; until we do there can be no more important question than Are we better than our fathers? the Church to-day better than the Church of the Reformation? Or in the Apostolic day? Perhaps you doubt the possibility of such a thing. But mark how it grew from Pentecost to John, and then remember that we have the same things before us still undone. have the same spirit of God to guide us, and we have had 1800 years more time. Would it not rather seriously reflect upon us if we had not advanced upon them? In the days of Ahab, the darkest period in history, E3 jah want-ed to die because he was no better than his fellows

In the church, as in nature, there is a awofold growth. One from without and the other from within. From with out the development of what I call cor-poration in numbers and in wealth and in the consequent influence upon the world which it has gained in the same way and maintained for the same rea as any other world power. The in ward growth is development from the heart antward; growth of character, and, necessarily a growth of individ-ual character. The development of the church in character only through the development of the individual churac-ter. For the church is like other cor-porations; it has no character apart from its members, and it depends upon the perfection of each several member for its perfection. One, you see, is growth in bulk, the other in character—one of the corporation, of the corporation indeed, but only by the growth of the Individual, and one is the rebuilding of the temple of God. One if the progress of the kingdom of Go wherein we have a citizenship, and the other the progress of the kingdom of God, which is within you. The first we read of constantly, the second we hear of rarely. The last is the most important and the less continuous in this our day. I do not wish to be mis understood. I glory in the outward growth of the church and the mighty works done for Christ in the world all our works mean nothing beyond the whitewashing of the outside of the sepdeline, save only in so far as they are the natural and inevitable evidence of the working of a God-like character. Are we growing in character at a nor-mal rate? We know the standard Christ gave it the parable of the tares and the wheat tares and wheat grow ing side by side, but further and fur ther apart. So are the church and the world growing together, but more unlike until the Percest. At sow ing time, even, was not the dividing line clearly marked? Is it so to-day If not it shows change of character of one side or the other. Which is it You ask: Is not this spiritual develop You ask: Is not this spiritual development of so soldle a character that we can hope for its continuance ever though not recognized in ourselves o others? How can there be change o character without a corresponding change of life? Look back to the sow life meant marryrdom. We have t tyr had who died for Christ. There are fundreds here to-day who would de that. It is not hard to die for Christ but I tell you it is hard to live for Christ; te plod on day by day on on unimpole way, persistently, consistently fiving with God in this world. And that is your task and mine. Get the character that will enable you to do that and you may le' the works take care of themselves.

That question comes: What is the use? Does not the calechism say we are not going to be porfect in this life but will be when we die? What is the use?" Suppose the death angel sum-moned you to-day. In order to stand worthily in the presence of Jesus every thing that defileth must be stripped off What would there be left? A balle l perfect, but it is only a perfect baby. I once knew a beautiful child, the deleght and joy of the household, but alast She grow up to the age of twenty and was still a labe. A babe of three is a child of promise, but a babe of twenty is a monstrosity. And is be not possible that in the boly city there whose only place is among the children? Would that satisfy you? No? Then "Grow in grace and in the know! edge of our Lord and Saviour, Jesus Christ." But how? Two things are necessity: The spirit of God in our hearts and the knowledge of the truth in it is in Jesus. The spirit of God on must is in Jesus. The apprit of God you have; the knowledge of the truth you must acquire. For it is by the truth that you will be literated; by the truth you are sanctified. It is not enough, therefore, to say

'I know I have not done as well as know; I will try to do better." You al ways do as well as you know. The truth you know has been making you what you are. To be holy you must be wiser, to be better you must know more for iruth is not a thing you cat record in a book or formulate in s Troth is a great living character, a life determining principle; "As a man thinketh in his heart, so is he." Take the Bible and follow the word. Like grawth in Christ growth in knowledge must be gained individually. like growth in Christ You cannot know another's knowledge any more than you can go to heaven on another's faith. Some years ago in a theological seminary a young man was being examined. He got along well until one of the examiners asked him a certain question, which took hip by surprise. He could not answer in his then state of mind. If he had been asked suddenly his age he could not have told it. At last on the question being pressed he said: "I believe what the Presbyterian Church believes." He

dld not pass. It will not pass you. There are some things like that in the church, far too serious to be funny. Such as going to the pastor time after time and asking: "Is this right?" that man's position correct?" W that spirit that guideth into all

