The Chestertown Transcript.

$1.00 PER ANNUM—IN ADVANCE. CHESTERTOWN, MARYLAND, THURSDAY, MAY 19, 1892. VOL. XXXI—NO. 1

LEWIN W. WICKES,

ATTORNEY-AT-LAW,

Chestertown, - - Maryland.

DR. GENESE.

Of Baltimore, will attend at Betterton every Saturday for all duties pertaining to Dentistry.
March 26, 1891.

DR. W. E. BARNARD,

—Dentist,—

has located permanently, and will be in attendance daily from 9 A. M. to 4 P. M., at the residence of Mrs. M. J. Howard, Still Pond, Md., for all duties pertaining to Dentistry.

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HOMEOPATHIC,

Office Main street, opposite Voshell House, can be found in office every day from 9 A. M. till 12 M., 3 to 4 P. M. and from 7 to 9 P. M. Sundays excepted.

Special attention given to women and children. May 3, 1888—tf.

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Chestertown Md.,

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—DEALER IN—

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OFFICE AND STORE-ROOM UNDER THE "VOSHELL HOUSE,"

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CARRIAGES, BUGGIES, CARTS, ROAD WAGONS and SPRING WAGONS.

I am prepared to furnish the farmers with any implement they want at short notice. My aim will be to sell only such implements as I can recommend, and of the best material to be had. I have taken great pain and trouble to inquire into the merits of the above articles.

GRAIN BOUGHT, by either Railroad or Water, for strictly responsible parties.

I hope to secure a portion of your patronage by fair dealing and attention to business.

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JOHN W. BORDLEY,

—WITH—

New York Clothing House

102 & 104 E. Baltimore St., Balto., Md.

HAVING connected myself as salesman with this, one of the largest and most reliable clothing houses of the South, I would be glad to show our immense

Assortment of Men's and Boys' Suits

to my many friends of Kent. Assortment, Cheapness and Quality are our principal attractions.

Respectfully,

m14. JOHN W. BORDLEY.

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FERTILIZER MANUFACTURERS.

HAVING BOUGHT THE FACTORY LATELY OWNED BY MR. W. H. CACY, WE ARE PREPARED TO OFFER TO THE FARMERS OF KENT AND QUEEN ANNE'S COUNTIES,

Fertilizers of All Kinds

WE WOULD CALL ATTENTION TO OUR SPECIAL BRANDS FOR THE SPRING CROP OF 1892:

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AND GENERAL TRUCK.

We are confident that a fair trial of these goods will give satisfactory results, as they are prepared under the personal supervison of MR. P. B. HOLLIS, who is well-known in this community as an experienced agricultural chemist.

BUSINESS OFFICE in the *Kent News* building, where we shall be pleased to see our friends and the public.

Chestertown, March 24, 1892

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—FOR—

10, 12 & 15-DOLLAR SUITS,

Latest Styles,

Latest Makes,

Newest Shades,

Newest Materials.

—ALL—

Our Own Manufacture

WORKMANSHIP, FIT AND WEAR GUARANTEED.

CHILDREN'S SUITS $5,

ALL WOOL (GUARANTEED).

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Nos. 10 and 12 East Baltimore St., Near Charles.

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CASTORIA

Castoria is Dr. Samuel Pitcher's prescription for Infants and Children. It contains neither Opium, Morphine nor other Narcotic substance. It is a harmless substitute for Paregoric, Drops, Soothing Syrups, and Castor Oil. It is Pleasant. Its guarantee is thirty years' use by Millions of Mothers. Castoria kills Worms. Castoria is the Children's Panacea—the Mother's Friend.

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Castoria cures Colic, Constipation, Sour Stomach, Diarrhœa, Eructation, Gives healthy sleep and promotes digestion, Without injurious medication.

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"Castoria is so well adapted to children that I recommend it as superior to any prescription known to me." H. A. ARCHER, M. D., 111 So. Oxford St., Brooklyn, N. Y.

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COAL and WOOD,

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LIME and BALED HAY.

COAL ALL SIZES.

WOOD SAWED and SPLIT for cooking and kindling, delivered at short notice.

Orders left at CHARLES S. SMITH'S promptly attended to.

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March 19, 1891. CHESTERTOWN, MD.

C. M. LUCAS,

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Watches, Clocks,

JEWELRY, ETC.

