

Topics of the Times

Some persons seem to go through life on the theory that it is naughty to be found out.

Lord Kelvin seems to have been one of the men who were not ruined by a college education.

The seven masted schooner Thomas W. Lawson is a wreck. Probably it was built on a wrong system.

And still some people are unable to understand why men who work in mines should want to be well paid for it.

A man may be just as good a citizen, mark you, if he pays some other man for shoveling the snow off his sidewalks.

A member of the Belgian senate has referred to King Leopold as "a royal gallivant." Evidently the Belgian lease mapestry laws are very lax.

Mr. Carnegie advocates an asset currency. It is scarcely necessary to mention the circumstance that Mr. Carnegie is an expert in all matters pertaining to assets.

There are in New York 27,000 women who are supporting their husbands. But they would probably rather do that in dear old New York than live in luxury anywhere else.

"How to Collect Postage Stamps" is the title of a new book. It would have a big sale among the parents of 10-year-old boys if its title were "How Not to Collect Postage Stamps."

Football, with its revised rules providing for open formation, was less fatal than usual in 1907, and much more interesting. Unfair play is bound to disappear along with brutality, for public sentiment is roused against both.

Mark Twain entertains a high regard for Mr. Carnegie personally, but he wishes to have it clearly understood that he objects to his meddling with the English language, by the careful and persistent use of which Mark has risen to greatness.

Pittsburg, now that the United States Supreme Court has decided the act of consolidation with Allegheny to be constitutional, rises to the rank of sixth city in point of population. Boston is the next larger, with about fifty thousand more than the five hundred and fifty thousand claimed by the enlarged Pennsylvania city.

Mr. Roosevelt, in the fiftieth year of his life, has been President six years. Washington at the beginning of his fiftieth year had not taken Yorktown. At fifty Jefferson was Secretary of State, Jackson was yet to fight the Seminoles, Lincoln was debating with Douglas. Four only of the Presidents before Roosevelt—Pierce, Grant, Garfield and Cleveland—were inaugurated before they had passed fifty.

Of the hunting accidents reported the past season, every one that has yet come under our notice has been due to some cause so familiar that it has been mentioned year after year for generations. They can all be summed up as "Didn't know it was loaded." "Pulled the gun muzzle toward him through a fence," or "out of a wagon," or "in a boat." If hunters would keep these few simple things in mind, many lives would be saved every year.

For criminal carelessness in loading dynamite, cast iron and oil on the same freight train, with disastrous results, Canadian courts recently fixed a railroad company twenty-five thousand dollars. In this country, aside from civil suits brought by damaged parties, railroad companies are not often brought to book for such offenses. Yet our laws and courts recognize abstractly the truth of what the Canadian Justice said: "It is the clear duty of railroad companies to take all due care of life and property, no matter what it may cost."

Literary Englishmen are mildly excited over the selection of nineteen names made by the trustees of the British Museum to adorn the walls of the remodeled reading room. Those chosen are supposed to be representative of British literature from its origin till the present. They are Chaucer, Milton, Dryden, Spenser, Shakespeare, Bacon, Milton, Locke, Addison, Swift, Pope, Gibbon, Wordsworth, Scott, Byron, Carlyle, Macaulay, Tennyson and Browning. Complaint has been made because no room was found for Burns, or Burns, or Fielding, or Goldsmith, yet no list that could be made would please everybody.

At the last annual meeting of the American Humane Society one of the speakers pointed out the commercial justification of kindness to animals. Of course no selfish justification is needed for kindness of any sort. But it adds interest to the work this society is trying to do, to know that the annual loss in cattle and sheep from neglect is, according to the computations of the Department of Agriculture, something like twenty-five dollars. And millions are thrown away every year by the abuse of beasts of burden. The cash value of goodness is an idea pleasing to many moralists, but the world is so ordered that the intelligent and the kindly act is usually the richest in practical benefit.