What are you doing to advance the Presbyterian Church, or our name in His name, by your own development? A danger to-day lies in believing in the wrong or error that may be in creeds. Is there anything in them that ought to be eliminated? It is a great peril to think that all truth is in creed and that what is not written there is wrong. For that stops ad-vancement and is a check to our progress in Christ's knowledge and grace and means declension-loss. Christ taught the truth and did not formulate

The apostles enlarged upon it to meet the needs of the growing church; the early fathers systematized truth into creeds. And so it went on down from the time of Constantine to the Renalssance, until we found the truth fect it was the same. I have seen old people so under the domination of their ecclesiastical commentator that they could see nothing in the Rible but

what he taught. But as I read the signs of the time the church to-day is on the eve of an advancement in the knowledge of fesus Christ unequalled in her history. You and I want a part in that, I know some of my ministerial brethren do not so read; they listen to the jarring voices of to-day: "Down with the Bible. Lop off lump after lump and give us lave in a mighty principle," which is but a sentimentality. That is not what God means. We are at the headwaters of a mighty, flowing river, which is yet bubbling and has not become deep and calm and still. But it will, and when it does we shall have more truth, not less. Be sure of that. Our creeds ought to gather up in themselves all the truth that is in Christ Jesus perpetually, just as He gathers up in Himfulness of the godhead bodi-Their confusion is like a puzzle picture from which some pieces are lost. It is your duty, and mine, to find the pieces and put them in their proper places until our creed becomes a per-fect pen picture of the God-man. When It does, we shall have a creed on which lover of the God-man will stand comfortably. It will be that way in heaven. It shall be that way on earth, Don't you want a hand in that? How? Not only for your own sake, but for the world's sake and the church's sake. "Grow in grace and in the knowledge of our Lord and Saviour, Jesus Christ." How? Simply by the use of the means of grace which Christ instituted for that very purpose; by the public ministry of the Word, by private intercourse with Jesus, by your right use of the Word of God, by those activities for which you find channels not only in the church, but out of it every day. whereby your spiritual muscles and sinews are developed as your physical ones are-by use.

A Prayer.

Lord, I know not what I ought to ask of Thee; Thou only knowest what I need, Thou lovest me better than I know how to love myself. O Father, give to Thy child that which he himself knows not how to ask. I dare not ask either for crosses or consolations; simply present myself before Thee, heart to Thee. Behold my needs which I know not myself; see and do according to Thy tender mercy. Smite or heat, depress me or raise m up, I adore all Thy purposes knowing them: I am silent: I offer my self in sacrifice; I yield myself to Thee; I would have no other desire than to accomplish Thy will, Teach me to

Teach me to

Pray Thyself in me. Amen.-Francols de la Mothe-Fenelon. Secret of Her Power. What was the secret of such a one's What had she done? clutely nothing, but radiant smiles, beaming good humor, the tact of divin-ing what everyone felt and everyone wanted, told that she had got out of self and learned to think of others; so that at one time it showed itself by sweet words; at another, by smoothing an invalid's pillow; at another, by soothing a sobbing chita. None but the saw those things, some but a loving beart could see them. That was the secret of her heavenly power --

A Heart Throb.

O most glorious God, relieve my spirit with Thy graciousness. Take from me all tediousness of spirit, and give me a hope that shall not fail desire of holiness not to be satisfied till it possesses a charity that will al-ways increase, that I may turn all things into religion, doing all to Thy glory; that, when Thou shall call me from this deliciousness of employmen-I may pass into the employments of with eternal joy and thanksgiving, to sing praises unto Thy mercles. Amen

The Victors Who Clercame The word "tribuistion" is derived from the Latin word tribulum; threshing instrument, by which the Roman husbandmen separated the corn from the chaff, says a writer in the Southern Cross, and it was often used by the Christian writers as an image for setting forth a higher truth, and so the trials and sorrows of this life are "God's threshing instruments" for separating in men whatever is light, sinful, poor and trivial from what is good, solid and true-literally the wheat from the chaff-fitting them for the heavenly garner.