Watch and Clock Repairing

A SPECIALTY.

A FINE ASSORTMENT OF

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C. M. LUCAS,
Next door to T. W. Eliason, Jr., High street.

ALWAYS GOOD COLOR.

LEA'S

FLOUR!

Always Good Strength.

SUBSCRIPTION to the TRANSCRIPT One dollar

SHE HAD TO SAY "FLY."

An Amateur Performer Who Insisted Upon Following the Lines.

It is not often that professional actors get mixed up in amateur theatricals, but when they do, as a rule, their lives are made miserable until the affair is over. A few years ago a young woman, who was one of the reigning belles of the Four Hundred in this city, wrote a romantic play, plentifully sprinkled with singing and dancing. She read the play to her intimate friends, and they one and all unanimously declared that it should be produced at one of the theaters where amateur performances are held, and that the author should play the part of the heroine. After much coaxing the lady consented. The play was called "Kismet." The cast was selected from among the best amateurs, the leading man being the head and front of them. The scene of the play was laid in Turkey, in the garden and palace of the sultan. The plot was hinged on the abduction of two beautiful girls and their final rescue.

A clever professional stage manager was engaged at a big salary and rehearsals began. Everything went along as smoothly as could be expected until the last rehearsal, which took place on the morning of the day appointed for the production, when a note was hastily delivered to the stage manager saying that the leading lady and author had lost her voice completely, and that her physician had ordered her not to leave the house. She was very sorry, but advised that a professional actress be engaged to take her place. Here was "a pretty kettle of fish"—how to get an actress at so short a notice. The costumes must be fitted and the part learned before 7 p. m. The manager thought of a friend of his, Mrs. Addie Plunkett, Charles Plunkett's wife, who had just closed her season with Lawrence Barrett and who was then at liberty. He sent for her and requested her to return with the messenger. She did so, and after a long talk with the stage manager consented to rehearse the part. She was nervous, of course.

In the garden scene her sister's lover has discovered her hiding place and they are having a loving interview, the heroine remaining on the lookout for interruptions, which may occur in the form of the sultan's servants, which would mean death to the intruder. At a certain cue the heroine rushes up to her sister's fiance and tells him to "Fly! fly for your life—some one approaches!" and the lover is pushed through a wicket and escapes. Mrs. Plunkett rehearsed the scene carefully and told the leading man that in case she should forget to say all the lines she would make him understand when it was time for him to make his exit. Thus it was settled between them. Evening came, and the time for the curtain to be rung up arrived. Most of the performers had stage fright, one fair amateur declaring that she had entirely forgotten her lines and was sure that she would faint from sheer fright.

The performance began and Mrs. Plunkett struggled bravely through her part, dropping an occasional speech now and then, but with professional tact she covered up her mistakes so that the audience was none the wiser. When the garden scene was reached the lover appeared in good time and she stood guard until the proper cue was given. It came all right, but alas for Mrs. Plunkett, she had forgotten her lines. When she heard the sultan's guard approach she rushed to the lover and said, "Away! begone!" but she received no response from that gentleman. She pushed him and tried to get him to go through the wicket, as agreed upon, but he refused to budge an inch, and said to her in a stage whisper, "Say 'Fly! fly!'" but Mrs. Plunkett was beyond speech by this time, so she continued to push him toward the wicket.

Her efforts were useless, however, for he resisted and declared he would not go until she said, "'Fly! fly! for your life, some one approaches,' so the audience can hear you." Still she could not speak, but with one herculean effort she gave him a tremendous push that sent him flying through the wicket and into some stage bushes which had been artistically arranged at the back of the stage. When the performance was over Mrs. Plunkett heaved a sigh of relief and said, "This is the first and last amateur performance for me!"—New York Tribune.

The Growth of Two Cities.

Just as the Atlantic cities were surprised when Chicago distanced all but two of them in population, and challenged all of them by her enterprise, so will they be astonished again and from another quarter if they refuse to study the forces that are operating to build up new capitals in the west. In another ten years there will be another claim of a million population, and the counting of heads will not make nonsense of it. The new and wonderful assumption of metropolitan importance will be that of the twin cities of the wheat region—Minneapolis and St. Paul. They may not be joined under one name and government—opinions differ about that—but all agree that they will jointly possess a million of population. The last census credited Minneapolis with 164,700 population and St. Paul with 133,000, or, jointly, 297,000. At the time of the preceding census (1880) the two cities included about 88,000 souls. At that rate of increase they will boast in 1900 a population of 976,000 and more.—Julian Ralph in Harper's.

