FARM AND GARDEN

HOTBEDS.

Use of Greenhouse Type—An Improvement in the Hotbed.

On all appliances for the use of glass to lengthening the season of plant growth that of the hotbed is by far the most common, from the small bed of a few sashes suited to a common garden up to the large yards of hotbeds owned by market gardeners. The ordinary making of hotbeds is well understood, but there are certain variations from the usual form which are not so well known, although worthy the consideration of progressive gardeners. To these attention is called in an article originally appearing in Vick's Magazine. The writer says:

First we will speak of a form of hotbed which is somewhat in the nature of a greenhouse.

Fig. 1 shows such a hotbed of greenhouse form in cross section. The width of the house is 14 feet. The roof con-

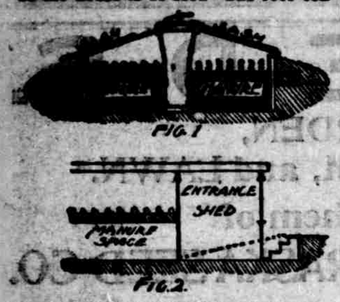


FIG. 2.

DETAILS OF GREENHOUSE FORM.

sists of six foot hotbed sash supported by rafters and a ridge part that consists of hinging boards which extend lengthwise of the house. The upper boards of this part, in alternate lengths on each side, are hinged to the ridge piece, thus affording means of ventilation without sliding the sash. Entrance is effected from the end through a shed, as shown in Fig. 2. The principal advantage of such a house is that the work of planting, watering, etc., can be done at times when it is too cold or stormy to open hotbeds as these are ordinarily made. There are some gains also in the matter of heat economy as well as in that of being able to replenish any part with fresh manure in case this is desired for increased heat.

First, an excavation two feet in depth and the size of the house was made, the soil being used in part for banking against the house for shelter and to carry away moisture. The sides consist of two inch scantling boarded up on the inside and at the top on the outside. The sash supports, of two inch stuff, at one end rest on the outer walls, while toward the other end they rest on two plates two and a half feet apart, which run lengthwise with the house. These plates are supported by iron gas pipes at intervals of eight feet, the lines of which also define the walk and the beds. The height of the house at the center is six and a half feet. The manure spaces are of the same extent as the beds proper and are about three feet deep. In the boarding up of the manure spaces at the walk it is arranged to have the greater part of the board surface movable, being kept in place by the buttons which are attached to the stationary boards at the top and bottom.

Aside from the hotbed above described the present writer has had much experience with hotbeds of the ordinary form a little later in the season than when the greenhouse is operated. One method employed in arranging his hotbed yard has been so satisfactory that he heartily recommends it to others. The idea is shown in Fig. 3. It is in the direction of entirely saving the handling of sashes, except as they slide on the frame, with a saving both in glass breakage and injury from racking.

The way of effecting this is by having the hotbeds arranged in double rows a and b in the engraving, with a space (c) between them equal in width to a hotbed. This space is designed to accommodate the sash when the bed is uncovered and thus never moving them into the walks (d d). It is seen that the sash supports are

BEDS ARRANGED ON AN IMPROVED PLAN.

twice the usual length—that is, they reach across the space c, thus keeping the sashes as safely supported and as free from racking when moved off the bed as when they are in place. The same space accommodates the sashes of both beds, as the slope permits the extended parts of the supports to be one well above the other, as the figure shows.

The space between the beds is not lost either, for here such things as late celery, cabbage and cauliflower are grown, as the sashes are entirely removed by the time the seedlings require the bed space.

Potato Experience.

At one of the Canadian farm stations large whole potatoes did not give a corresponding yield to the weight of tubers planted, and the result points to the inadvisability of planting very large sets. Small whole potatoes were more satisfactory and give promise of furnishing in a favorable season means of disposing of some unmarketable potatoes. The result from seed ends only proves the error of a prevalent theory as to their worthlessness for seed purposes.

DAISY.

"Daisy!"

Willard Grover was not a rich man, and, although Daisy loved him as she could never love any one else, she was not quite sure that she was ready to give up everything for love, and, besides, she was only 18 and he had seen nearly 40 years.