SPIDERS AND THEIR HOMES

At the 40th corporate meeting of the Boston Scientific Society recently James H. Emerson spoke on the subject of "Spiders and Their Webs." Not only did he outline the habits of the spiders and show pictures of them and their webs, but he gave an object lesson

In webs by making the essential parts of a geometrical web in the same manner and in the same order as the spider would herself, says the Boston Transcript. Many interesting facts were related. The spinnerets are of the same nature as the little cones with which confectioners produce the sugar designs on frosted cakes; there are many of them, each one connected with a gland in the body of the spider. Sometimes half the body of the creature is used for these glands. The spider can keep the threads apart or can run them together into one and it can produce different kinds of thread. This is a silk and is used for different purposes, for webs, to make nests, to inclose cocoons, etc. The ordinary white thread is for the nests, while that of the cocoons is oftentimes colored. Then the thread may be dry or sticky; it may be fine and regular or coarse and rough, according to the use that the spider wishes to make of it.

Next Mr. Emerson gave consideration to the webs. About half the spiders do not make webs, but catch their prey, which consists of insects, by springing upon them. The webs that are made are of different kinds and for different purposes. The most common and familiar one is that which is seen in the grass on dewy mornings. This is merely a level floor on which the spider may run out and catch his food. The web is not of sticky thread. It may last an entire season, but is repaired and strengthened from time to time. These nests are furnished with a tube of web, in which the spider hides.

The distribution of spiders is a curious feature, to which the speaker alluded in passing. There are some, for example, that live in the shade and are never seen out of doors, yet they have been carried to all parts of the earth just as rats and mice have been. Another kind of web is in large meshes, but of no definite shape. These usually have a thinner portion which is the spider's nest. Insects flying about get into the meshes and are entangled, but are not held by any glutinous nature of the thread. In all the cobwebs except the flat kind, which have already been noted, the spider lives down on the under side of the web. Then there are dome webs, in which the spider lives within the dome and runs about within it to catch the insect that is entangled. These webs are kept always clean, even bits of leaves are taken out by the spider. Then there is a kind of web in which great, crinkly, rough threads are placed upon a framework of finer ones. These by their roughness entangle the flies which the spider catches and eats. Then there are the geometrical webs. This was the kind that Mr. Emerson made with a large tatted shuttle and a radial line, then, beginning at the center, waves outward a coarse spiral. These constructions, which are really the scaffolding of the web, are of ordinary thread. Then beginning at the outer edge of the web the spider weaves in the finer meshes of sticky thread, biting out the original coarse spiral as it goes along. This sticky mesh never goes to the center. These webs catch the flies through their maddening quality. Most of the work is done at night, and a single night is sufficient for the construction of a new web. The measurements are by the sense of feeling. Many details and interesting facts about the habits of these industrious creatures enlivened the making of the thread model, which was two or three feet in diameter.

Alexander the Great, when on a campaign, ate the rations of a common soldier.

Plus IX., during most of his pontificate, ate only an egg and bit of bread for breakfast.

The total commerce of the world in 1880 was about one half billions of dollars; in 1900 it was more than twenty billions of dollars.

Fleming H. Revel, the largest publisher of religious books in this country, and probably in the world, says the aggregate sale of Moody's sermons has exceeded 2,500,000 copies, placing them next to the Bible as a seller.

Noticeable among other embalmers bodies of dead and gone Egyptians in Pierre Loti's study is that of a little 3-year-old girl, who stares down with thoughtful eyes on her present owner, as he sits writing his romances and plays in the still watches of the night.

With the Persian one cannot discuss his woe without. To ask a Persian about his wife is a grave breach of etiquette. The most you can do is to ask about "mother of his son." If he has only daughters he does not mention them; they are a misfortune to be suffered in silence.—London Globe.

The number of foreign tourists visiting Norway during May, June, July and August, 1906, was about 34,342, against 29,827 for June, July and August, 1902, and 16,774 for the same months in 1880. During the winter season 1906-7 about 1,230 foreign tourists are also supposed to have visited Norway.

A statistician has lately compared the cost of an up-to-date battleship (\$10,000,000) with Yale University's fund of \$8,700,000, the Nobel fund of \$9,000,000, the Rhodes bequest of \$10,000,000, etc. For the cost of a battleship we can build 100 miles of railroad, 2,000 village schoolhouses or forty model tenements.—New York Press.

In a little more than a hundred years, according to government figures, the population of the world has grown from 640,000,000 to 1,900,000,000, an increase of 150 per cent. At the end of so many hundreds of centuries, in other words, there were in the world in 1800 only 640,000,000 of persons, and in 1906 there were 1,900,000,000, to this number had been added 900,000,000.—Boston Globe.