Thoroughly Alive.

Young America is in thorough touch with the times. An up town boy of eleven, rejoicing in a little printing press, at once announced a forthcoming newspaper, of which he was to be editor and proprietor. "And Helen," he added, referring to a nine-year-old sister, "may do the woman's page."—New York Times.

Drawing in a Dark Room.

A luminous crayon has been invented which enables lecturers to draw on the blackboard when the room is darkened for use of the lantern.—New York Journal.

Hats in the House of Commons.

No honorable member sits in the English house of commons without his "pot" hat on his head. If he rises to address the house, greet a friend or cross the room he must hold his shiny tile in his hand. Should his name be mentioned in the speech of another member he lifts his hat respectfully. If it is in his hand when his name is uttered etiquette requires him to clap it hastily on his head in order that he may lift it with proper deference.—Youth's Companion.

The Movement of the Sun.

Professor Duner, of Germany, has discovered that the revolution of the sun as shown by the movement at its equator is once for twenty-five days and twelve hours of our time, while at or near its poles the revolution may be only once in forty-six of our days. This would only be possible with a movable and gaseous surface like that of the sun.—New York Sun.

A HORRIBLE FEAR.

The Terrible Thought in a Mother's Mind Does Not Prevent Her Shopping.

Two women and a baby were the dramatis personæ of a typical feminine episode the other afternoon. The mother of the baby, Mrs. A., with her precious charge, a lusty boy of thirteen months, drove over to pay a visit to a friend in Brooklyn who was staying with a resident of that city with whom Mrs. A. was slightly acquainted. The friend whom she had come to see had just left but the lady of the house pleasantly received her, and she remained for a little chat.

Mention chanced to be made of hemstitched bed linen and Mrs. B. remarked that a certain Brooklyn shop was offering wonderful bargains in that line, whereupon Mrs. A. confessed her need and desire for these articles, and in the end carried off Mrs. B. in her carriage to guide her to the desired shop. Arrived there, the dilemma of what to do with the baby was finally solved by Mrs. B., who was sure she could amuse him long enough for his mother to accomplish her purpose.

With some misgivings Mrs. A. left and Mrs. B. found within five minutes of her disappearance that she had undertaken a serious responsibility. The child became frightened at being with a stranger and cried vehemently. Mrs. B. kept him in the carriage as long as possible, then got out and walked with him, but, as all Fulton street began to get interested, she in despair thought she must hunt up his mother.

She went into the shop, the baby screaming at the top of his voice, and made her way, embarrassed and irritated, through the crowd to the linen counter. Mrs. A. was not there nor apparently anywhere else in the shop, for Mrs. B. made search as thoroughly as her roaring charge would permit without success.

"Where can Mrs. A. have gone?" she exclaimed in her dispair to the coachman when she came out again.

"Sure," said that functionary stolidly from the box, "it'll be in the fifth floor she'll be by this time."

It was nearly an hour later that Mrs. A. appeared, excited and breathless, and poor Mrs. B.'s arms ached, head ached and temper ached sadly before that welcome moment arrived.

"Oh, did he cry, bless his heart?" exclaimed the mother, seizing the baby. "I was so afraid he might, but I just couldn't lose those wonderful bargains."

Mrs. B. deemed a reply useless and only gasped in relief as she sank back in the cushions. The cream of the affair came, however, a moment afterward as they were rolling toward upper Brooklyn again, the baby gradually slackening his sobs under the soothing of his mother.

"And do you know," said Mrs. A., with only a half laugh, "I was pursued from counter to counter with the dreadful possibility that you might run off with Harold. One reads such shocking things of babies being stolen, and you know," apologetically, "young mothers are so foolish."

At this Mrs. B. could not even gasp.—Her Point of View in New York Times.

The Antiquity of the Organ.