Goodness of beart is man's brightest honor and noblest negalition. It is that ray of Divinity which dignifies humanity.

START THE PIGS RIGHT.

The man who starts off his pigs on the corn ration about as soon as he can after they are wouned is laying in a store of trouble for himself later. There is a trouble known to swine raisers as contracted stomach, which results from an improper ration. The animal is apparently "off its feed," says the Indianapolis News, but the fact is, the ration has been so poorly balanced that the stomach has not grown with the growth of the rest of the body. If the young pigs are to be allowed a range they will do more or less rooting, enting of soil and sod; as this is their nature, it will not hurt them, but if they are placed where one does not wish the sod uprooted, then the animals must be ringed. If middlings and oliment are introduced with the corn ration there will be considerably less trouble. Some of the stock foods on the market have their greatest value to the swine raiser who does lot feed a balanced ration, and if these stock foods can be obtained practically free from drugs or condiments, they are very valuable in such cases

CHRISTIAN ENDEAVOR NO

JULY FIRST.

Humility, the Foundation Virtue .--Matt. 20:20-28; I Pet. 5:5.

To be served requires no greatness; those only require greatness

Christ came to show us God as the Infinite Servant, the great Self-Giver; henceforth dares scorn a servant?

Humility is the true clash of gold: no royal robe is so respondent. There is no more certa a omen of failure than to have God against you; that is, to be proud in spirit, Suggestions.

"Humility" Is from the Latin humus," the ground; It ls the ground of all nobility, the foundation

Humility is the foundation of wisthe conceited man cannot be taught.

Humility is the foundation of influence; men do not love self-lovers. Humility is the foundation of happiness; everweening ambition always means misery, but modest contentment means pence, whatever the lot may be

Humility is the basis of sulvation. Many men will not be saved because they want to save themselves, Illustrations.

Any teacher will testify that mediocre scholar who is teachable will learn more than a brilliant scholar who thinks he knows it all. The head of a church is called a

minister, i. e., a servant. The head of a government is called a prime minister, I. e., the first servant, Questions.

Am I trying to exalt myself, or my Do I find my joy in the service, or the reward?

Do I count any service of others beneath me'

Quotations.

Humility is the solid foundation of all the virtues.-Confucius. There are sweet surprises awaiting many a humble soul fighting against great odds in the battle of a seem ingly commonplace life. Henry van

The doctrines of grace humble man without degrading him and exalt him

without inflating him. Hodge. At our worst, we are weaker than we think. At our best, we are stronger than we think. We have belo in both directions. Let us, therefore be humble and watchful on the on hand, and hopeful and joyful on the other.-Bishop O. P. Fitzgerald.

That things are not so ill for you and me as they might have been is partly due to those who lived humble lives and rest in unvisited tombs.-George Ellot.

THE LENGTH OF GIRLS DRESSES

"Madam Modis:" says, in Housekeeper: "It seems to me that I have never yet made a gown for a girl any where between fourteen and eighteen years of age that it did not involve a discussion about the length of the skirt, which almost amounted to a little quarrel between the mother and daughter. Of course, I realize that the girls are foolish in wanting to be young ladies before they have had althe fun out of their young girlhood but I often think that, if the mothers remembered a little more about their own feelings on the subject when they were the same age, and, instead o being cross about it, told the girls they could have the skirts the very longes that would be proper, it wouldn't mear so much unpleasantness during theh dressmaking seances. When my own opinion is called for in the matter. always strenuously insist that girls be tween fourteen and sixteen should not wear their skirts on inch below their shoe tops, which is nine inches from the floor; but I try to impres on them that my reason is that they look very much more attractive it skirts this length, and that it is far more 'proper' than to wear a longer skirt at that age. When a girl gets to be eighteen, the length of her frocks musbe largely determined by her height If she looks younger, I always advise her to keep them short for a while but if she is tall, there is no reasor why she sould not wear them ankle length if she wishes. Like the mothers, I cannot leave the subject, though without reminding them that there plenty of time ahead for long freeks.