There is more genius floating around than there is plain common sense.

ALKENSIDE

BY
MRS. MARY J. HOLMES

Author of "Mrs. Deane," "The Captain's Orphan," "Remembered on the Hillside," "Less Rivers," "Manservant," "Lamp and Sash," "Cordelia," etc.

CHAPTER XVII.—(Continued.)

Guy was a puzzle to himself. He would not admit that during the past year his liking for Maddy had been anything but something stronger than mere friendship, nor yet that his feelings toward Lucy had undergone a change, prompting him not to go to her when she was sick, and not to be so sorry as he ought that the marriage was again deferred. Lucy had no suspicion of the change, and her childlike trust in him was the anchor which held him still true to her in intentions at least, if not in reality. He knew from her letters how much she had learned to like Maddy, and so, he argued, there was no harm in his liking her, too. She was a splendid girl, and it seemed a pity that her lot should have been so humbly cast. This was usually the drift of his thoughts in connection with her; and now, as he stood there in that cottage, Maddy's home, they recurred to him with tenfold intensity, for well he foresaw that a struggle was before him if he could not get Maddy to consent to do, from her approval of the fact.

No such thoughts, however, intruded themselves on Maddy's mind. She did not look away from the present, except it were at the past, in which she feared she had erred by leaving her grandmother too much alone. But to her passionate appeals for forgiveness if she had neglected the dying one, there came back only loving looks and mute caresses, the aged hand smoothing lovingly the bowed head, or pressing fondly the girlish cheeks. With the coming of daylight, however, there was a change; and Maddy, listening intently, heard what sounded like her name, but which she could not hear. The first tongue she listened for, and in tones scarcely articulate, the disciple who for long years had served her Heavenly Father faithfully, bore testimony to the blessed truth that God's promises to those who love Him are not mere promises—that He will go with them through the river of death, bearing the fainting soul of every fear, and making the dying bed the very gate of heaven. This tribute to the Savior was her first thought, while the second was a blessing for her darling, a charge to seek the narrow way now in life's early morning. Disjoined sentences they were, but Maddy understood them all, treasuring up every word even to the last, the words the farthest apart and most painfully uttered. "You—will—care—and—comfort—"

She did not say whom, but Maddy knew whom she meant; and without then realizing the magnitude of the act, virtually accepted the burden from which Guy was so anxious to save her.

CHAPTER XVIII.

Grandma Markham was dead, and the covered sleigh, which late in the afternoon plowed its way heavily back to Alkensis, carried only Mrs. Noah, who, with her forehead tied up in knots, sat back among the cushions, and the peace of the peaceful dead, gone forever to the rest which remains for the people of God, but of the wayward Guy, who had resisted all her efforts to persuade him to return with her, instead of staying where he was not needed, and where his presence was a restraint to all save one, and that one Maddy, for whose sake he stayed.

"She'd be rummed," the indignant old lady said, "if she would not write to Lucy herself if Guy did not cut such do's." And thus resolving she kept on her way, while the subject of her wrath was, it may be, more than half repenting of his decision to stay. Oh, it's terrible to have an unpleasant consciousness of himself being in everybody's way.

In the first hour of Maddy's bereavement he had not spoken to her, but had kept himself aloof from the room where, with her grandfather and Uncle Joseph, she sat, holding the poor aching head of the latter in his arms, and trying to speak a word of consolation to the old, broken-hearted man, whose hand was grasped in hers. But Maddy knew he was there. She could hear his voice each time he spoke to Mrs. Noah, and that made the desolation easier to bear. She did not look forward to the time when he would be gone; and when at last he was going, she started quickly, and with a gasp of tears, exclaimed: "No, no! oh, no!"

"Maddy," Guy whispered, bending over the strange trio, "would you rather I should stay? Will it be pleasanter for you, if I do?"