The organ is the most magnificent and comprehensive of all musical instruments. While the pipes of Pan—aside from that mythical personage—indicate a very ancient use of pipes as a means of producing musical sounds, the "water organ of the ancients" furnishes to the student of organ history the first tangible clew regarding the remote evolution of the instrument. In the second century the magripha, an organ of ten pipes with a crude keyboard, is said to have existed, but accounts of this instrument are involved in much obscurity. It is averred that an organ—the gift of Constantine—was in the possession of King Pepin of France in 757; but Aldhelm, a monk, makes mention of an organ with "gilt pipes" as far back as the year 700.—Daniel Spillane in Popular Science Monthly.

What Bacteria Are.

Bacteria are simply microscopic plants, the smallest form of vegetable life. In some instances they are so small it would be necessary to place 15,000 of them end to end in order to make a row an inch in length. They are of widely different forms, some round, some oval, some flat or rod shaped, while still another class are the exact counterparts of small cork-screws.

In all cases they are so minute that one needs a powerful microscope in order to study them, and in no case can they be perceived simply with the naked eye. When countless millions are grouped together they may probably be seen, but in this case they may be said to resemble an approaching army, of which we are totally unable to distinguish a single soldier.—St. Louis Republic.

A Lover.

A lover is one driven hither and thither by doubt and longing; whose every action gives to himself dissatisfaction; whose every sensibility, merged into that of anxious excitability, poised delicately as a magnetic needle, fluctuates between hope and despair. Who experiences the involuntary departure of his own self worthiness to the increase of that of his idol, thereby rendering that object seemingly beyond his reach.—Cor. Philadelphia Music and Drama.

A Remedy for a Bad Habit.

An efficient remedy for the nail biting habit is to dip the finger tips after every hand washing into a strong solution of quinine and glycerin. Any druggist will prepare it of requisite strength; the bitter taste will stop children from further biting, and will remind an adult as well.—New York Times.

The shoemaking business in California is controlled almost entirely by Chinese. Fully 10,000 Chinese are employed in such labor.

WE'RE not waiting for the bats and moles, but for men and women who have eyes and use them, who have brains and reason! There's a new world for them—suffering and sickly as they are—a new world created from the brain of a skillful physician—a discovery—the "Golden Medical Discovery."

Years ago Dr. Pierce found out that the secret of all scrofula, bronchial, throat and lung trouble lay—in the beginning at least—in impure blood and the weak tone of the system; that the way to cure these effects was to remove the cause, that human nature being the same, the same results might be looked for in nearly all cases. So confident was he that the exceptions were uncommon that he took the risk of giving the medicines to those it didn't benefit for nothing, and the results have proved that he was right.

And "Golden Medical Discovery" is the remedy for the million! The only *guaranteed* Liver, Blood and Lung remedy. Your money back if it doesn't help you.

"IT PAYS."

It pays to wear a smiling face
And laugh our troubles down;
From all our little trials waft
Our laughter or our frown.

Beneath the magic of a smile
Our doubts will fade away,
As melt the frosts in early spring
Beneath the sunny way.

It pays to keep a worthy cause
By making it our own;
To give the current of our lives
A true and noble tone.

It pays to comfort heavy hearts,
Oppressed with dull despair,
And leave in sarrow-darkened lives
One gleam of brightness there.

It pays to give a helping hand
To eager earnest youth;
To note with all their waywardness,
Their courage and their truth.

To strive, with sympathy and love,
The confidence to win,
It pays open wide the heart
And let the sunshine in.

Presbyterian Journal.

DEBT HERE AND ABROAD.

The total debt of the world in June, 1890, according to bulletin 176 of the census bureau, was $28,648,392,681, less sinking fund. This is an increase over 1880 of $118,103,791. Of this world's total of unsettled obligations the part for which the United States is responsible is $891,960,104. There is a nominal decrease of the "public debt" of the United States since 1880 of $1,030,557,260. That is to say, the principal on which interest is to be paid to bond-holders has been decreased to that extent. But this decrease in the annual burden upon the tax-payer "on account of the war" is only nominal, owing to the policy of the Republican party of increasing the outgo for pensions just as fast as the outgo for interest decreases. In 1880 the annual outgo for interest was about $78,000,000; for pensions, $57,240,540; total "on account of the war," $135,000,000. In 1890 the annual outgo for interest was $30,000,000; for pensions, $106,493,000; total "on account of the war," $136,493,000. Hence, as a matter of fact, the tax-payer has received no benefit from the reduction of the bonded debt of the United States since 1880. Indeed, since the last Congress increased the annual pension payment to $150,000,000 a year, the average man's position is decidedly worse than it was in 1880. The average debt per capita in that year was $38.33; or, including State and local debts, $60.73. At present it is, as shorn above, considerably more. The per capita of debt in foreign countries in 1890, exclusive of local debts, the bulletin states, was $32.88. The bulletin puts the State and local debt of the United States at $1,135,210,442, an increase of $11,921,795 since 1880. This aggregate consists of the following items: State debts, $228,997,389; county debts, $145,048,045; Municipal debts, $724,463,060; school district debts, $36,701,948. The aggregate of State and local debt exceeds, it will be observed, the national debt.