FLOND STENOGRAPHER PASSE "The pretty little blond stenogra pher," said a commercial traveler "has almost disappeared from the hotels, also the kittenish telephone girl and telegraph operator. Their places are taken, in the better grade of hotels all over the country, by sedate, dignified, self poised, self re specting young women, who know how to treat hotel patrons with unassailable reserve, at the same time being perfectly courteous and attentive.

"Oh, no, of course there is no objetion to blondes as such, but they must not be of the artificial variety. Any young woman who is employed around a hotel office nowadays must dres well, but not gaudily, and must under stand that it is no part of her business

to filet with the hotel patrons. "No, I don't think the change was brought about by the complaints of married women, but by the attitude of business men who travel. When they wish to dietate a letter or other document, or send a message by wire. girl in charge of that department. It better than a Johnny has time for it. Hotel managers have learned that their best patrons have little time to lose in such ways, and they choose for office jobs young women who are self respecting and expert in their work. -New York Sun.

The forest service of the Department of Agriculture has issued statistics of the crosstles purchased by the steam held up between the hands before a railroad companies during 1905. The light in a dark room the air space can total number of ties reported is 80,051. 000, of which 22,569,000, or 26 per cent. were to be used for the construction of new track. As 95 per cent, of the railway mileage reported, the total number of ties used by the steam rallways would be 84,400,000, representing nearly 3,000,000,000 feet of lumber, board

THE SUNDAY SCHOOL

INTERNATIONAL LESSON COMMENTS FOR JULY I.

Subject: Jesus and the Children, Matt. zviii., 1-14-Golden Text, Matt. zviii.,14 -Memory Verses, 2, 3-Topic: Lessons From a "Child" Text-Commentary.

A question asked (v. 1), "At the same lime." had returned from paying the tribute. "Came the disciples." By combining the three accounts we learn that the disciples had discussed the question as to who should be the greatest, and that Jesus, knowing their ambitions, had opened the subject by asking then about the dispute they had among themselves by the way. At first the disciples, thoroughly ashamed, were slient, but a little later they came and submitted the question to Him. "Whe is the greatest?" Such is blind human nature; always desiring to be made prominent. "In the kingdom of heav-They still view the kingdom of Christ as a temporal one.

 Lessons from a little child (vs.
 2. "Called a little child," Jesus purposes to teach them by means of an object lesson. He corrects their false ideas about greatness. The little child was their teacher.

3. "Verily." A word that denotes the importance of what is to follow. "Except ye be converted." The word here rendered "be converted" means turn about so as to face in the other irection." It always signifies a radi cal and complete change, "And become as little children," Humble, teachable as little children." Humble, teachable, obedient. "Ye shall not enter." They not only could not be first, but they could not enter. There is no way into the kingdom of grace only by the door of humility, 4. "Whosoever." All have equal privileges. "Shall humble himself." None but the lowly are in the kingdom, and the lowliest in the kingdom are the greatest. "The same is greatest." Selfishness is the root of all sin. True humility is the surest mark of true greatness, 5. "Whose shall receive." That is

shall show kindness to, shall help and care for. "One such little child." This efers not only to actual children (Luke 0:48), but also to Christ's followers who have a humble, childlike spirit. "In My name." Out of love to Me and for My sake. "Receiveth Me." Jesus conlders Himself treated as we treat His little a

III. Christ's teaching concerning offenses (vs. 6-9), 6, "Shall offend." Whose, shall cause one of My little ones to stumble and fall into sin. "I were better." This shows the great ness of the offense, "That a milistone, A very large stone, "About his neck, etc. Drowning in the sea was a pun-ishment used among the ancients. 7. "We muto the world." Or, alas for the world. "Because of occasions of stumbling" (R. V.) Because there are so many temptations and stumbling blocks put before men. "It must needs be." In this world, that is so full of sin and wickedness, those who serve Christ will be tempted. "Woe to that man through whom the occasion com-eth" (R. V.) Wee to the man who is guilty of the awful crime of leading others into sin. Each man is personally responsible for his own actions, 8 "If thy hand-foot causeth thee to stumble" (R. V.) If objects as dear to thee as these most valuable and prelous members of the body cause the to stumble and to fall into sin. them off," etc. The pleasing thing if hurtful, must be given up and renounced. "Into life halt." The only who renounces a successful life here by giving up a profitable business because of its worldly character, or by giving up a pleasing and profitable oc cupation because it cannot be followed to the glory of God, and who accept poverty and hardship, may be said to enter into life "halt or maimed." it is better to do this than to lose eterunl life