"Yes—I don't know. I guess it would not be so lonely. Oh, it's terrible to have grandmother dead!" was Maddy's response; after which Guy would have stayed if a whole regiment of Mrs. Noahs had confronted him instead of one. Maddy wished it; that was reason enough for him; and giving a few directions to John, he stayed, thereby disconcerting the neighboring women, who came in to perform the last offices for the dead, and who wished the young man from Alkensis was anywhere but there, watching them all in their movements, as they vainly fancied he did. But Guy thought only of Maddy, watching her so carefully that more than one meaning glance was exchanged between the women, who, even over the inanimate form of the dead, spoke together of what might possibly occur, wondering what would be the effect on Grandpa Markham and Uncle Joseph. Who would take care of them? And then, in case Maddy should feel it her duty to stay there, as they had hoped she would, they fell to pitying the young girl, who seemed now so wholly unfitted for the burden.

To Maddy there came no definite idea of the future during the two days that while, rigid form lay in the darkened cottage; but when, at last, the deep grave was for Grandpa Markham was occupied, and the lounge in the little front room was empty when the Alkensis carriage, which had been sent down for the use of the mourners, had been driven away, taking both Guy and Mrs. Noah, when the neighbors, too, had gone, leaving only herself and the little hired girl sitting by the evening fire, with the grandfather and the hired girl, who had been then it was that she first began to feel the pressure of the burden—began to ask herself if she could live thus always, or at least for many years—so long as either of the two helpmeets was spared. Maddy was young, and the world as she had seen it was very bright and fair, brighter far than a life of laborious toil, and for a while the idea that the latter alternative must be accepted made her dizzy and faint.

As if divining her thoughts, poor old grandpa, in his prayers that night, asked in trembling tones which she should much he felt what he was saying, that

God would guide the dying in all she did, and give her wisdom to make the proper decision; that if it were best, but if it might be happy there with her, but if not, "Oh, Father, Father!" he added, "help me and Joseph to bear it." He could pray no more aloud, and the gray head remained bowed down upon his chair, while Uncle Joseph, in his peculiar way, took up the theme, begging like a very child, Maddy might be inclined to stay; that no young man could be so fair, a diamond cross, the seal of which might be permitted to come near her with entangling looks, but that she might stay as she was and be an old maid forever! This was the subject of Uncle Joseph's prayer, a prayer which set Maddy's heart to a languor and would have wrung a smile from Maddy herself had she not felt all the strange petition implied.

With waywardness natural to people in his condition, Uncle Joseph that night turned to Maddy for the little services his sister had formerly rendered, and which, since Maddy's marriage, had been neglected. He would not let Maddy Maddy must untie his cravat, unbutton his vest, and take off his shoes, while, after he was in bed, Maddy must sit by his side, holding his hand until he fell away to sleep. And Maddy did it cheerfully, feeling his hand in hers, and keeping his own shoking sorrow for the sake of comforting him. Then, when this task was done she sought her grandfather, still sitting before the kitchen fire and evidently waiting for her.

"Maddy," the old man said, "come sit close by me, where I can look into your face, while we talk over what must be done. With a half-shudder, Maddy drew a stool to her grandfather's feet, and resting her head upon his knee, listened while he talked to her of the future; told her all her grandmother had done; told of his own little hopes; of the trial it was to him to see her so young, and in faltering tones asked who was going to look after her now. "We can't live here alone, Maddy. We can't. We're old and weak, and want someone to lean on. Oh, why didn't God take us with her, Joseph and me, that would leave you free to go back to the school, and the life which I know is pleasanter than to stay here with us. Oh, Maddy! it comforts me to look at you—to hear your voice, to know that though I don't see you every minute, you are somewhere, and by and by you'll come in. I shan't live long, and maybe Joseph won't. God's promise is to them who love their father and mother. It'll be hard for you to stay, harder than it was once; but, Maddy, oh, Maddy! stay with me, stay with me—stay with your old grandpa!"

Maddy had a brave young heart, and at last, winding her arms around her grandfather's neck, she whispered: "I will not leave you, grandpa. I'll stay in your mother's place."

Surely Heaven would answer the blessings whispered over Maddy by the delighted old man, and the young girl taking so cheerfully the burden from which many would have shrunk, should be blessed of God.

With her grandfather's hand upon her head, Maddy could almost feel that the blessing was descending; but when, in her own little room, the one where she had lain sick for so many weary weeks, her courage began to give way, and the burden, magnified tenfold by her nervous weakness, looked heavier than she could bear.