The debt of Maryland (State, county and municipal) is stated to have been in 1890, less sinking funds $40,175,408, an increase of $1,042,390. Its population was 1,042,390, making its per capita of debt $40.46, or nearly $4 less than in 1880. Virginia is represented as owing $50,837,315, making her per capita $30.70. The State debt is put at $34,227,234. West Virginia is said to owe $2,532,460, of which but $184,511 is State debt. Delaware owes $2,919,084, which is $17.32 per capita; North Carolina $11,117,445, or $6.87 per capita. The District of Columbia, having a debt of $19,781,050, has a per capita debt of $85.86. If this seems large, it is to be remembered that in 1880 it was larger, being in that year $126.66. The aggregate of the debts of the Southern States is made up, the bulletin shows, of State, county and municipal debts, the school district debts amounting to very little. This kind of borrowing is almost confined, it seems, to the Northern States. County debts in the South form but a fraction of the total. The aggregate for all hardly exceeds $27,000,000, while the aggregate of Southern municipal debts is over $119,000,000. There has been a very perceptible increase of borrowing by municipalities in the South since 1880. There has been an increase of such borrowing also in the North Central States, but a decrease in the North Atlantic States. The Western States have greatly increased their debt of all kinds in the last decade.—*Baltimore Sun.*

BEAUTY.

Three things enter into beauty—fine features, color and expression. The features, the form of brow and nose and chin, bequests coming often from far ancestors; our colors, too, are the main bequests, depending on the quality of tissue and of blood, the more immediate parents give it; but *expression* is very largely our own affair. And, even with good features and the clearest colors, *expression* is the best part of beauty. The play of thought and will and feeling on the face—of noble thoughts, firmness, self-control, and pure, unselfish, gentle feelings—we can secure if we will. Ten years of habit, three years, or only one, will affect expression much. Some one said that "Every face ought to be beautiful at forty," and another that "No old person has a right to be ugly, because he has had all his life in which to grow beautiful." That is to say, life's opportunity of nobleness, or even forty years of opportunity, if well used, are enough to make so much within that it cannot help coming through the surface in graceful habits of the nerves and muscles. The transfiguration of a pleasant smile, kindly lightings of eyes, restful lines of self-control about the lips, pure shining of the face as great thoughts kindle inwardly—these things no parent makes inevitably ours, and no fitful week or two of goodness gives them, and no schooling of the the visage either but only habitual nobleness and graciousness within; and this *will* give them all.

Splender within! It is the only thing which makes the real and lasting splendor *without!* Trust that inevitable law of self-expression. *B.*, not seen! Be to seem. Be beautiful, and you will by and by seem so. Carve the face from within, not dress it from without. Within lies the robing-room, the sculptor's workshop. For whosoever would be fairer, illumination must begin in the sould—the face catches the glow only from that side. It is the spirit's beauty that makes the best face, even for the evening's company; and spirit beauty is the only beauty that outlasts the work and wear and pain of life. *The Bombay Guardian.*

FRUIT TREE SPRAYING.

Spraying for Fungous Diseases of the Apple, Pear, and Other Fruits.

[CONTINUED FROM LAST WEEK.]

Probably in no other country in the world is spraying for fungous diseases of fruits practiced to the same extent as in the United States. Five years ago practically nothing was known of this subject; in fact, the number actively engaged in spraying their trees, vines, etc., for such diseases as apple scab, black-rot, downy mildew and other diseases of the grape did not exceed half a hundred, all told. Now, as a fair estimate, probably no less than 50,000 fruit-growers are engaged in this work. From the Atlantic to the Pacific and from the Great Lakes to the Gulf the methods recommended by the Department are practiced every year. Canada has also adobted many of the suggestions made by us, and even now Australia is actively engaged in experiments in the treatment of apple, pear, peach, and other diseases, in accordance with suggestions originating with this Department.