"Into the hell of five" (R. V.) The literal Gehenna was a valley to the south of Jerusalem, a former scene of worship, and later the place where the refuse of burned with perpetual fires. This fire is the symbol of terrible torment, which

is awaiting the finally impenitent. IV. Christ's care for His little ones vs. 10-14). 10. "Despise not." As though they were beneath your notice, "Little ones." Children; therefore the weakest and most lowly of those who helieve in Christ. "In heaven their angels. The angels in heaven, who be hold the face of the Father, have a pe cultur charge over them. 11. sion, but if it does not belong here it certainly belongs elsewhere, for Jesus came to save sinners, 12. "One-gone astray." This parable is given more fully in Luke 15:10. The lost sheep is a type of one straying away from the fold of Christ into sin. 13. He rejoiceth more. That sheep was o no more value than the other sheep. It was its "rescue" that caused the joy. 14. "Even so." Our heavenly Fath-

er has done all that He can do to bring all men to repentance; it is not His will that any should perish.

CURING ALFALFA.

Many farmers who have had their first experience with alfalfa have had some difficulty in curing the hay. They treat it as they do timothy or other grasses, and find it loses much of its virtue cured in this manner. As a untter of fact such a process is not curing, but drying, and alfalfa will not stand drying.

The best plan of curing it which

has yet been tried is to rake the alfalfa into winrows as soon as it can be handled to advantage. It is then cocked up into spull cocks and covered with the regulation muslin hay caps, which have weights at the corners, In this way it cures perfectly if left for five or six days, and is then taken out, allowed to dry in the sun for half a day, and then carted to the barn. they do not wish to be suspected of This plan holds the color in the alfalfa trying to strike up a flirtation with the and cures the plant perfectly without drying it out. If those who have had is a bore, and no man who is anything trouble with the curing of alfalfa will try this pian there will be no trouble in suring the bay so as to retain its full value.-Indianapolis News.

A simple method of finding out the age of an egg is by means of the air space, which is situated toward the broad end of the shell. If the egg is be easily discerned, and by its size the age can be determined. In a perfectly fresh egg the air space is very small. but as age increases it extends, until when the egg is three weeks old the air space occupies about a sixth of the entire contents. With practice the age can be told to within twenty-four hours.-British Agricultural Economist.

Fbellarm

cripple.

commercial phosphate under the crop except nitrate of soda, which should be used as a top dressing on all pulrecized plants.

Stray Tools.

If some farmers would just calculate the time they sometimes use up in runting for tools that have gone astray here would very shortly be a "place or everything and everything in its place." It doesn't pay to use up a dolar's worth of time to hunt for a fifty cent tool that has been lost or mislaid. Now That You Are Prosperous There is no getting over the fact that

it the present time the greater major-

snowledge, which will, in after years,

ty of the American farmers are pros perous and fairly well fixed financially This being the case, isn't the present nost opportune time for you to send your son, or sons, to some good agrirultural college or school? By so doing con can assist him in his pursuit of

pe of untold assistance to him in adcancing the business of agriculture and making himself independent of oth ers, so far as this world goes,-New York Witness. Alfalia as a Hog Food, At one of the Canadian institutes a speaker said that "in no way will alflifa yield a larger return than as a pasture for hogs. A great many of the farmers are doing this, and are getting

cery large returns. I know one who cept ten head of hogs to the acre of alfalfa, and they were not able to keep it lown, and he cut it for hay once and got a ton to the acre. It is possible to grow good large hogs on alfalfa with out any other food, but the best results been obtained from feeding a small amount of some other food along with it, such as corn. I would feed about two ears per day to hogs pas-tured on alfalfa."