"I will, I will," she cried, while into her heart there crept an intense longing for the love of Him who alone could make her task a light one. "If I were good like grandpa, I could bear everything," she thought, and turning upon her pillow, Maddy prayed an earnest, childlike prayer, that God would help her do right, that the grandpa who bore father and mother, which rebelled against her lot because of its loneliness, that pride and love of her own ease and advancement in preference to others' good might all be subdued; in short, that she might be God's child, walking where He appointed her to walk without a murmur, and doing cheerfully His will.

It was broad noon ere Maddy awoke, and starting up she looked about her in bewilderment, wondering where she was and what agency had been at work in her room, transporting it from the cold comfortless apartment in the school to the pleasant night into the cheery-looking chamber, with a warm fire blazing in the tiny fireplace, a rug spread down upon the hearth, a rocking chair drawn up before it, and all traces of the little hired girl as completely obliterated as if she had never been. In her grief, Maddy thought she had forgotten to be taken to the hospital, and was now in the hospital, and she was wondering who it could be when the door opened cautiously and Flora's good-humored face looked in.

"Flora from Alkensis," Maddy knew now to whom she was indebted for all this comfort, and with a cry of joy she welcomed the girl, whose very presence brought back something of the life with which she had parted forever.

"Flora," she exclaimed, "how come you here? Did you make the fire and fix the room for me?"

"Yes, I made the fire," Flora replied, "and fixed up the things a little, but that young one's goods out of here, because it was too full for you to be there with her. Mr. Guy was mad enough when he found it out."

"Mr. Guy, Flora? How should he know of our sleeping arrangements?" Maddy asked, but Flora evaded the reply, saying, "there was Alkensis," then continuing to get things ready for Maddy, and saying, "I'm sure you must be, Miss Maddy, to sleep so sound as never to hear me at all, though to be sure I tried to be still as a mouse. But let me help you dress. It's all but noon, and you must be hungry. Your breakfast's ready."

"Thank you, Flora," she stepped out of her bed, Maddy said, stepping out upon the floor, and feeling that the world was not as dark as it had seemed to her when she last night she came up to her chamber.

God was comforting her, and as she made her simple toilet, and as she thought Him for His goodness, and as she gave thanks for what she ought to be, grace to make her yet told me why you came here," she said to Flora, who was busy making her bed, and who replied:

"It's Mr. Guy's work. He thought I'd better come, as you would need help to get things set to rights, so you could go back to school."

Maddy felt her heart coming up in her throat, but she answered calmly, "Mr. Guy is very kind—so are you all; but, please, I am not going back to school."

"No, going back?" and Flora stopped her head-dressing, while she stared blankly at Maddy. "What are you going to do?"

"Stay here and take care of grandpa," Maddy said, bathing her face and neck in the cold water, which could not cool the feverish heat she felt spreading all over them.

"Stay here? You are crazy, Miss Maddy! 'Tain't no place for a girl like you, and Mr. Guy never will suffer it, I know," Flora rejoined, as she resumed her work, thinking she "should die to be mopped up in that nutshell of a house."

With a little sigh, as she foresaw the opposition she should probably meet with from Guy, Maddy went on with her toilet, which was soon completed, as it did not take long to arrange the dark calico dress and plain linen collar which she wore. She was not as fresh-looking as usual that morning, for excitement and fatigue had lent a paleness to her cheek and a languor to her eyes, and now she saw that Flora, who glanced anxiously after her as she went out, muttered to herself, "She was never more beautiful, and I don't wonder an atom that Mr. Guy thinks so much of her."

The kitchen was in perfect order, for Flora had been busy there all evening. The kettle was boiling on the stove, while two or three little covered dishes were ranged upon the hearth, as if waiting for someone. Grandpa Markham had gone out, but Uncle Joseph sat in his accustomed corner, rubbing his hands when he saw Maddy, and nodding mysteriously toward the front room, the door of which was open, so that Maddy could hear the crackling on the hearth.

Maddy entered the room known at the cottage as the parlor, the one where the rag carpet was, the six can-seated chairs and the Boston rocker, and now the lit round table was nicely laid for two, while cozily seated in the rocking chair, reading last night's paper and looking very handsome and happy, was Guy!

(To be continued.)

SIMPLE DIAMOND TESTS.

A Needle Hole in a Card One Means of Detecting Imitation Brilliants.