DOES IT PAY TO SPRAY?

This question is in large part answered by the facts already given. No work that did not carry merit with it could have had such a phenomenal growth. To give a more direct answer, however, it may be stated that last season two hundred and fifty grape-growers in different parts of the country made a series of observations with a view of obtaining some definite information as to the value in dollars and cents of the recommendations made by the Department in the treatment of grape diseases. The facts reported by these men show conclusively that the actual profit to them over all expenses resulting from the treatment of black-rot and downy mildew was in round numbers $37,000. Thirteen thousand dollars of this sum was reported from the State of New York alone.

Other examples equally as striking could be given, but this is sufficient for our purpose. Of course, every one is not successful, but where failure is reported it is usually easy to locate and remedy the trouble.

FUNGICIDES OR REMEDIES USED IN SPRAYING.

Numerous preparations have been recommended and used for this work. For all practical purposes, however, there are but four which properly may be called remedies. They are (1) Bordeaux mixture, (2) ammoniacal solution of copper carbonate, (3) eau celeste, and (4) modified eau celeste. The latest experiments indicate that the best results will follow the use of these preparations when made as follows:

3.—EAU CELESTE.

Dissolve 2 pounds of copper sulphate in 8 gallons of water. When completely dissolved, add three pints of strong ammonia and dilute to 45 gallons. Prepared in this way, the solution will cost about two-thirds of a cent per gallon.

4.—MODIFIED EAU CELESTE.

Dissolve 4 pounds of copper sulphate in 10 or 12 gallons of water, and stir in five pounds of washing or sal soda; then add 3 pints of strong aqua ammonia, dilute to 45 gallons. The cost will be 1½ cents per gallon.

HOW AND WHEN TO SPRAY.

It should always be borne in mind that no hard and fast rules can be laid down for work of this kind. Frequently the fruit-grower will have to use his own judgement, especially as regards the number of sprayings and the proper time to disconue them. If this be not done serious results may follow. In the treatment of black-rot of the grape we have known vine-growers to continue the application of Bordeaux mixture through a protracted draught up to the time of ripening of the fruit. As a result when the time arrived to send the grapes to market they were so badly spotted with the mixture that no one would buy them. Again we have found fruit-growers thoroughly imbued with the idea that the only proper way to spray was to rush through an orchard or vineyard with some new-fangled complicated machine, applying the solution in daubs at one point and omitting whole trees or blocks of vines at another. Such work is to be regretted, as it may be the cause of much loss to those who have acted carefully and intelligently in the matter. For example, in the case of the grape scare in New York city the past summer, grape-growers all over the country were made to suffer, partly through the folly of a few overzealous individuals, who upon their own responsibility made more applications than were necessary and partly through the action of a somewhat hasty Board of Health.

Before taking up the subject of treatments proper it may be well to emphasize the importance and necessity of using the right kind of machinery. A sprayer to be effective requires first of all a good strong force pump. Next in importance is a nozzle that will throw a mist-like spray and will not clog when thick fluids are used. There are plenty of machines on the market filling all these requirements. For convenience they may be divided into three classes: (1) horse-power automatic machines, (2) machines drawn by horse power, but operated by hand, and (3) hand machines. All belonging to the first group may be dismissed with the statement that they are unnecessarily expensive and complicated, and will not, even in the most careful hands, do the work as thoroughly and effectively as the machines belonging to the second and third groups. Of the second group, in which the cheapest, most practical and efficient example is found in a strong, light, double-acting, double-discharge force pump mounted on a barrel, it may be said that while they cannot do the work as rapidly as the machines of the first class they are more effective, much cheaper, and far less wasteful of liquid used. To the third class belong the knapsack sprayers, which are the only ones necessary to notice in this connection. There is no question that for all moderately low-growing crops the knapsack sprayer fills every requirement. In no other machine is the work so absolutely at all times under control, it being possible to place nearly every drop of liquid exactly where it is wanted. Knapsack pumps are now used in many moderatesized vineyards; also in places where the horse-power apparatus, owing to the nature of the land or the manner of cultivation, cannot be utilized.

Many firms throughout the country, as will be seen by reference to the columns of any good agricultural paper, are engaged in th
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APPLE POWDERY MILDEW.