A Cause of Poor Separation.

From experiments in Sweden to determine the cause of the unsatisfactory results occasionally noted in the sparation of milk, it has been shown that when the milk has been strongly agitated (as in certain methods of pasteurization), before separation, a lower percentage of cream is obtained. In the skim milk, when separated under good conditions, the percentage of fat should not exceed 0.1 per cent.; if the milk has been previously agitated, this amount may run up to 0.5 per cent. The explanation is that during the agitation some of the large fat globules are broken up into smaller sizes, although some may increase their volume. Very minute globules are sep arated with difficulty; the smaller they are the more effect has the stickiness of the milk upon them. The same difficulty is also noticed when dealing with the milk of cows that have been long in milk, the fat globules of their milk being much smaller than when newly calved. The conclusion, drawn from the experiments, is that milk intended for butter making should not be subjected to any violent agitation previous to passing it through the

Why Plowing Kills the Bugs. On most soils fall plowing lays the ground open to the action of the elements, rendering fertility available, oosening and fining the soil and destroying insects and vermin. Another advantage is that it enables the farmer to sow his grain earlier than he otherwise could, for at the first thawing, before plowing is possible, he could sow his wheat. Besides, if it should be a bug year he gains on them by early

planting, and the grain is out of the way before the chinch bug becomes nu-The harrow cannot be used too much for surface fitting. The roller is a dangerous implement except on light sandy soils. If used on heavy lands it should generally precede sowing and at least one barrowing rollow it. On fail plowed lands disking and harrowing in the spring is sufficient. Plowing may safely be omitted when the wheat fol lows corn or some clean-cultivated crop but on grass lands or where weeds or other growths are prevalent it is best to plow to a depth of five inches, turn ing under all green growth, then pre-

pare with disk and steel-tooth harrows. Don't skimp the harrowing, it is the important part .- Farming/

Kahlrabi For Stocks. This root is cultivated much in the same way as Swede turnips, but is somewhat more hardy-that is, bears a little more roughing it in a general way. Manure at the rate of sixteen tous of good farmyard dung to the acre, work the ground to a fine tilth and drill on the flat as soon as the ground is ready. It is a characteristic of the crop that it may be varied in its time of sowing from early in April until after mid-summer. It is really of the cablinge family, and, like the cabhage, may be transplanted, if it is found more convenient to rear the plants on a nursery bed. Unlike the Swede, it flourishes on clay land. If sown directly in field, drill in rows twenty inches apart, four pounds of seed per acre, lightly roll to cover the seed and to leave a level surface to the ground. Top dress as soon as the plants appear with some active dressing-say, guano-at the rate of 400 pounds per acre, or it may be sown as soon as the seed is drilled, or even with the seed. Single the plants out in due time. Store in precisely the same manner as mangel or Swedes, and serve to stock in a similar manner. It claimed for kohlrabl that when served to dairy cows it does not make the butter strong, as Swedes are so apt to do There are only two varieties in usethe "short top" and the "hardy green. Both are suitable for field or garden The former is the earlier, but the latter suits sheep and Limbs quite as wellprobably a bit better.-Boston Cultiva-

Renovating a Horse.

Parm horses generally have a hard spring, as arrears of work have to be caught up hurriedly, and the soil is moths can be scraped up by the quart. exceptionally heavy to work. The The natives have learned to prize horses will, undoubtedly, enjoy and them as an article of food, and they benefit by a rest or less work, and be- now collect and eat them in large ing out at the grass is a great ease- quantities.

riding horse on the farm is not usually overworked, and unless on extra duty the grass alone should keep it in condition. Any partial cripples that have been made as much use of as possibleand an old horse or two are often very useful on the farm-should be given a complete rest on the grass to recoup against having time. When there is a milk run, the milk cart horse is the one which has as much hard work to do as any one on the farm. He is at it dally. Sunday included, which sooner or later generates weakness, mostly in the legs, and a rest on the grass in not only well merited, but highly advantageous, especially if given in time, and before the horse has become a chronic

When these horses are put out and rested a month or so-and this is none too long-they should have their shoes taken off and run barefooted. Hacks which have been much employed during the winter, but are now not so much used, should never be kept in the stable, as a run at grass is much the better way of either resting or improving them. If the winter work has been hard and the horses are run down, the sooner the rest and grass cure is begun the better. To run them on till the fall will only increase their allments, while a rest in time will often quite cure deficiencies, which, if let go or aggravated by further cause, may end in serious loss or permanent flaws A horse that really needs a rest should have nothing short of one month. Two would be better in many cases, while three months will rejuvenate most animals in a satisfactory manner.