"There are few persons," remarked a jeweler, "who are able to purchase a diamond on the strength of their own knowledge and observation, and without placing implicit confidence in the man who sells the stone. It is a fact that even pawnbrokers have often been taken in by jewelry and precious stone fakers," says the New York Sun.

"Although it takes many years of actual observation and experience before one can become a diamond expert, there are a few simple tests which will considerably aid a buyer of diamonds. One test is to prick a needle hole through a card and look at the hole through the doubtful stone.

"If the latter is spurious two holes will be seen, but if it is a diamond only one hole will be visible. Every imitation stone which resembles a diamond gives a double reflection, while the diamond's refraction is single.

"This is a delicate test, because it is difficult to see even a sharp and defined object through a diamond. The single refraction of the diamond also allows one to determine an uncertain stone.

"If the finger is placed behind it and viewed through the stone with a watchmaker's glass, the grain of the skin will be plainly seen if the stone is not a diamond. But if it is a diamond the grain of the skin will not be distinguished at all.

"A diamond in solid settings may be identified in the same manner. If genuine, the setting at the back cannot be discerned, but if it is a phony stone the foil or setting will be seen.

"There is no acid which has any perceptible effect upon a genuine diamond. Hydrofluoric acid, if dropped on a stone made of glass, will corrode it, but will not affect a diamond one way or the other. A trained eye can see the hardness in a diamond, whereas the imitations appear soft to the vision of the experts."

Proof Not Needed.

As General Benjamin F. Butler entered the lobby of the Boston State House one morning he saw two men whom he knew engaged in a heated argument. "One moment, General," said one of them to him; "can't you settle a dispute? We are arguing as to who is the greatest lawyer in Massachusetts, and as we can't agree we will leave it to you."

"That's easy, I am," said Butler, with perhaps more truth than modesty.

The two men were somewhat taken aback.

"Er—er—but, General, of course, you know—but—how can we prove it?" the first speaker managed to get out.

"Prove it? Prove it?" growled Butler. "You don't have to prove it. I admit it!"—Woman's Home Companion.

He Had Been Stung.

Wedderly—"The only way to cure yourself of an attack of love is to run away from it."

Singleton—"Why didn't you do that when you were courting the girl you married?"

Wedderly—"I did—I ran away with her."

Poor but Honest.

She was an heiress and he was poor, but otherwise honest.

"How much do you love me, dear?" she asked, after the manner of her sex.

"I love you," he replied in a tone replete with candor, "for all you are worth."

Same Effect.

"Was you ever in love, Eddie?"

"Now, but I fell out of er second-story window once!"

AGRICULTURAL



Value of Co-Operation.

Sir Horace Plunkett, member of the British house of parliament, who has been in this country recently, said in an address to agricultural students that there was "not a single county, not a parish, in Ireland where the farmers are not completely revolutionizing the entire business of farming by introducing co-operative methods." And it might be added that there is scarcely a farming district in the United States where more benefits cannot be realized by a closer co-operation of the farmers. The farmers are understanding each other better each year and are coming closer together in all matters which pertain to their mutual interests, but there are still greater possibilities ahead. Describing the 900 co-operative organizations of peasants in Ireland which he was instrumental in establishing for the purpose of competition with commercial industries, forcing out middlemen, compelling railroads to provide better facilities, and dictating more favorable legislation to parliament, done: "The first thing was to introduce a system of agricultural education which extended into every branch of the industry, teaching the farmer, for instance, to purchase everything he requires, implements and machinery, of the very best quality. They combined to consign in bulk and distribute their goods in the market. They combined to raise working capital for their operations. They combined to own breeding animals. They did just what you are doing here, brought science into farming by getting it into the schools. They had the same system of instruction and experimentation supplied by your government."

New Variety of Tobacco.

A new variety of tobacco, valuable for cigar wrapping, was first raised in Connecticut from seed brought from Florida and which originally came from Sumatra. After very careful and satisfactory tests results have proved beyond a doubt the value of this variety for growing commercially, together with the fact that the seed comes true to type year after year when saved under bag. The name Uncle Sam Sumatra was given to this variety. It is a cigar wrapper variety of tobacco and adapted for growing under shade in the cigar wrapper producing regions. The plants reach an average height of about eight feet at the time of maturity, and they bear an average of about twenty-six leaves before topping. The cured leaves will average about sixteen inches in width by twenty inches in length, although the size varies according to field and cultural conditions. The yield of the crops of this variety is high, being as much as 1,000 pounds of cured tobacco to the acre under favorable conditions. The percentage of the best grades of wrapper in these crops is correspondingly high.—Exchange.