It is only in nurseries that this disease is destructive. Seedlings are especially subject to the mildew, the leaves being attacked as soon as they appear. As a result the trees make very little growth, are bark bound, and consequently unfit for budding. The ammoniacal solution has proved the cheapest and most effective remedy for this disease, and five sprayings seem to be required. The first application should be made just as the leaves start in spring. At least three other sprayings should be made at equal intervals between the time of the first treatment, and the time for budding. Ten or twelve days after budding the last spraying should be made, making five in all. For blocks of 50,000 to 100,000 seedlings the total cost of the treatment, as indicated, need not exceed 8 cents per thousand. In smaller blocks the average cost per thousand trees will be somewhat greater, as it requires practically as much time to prepare to spray 25,000 trees as it does 50,000. The knapsack pump is well adapted to this work and is extensively used by nurserymen.

TREATMENT OF PEAR SCAB, CRACKING AND LEAF-BLIGHT.

These diseases, caused by two different spscies of fungi, are now successfully combated by one line of treatment. In most sections all three diseases are found associated. Bordeaux mixture has given the best results in this work, although ammoniacal solution has proved almost as effective. The only objection to the latter is that it sometimes gives the fruit a rusty appearance, which is not at all desirable. The first spraying for these diseases should be made when the trees are in flower. In ten or twelve days a second treatment should be made, followed by a third and fourth at the expiration of two and four weeks respectively. In the nursery, pear leaf-blight is often exceedingly troublesome. It may be almost entirely prevented by spraying five or six times with the Bordeaux mixture, making the first application when the leaves are about one-third grown and the others at intrevals of ten or twelve days throughout the season.

The cost of treating full-grown standard trees with the Bordeaux mixture as indicated will average from 12 to 14 cents per tree. For dwarf trees the cost will range from 8 to 12 cents each. The cost of treating with the ammoniacal solution will be considerably less, probably not exceeding 10 cents for standard and 8 cents for dwarf trees. In the nursery pear seedlings can be treated six times with the Bordeaux mixture for 50 cents per thousand.

TREATMENT OF LEAF-BLIGHT OF THE CHERRY, PLUM AND QUINCE.

This disease, which seriouly damages the trees both in the nursery and orchard, may be readily held in check by the proper use of either Bordeaux mixture or the ammoniacal solution. In the orchard and nursery the directions laid down for the treatment of pear scab, cracking and leaf-blight are applicable here.

TREATMENT OF BLACK-ROT OF THE GRAPE.

Method A.—After pruning the vineyard and putting the ground in thorough order spray the vines first, as the buds begin to swell, with Bordeaux mixture. When the leaves are one-third grown make a second application of the same fungicide, following with a third when the vines are in full bloom. After this, applications should be continued at intervals of ten or twelve days until the first signs of ripening are noticed. This will usually be three weeks or a month before the grapes are ready to pick. In no case should the treatments be continued up to the time of harvest, as this is entirely unecessary; moreover, it is sure to render the fruit unsightly. It is important to bear in mind that in case of dry weather the sprayings should cease.

Method B.—Following the direction laid down under method A, with the exception that the ammoniacal solution be used instead of Bordeaux mixture.

Method C.—For the first three sprayings use Bordeaux mixture, then substitute the ammoniacal solution for the rest of the season.

The cost of the treatment as laid down in method A, need not exceed 2½ cents per vine. Method B will cost 2 cents and method C the same.

So far as efficacy is concerned there is little choice. All things considered, however, method A will doubtless prove the most factory.

DOWNY MILDEW OF THE GRAPE.

When this disease occurs alone ammoniacal solution or modified *eau celeste* may be used. The first spraying should be made when the fruit is well formed, the others at intrevals of ten or twelve days as recommended for black-rot. What is known as brown-rot is caused by the fungus of downy mildew. It is seldom that brown-rot occurs in the berries without the leaves being also affected. In regions where this happens the treatment recommended for black-rot should be followed.

In some sections *eau celeste* has been more effective against these diseases than any of the other fungicides. This is notably the case in Northern Ohio and Western New York. *Eau celeste*, however, sometimes injures the foliage, and we do not advise its extended use.

(CONCLUDED NEXT WEEK.)

SUFFERING becomes beautiful when any one bears great calamities with cheerful; not through insensibility, but through greatness of mind.

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