If possessed of any ailments which no veterinarian can relieve or remove this attention should be given when grazing begins, or grazing should follow the treatment closely, if it cannot be accomplished when on grass and out. The most favorable land for recruiting horses is that of a marshy character. Leg and foot allments are the most common, and soft ground is desirable as a remedy, but it should always be associated with good grass. A good water supply should invariably be a condition of horse grazing fields, which should be absolutely free of barbed wire, broken rails or sharp pro jections, which are likely to enter either foot or body. Shade in hot weather is also enjoyed, and if not sufficiently supplied by trees, an open shed should be erected. In that case rough, strong posts and any kind of cool roof answer the purpose perfectly -W. R. Gilbert, in Massachusetts

Egg-Eating Habit.

"The egg-eating habit is laid to good many causes. However, in my experience I have seldom noticed it where plenty of oyster shall or shellforming material was at hand. generally has its beginning where fowls get to laying soft-shelled eggs There are two reason for this-a softshelled egg is an invitation to a fowl to help itself and also if they did not nced the shell element they would not lay soft shells unless in the case where the fowls are over-fat," says C. A. Stone in Poultry Standard. "There are a good many remedies, but I have never run across any that were abso lutely sure every time. The most practical way I have ever struck is to catch the leader, if possible, at the very be ginning, before the flock has learned the trick, and apply the hatchet cure, Or where the habit is universal supply all the oyster shells they can Keep them hustling for their feed. Cather the eggs as often as possible don't leave any in the nest if you can possibly help it. Also supply a liberal amount of animal food, a piece of raw meat hung up where they will have to hump for it will detract their attention, as with other habits. Then stock up with a number of loaded eggs. Take a few eggs and crack them apart, keeping the shell as whole as possible. Then make a paste, mixed up with a liberal supply of red pepper, altogether too much for comfort, or something similar; new by filling the shells we have an egg which, if supplied liberally for a few cays, will generally discourage the egg-enting habit very soon. This remedy combined with keeping the nests in a dark location will almost always effect & cure.

Farm and Garden Notes There is no soll too good for the gar-

Poor seed in good soil is making a poor use of a good thing.,

For the best and most tender vegetables the ground must be rich. Every orchard that is well cultivated

can be made to pay handsomely. Keep the stables clean; standing in wet manure tends to make the feet of he horses tender.

Systematic training is of value in handling young colts; teach them one thing at a time and learn it thoroughly. With poultry, as with other farm products, one secret in being able to secure good prices lies in the offering of good stock, The proper way to feed corn to young

chickens is to give in a crushed or cracked condition, and it may be fed dry or scalded. In breeding for color, always select

birds a shade darker than the color you want to breed, as fowls are inclined to breed lighter. The crowding together of young

chicks is productive of more evil than almost any other form of mismanagement, and especially so in summer, Catch the first toad you see and place it in the garden. Aside from his usefulness in catching insects he is an amusing creature, for when he stands he sits and when he cuns be hops.

Seeds of all vine crepe may be sown on inverted sods in the cold frame. After danger of frost has passed, the sods and plants should be removed intact to prepared hills in the garden.

In the mountains of Panay and other islands of the southern Philippines COPULAR

be distinguished better with one than with both.

Only one person in fiften has perfect eyes, the largest percentage of & feets prevailing among fair-hairs people.

The primary cause of sour milk is the growth of certain bacteria that as always very numerous in the air and cannot be kept out of the milk. The are most abundant during damp, hear weather, which usually accompany thunder storms, as such weather particularly favorable to their develop ment. Hence, the popular notion the thunder storms make milk sour.