Fertilizer Tests with Corn.

Fertilizer tests with corn in Virginia show clearly that plowing under green leguminous crops is a highly beneficial practice and that where this is followed only moderate amounts of fertilizer will be necessary to give increased yields. When vegetable matter is lacking, however, heavy applications of fertilizer seem advisable.—Andrew M. Soule.

Value of Beet Sugar Products.

Some idea of the magnitude of the beet sugar industry in the United States can be given by estimating the value of the beets sold by the growers to the factories and of the refined sugar placed on the market by the factories last year that the average price paid for beets in 1906 was \$5 per ton, the total value of the 4,296,112 tons of beets harvested is \$21,480,560. If we estimate the value of the sugar at 43 cents per pound, the 967,224,000 pounds of sugar manufactured were worth \$42,525,080. Probably the assumed prices both for beets and for sugar may be a trifle below those actually received, but these figures are sufficiently accurate to indicate the magnitude of the industry.

Ripening Green Tomatoes.

Often when frost comes there are many tomatoes on the vines that are nearly full grown, but that have not yet ripened enough to send to market. I have picked such tomatoes and put them in a cool, dark place to ripen slowly and sent them to market when the supply had run low and prices run high, says a writer in New England Homestead. But for home use a better way is to pick the smaller ones from the vines and then hang up the branch in the cellar, darkening the windows and keeping the place cool. They will ripen slowly, and one may indulge in ripe tomatoes in January when those grown in a hot-house and which are not as large or any better flavor are selling at 25 cents a pound or more. Try it.

Celery Stored in Cellars.

Where celery is stored in cellars the temperature should be kept low and plenty of ventilation maintained. The warmth and dampness of the ordinary cellar have a tendency to cause the cellular wall to become soft and to decay, but these conditions can be frequently be overcome. Celery will readily absorb any odor that may be present in the atmosphere of the storage place, and care should be taken to provide sanitary conditions. The plants should have most of their roots attached, and a bed of moist sand in which to set them should be provided.

Wintering Cabbage.

One of the simplest ways of keeping cabbage is to store in an orchard or some sheltered place, often alongside a fence which has been made tight by a liberal use of straw. The cabbages are stored with their stems on and are placed head down and as close together as possible. Two or three tiers are often made, the heads of the second tier being placed between stems of the lower, and so on, the piles being made of any width and length desired. The whole is covered with leaves, salt grass hay or straw and a little soil, rags, brush or litter. Small unsalable heads when stored in this way in November will continue to develop during winter and frequently sell as well as any in February. Small quantities may be stored by piling out two or three furrows ten or twelve inches deep on a well drained site and placing the heads with their stems up as close together as possible. Some prefer to lay them but one or two thick, while others will pile them up two to two and a half feet high, bringing them to a point. The pile is then covered with straw, salt grass hay or a thin layer of soil, and then several inches of soil. They are stored before freezing, and when the soil covering them is frozen it may be covered with straw manure or any other litter to keep the soil frozen until the cabbages are needed for sale.

An Electric Incubator.

Electricity has been applied to incubation by Otto Schultz, an electrician of Strassburg, and is the result of three years of experimentation. The apparatus is made for 50, 100 or 200 eggs, and is designed to obviate the difficulties connected with the ordinary form of incubator. The manipulation of the apparatus is very simple, and its maintenance depends only upon an uninterrupted supply of electricity.

An automatic attachment keeps the temperature within one-tenth of a degree of the normal temperature of incubation. The degree of saturation of the air is kept in the same manner. Under ordinary conditions, ninety chickens can be counted on out of 100 eggs incubated. The quantity of electricity required is very small, for an incubator holding fifty eggs, ten to twenty watts being sufficient, depending upon the temperature of the outer air.

For raising the chickens after they are hatched, an electric "mother" has been devised. The upper part is devoted to the freshly hatched chickens, while the lower part is arranged so that the chicks can run around on the ground and at the same time find heat and protection when they desire. The electric incubator has already proven very successful.

THE PLANT.

THE LEAF.