A testing apparatus for varning supplying a needed standard, has been brought out in Scotland by Professor Bally and Dr. Laurie. It includes a blunt steel point pressed down by a spiral spring, and this point is drawn over a dry coat of the varnish on glass, the pressure being increased until the varnish is scratched. The pressure being known, a definite measure of the toughness and hardness of the virnish is made available.

Liquid air blasting cartridges, as de scribed by M. Jacquier, are made by packing powdered charcoal in a case of stout paper, and covering this with an asbestos wad through which a paper tube passes to the bottom of the cartridge. When ready to us, liquid air is poured into the tube, the cartridge being fired by a fulminate cap in the usual way. The firing should follow the filling within ten minutes. as the liquid air gradually evaporates.

Mr. W. E. Scarritt, formerly president of the Automobile Club of America, says, in Cassier's Magazine, that he expects in the near future to see very fair runabouts sold for \$300, and touring cars of a similar grade for \$500. He also predicts that in time prices will be still lower, so low, in deed, that the average city workman will be able to own his own automobile, as he now owns his bleycle, so that he can keep his family in the country, and ride to and from his work.

Why the teeth of some people decay early while those of others continue sound throughout a long life is a problem that appears to have been only inperfectly solved. A European investigator, Dr. C. Risa, has lately analyzed the saliva of 219 children, averaging thirteen years of age, and has confirmed the idea that there is a relation between the alkalinity of the saliva and dental carles. A highly alkaline saliva insures good teeth. He has made many experiments to determine how an acid or slightly alkaline saliva may be made decidedly alkaline, and has proven that a diet containing much lime has a marked influence, and does much to keep the teeth in perfect condition.

Cheap oxygen is the one important product thus far obtained from liquid air, for which such extravagant prophecles have been made. As the nitrogen and oxygen of the liquid air return to the gaseous state at different temperatures, it has proven to be possible to separate them by fractional distillation, and as the evaporation of the gases cools the air entering to be compressed in the apparatus, the process very economical. An idea of this efficiency has lately been given by M. Georges Claude. His plant produces one thousand cubic metres of oxygen, with a purity of ninety-six to ninetyeight per cent. in twenty-four hours, and the cost in France is only onetwentieth of that of oxygen from the

THE COLD UPPER AIR. Surprising Streaks of Warmth Encountered Sometimes.

electrolytic decomposition of water.

Generally speaking, the temperature of the air falls with ascent-about one degree for every three hundred feet. The change is pretty regular, too. There are exceptions to the rule, though. A report has just appeared in print about some experiments made in Italy with "unmanned" balloons. They were sent up near Venice. One important inversion of temperature amounting to ten degrees Fahrenheit, was experienced between 10,000 and 10,385 metres, on August 4, last year, notwithstanding the fact that a few hours previously a very violent thunder storm occurred at the station. The second ascent was made on August 30, at the time of the solar eclipse; the inversion of vemperature was not so marked as in the previous case, but amounted to five dagrees between the heights of 18,000 metres and 20,000 metres. The exact altitude of the inversion during this ascent is somewhat uncertain, as the barometric trace was partially obliterated by the peasants who picked up the records. Thunderstorms were also prevalent about fwelve hours prior to the time of this ascent. The discovery of such inversions of temperature

The Hen and Schoolma'ams. Continuing his talks in "Nature Study," at the Teachers' Institute of Pottstown, Pa., Dr. Bigelow said that the barnyard hen is the first bird of the year to lay an egg, and that it is this that makes her the most lovable American bird. The greatest need of the public school teachers," he said. "is a fatter pocket-book," and he would recommend to them as a pleasant outof-door diversion and wealth-promoter the honey bee business. He instanced cases of the great profit and pleasure derived from it, he having harvested twenty-nine tons of happiness from his thirty colonies of bees last year.

is known to be one of the most inter-

esting results connected with the recent

explorations of the upper air.

Will of Three Words. "All to mother .- C. T."

The above words constituted the leathbed will by which Freder Charles William Thorns, M. London, about \$40,000 to his wife, whom he always addressed and spoke of as

In pronouncing the will valid, the Probate Judge said that it was the shortest ever seen.