"Daisy!" he said again, and she raised a flushed face, saying respectfully:

"Sir?"

He smiled just a little at her tone and then asked abruptly:

"How old are you, Daisy?"

"Young enough to be your daughter, Mr. Grover."

The man's face flushed hotly, for he was very sensitive about the years between them, and after a few moments of silence he put out his hand and, taking hers for scarcely a moment in his own, said coldly:

"I beg you pardon, Miss Raymond. I forgot you were a child, with a child's feelings. It is not necessary to explain why I asked you here for a last walk today, for you are too young, I presume, to understand me." He raised his hat in adieu, but Daisy, hurt and angry at his tone, called after him, saying scornfully:

"If you see any pretty dolls in the city, you will send me one, won't you, Mr. Grover?"

He did not answer, for he was more hurt at the allusion to the difference in their ages than she knew; but his silence was so provoking, and she called again:

"Mr. Grover!"

He turned with a new hope in his heart, but, without looking at him, she said sweetly:

"If it is not asking too much, I would like some bonbons with the doll; all children like them."

He was hurt before, but he was angry now, and his eyes were flashing at her insolence, and he said angrily:

"You will beg my pardon for this before we are friends again, Miss Raymond."

"I never will," said Daisy, most decidedly, "unless"—

"Well?" he said, still hoping she would give him some word of encouragement.

"Unless you give me the doll and bonbons."

He turned on his heel and strode away without a word. Daisy watched him out of sight and then listened until she heard the whistle of the train that bore him away to the city to practice as a physician, and she knew it would be long, weary days before he would come back again.

She tried to make herself believe that she did not care, but the tears came in the soft eyes, and she gathered up the clover blossoms he had arranged for her and kissed them softly, for she did love the handsome doctor and would very likely have told him so if he had returned. But Willard Grover, sitting in the crowded cars, was thinking bitterly that he had made a fool of himself and bit his lip with vexation as he thought of the doll and bonbons.

And then he thought sadly of his 40 years and wondered how he could have been so foolish as to think that one so young and lovely as Daisy Raymond could link her fresh young life with his.

And he felt even older than he was, for all his life had been a continual struggle with poverty, and each year had been full of care, for he had his young sister to educate and support, and he had never thought of a wife until he met lovely Daisy Raymond.

But now a physician, an old and valued friend, had died, and, in taking the position vacated, with a good practice, the way had seemed clearer and brighter, and he had now dared to think of Daisy.

The months went slowly by, and when nearly a year had passed Mr. Grover returned.

His sister was to be married and insisted upon his being groomsman, and Daisy was to be bridesmaid. He came in the evening train, scarcely an hour before time, and Daisy fastened the flowers in her hair with trembling hands and went down to meet him with a beating heart, wondering what he would say and do.

He was standing in the hall when she came slowly down, looking more handsome than ever, and Daisy wondered how she had ever dared to tell that dignified, haughty looking man that he was old enough to be her father.

She need not have feared for him, for he came forward with perfect ease and took her hand, saying quietly:

"How do you do, my daughter?"

She did not answer, and he looked smilingly down on the flushed cheeks and downcast eyes, but there was not time to say more until after the ceremony had been performed, and then he drew her out of the heated rooms into the cool, moonlit porch and, turning to her, said gravely:

"Have you not a kiss for your father, Daisy?"

An angry light gleamed in her eyes, and she drew back haughtily as she said:

"You forget yourself, Dr. Grover. I am not a child."

He laughed and said carelessly:

"I am sorry to hear that, Miss Raymond, for you will hardly appreciate the lovely doll and delicious bonbons that I have brought you, then."

She turned away her face, saying softly:

"I did not know that you were so unforgiving, Dr. Grover."

"You have not asked my forgiveness," he said eagerly.

"And I never will," Daisy answered with her old spirit.

"But you said you would if I brought the doll and bonbons, Daisy. Isn't your word good?"

He held up before her a tiny doll and a beautiful box filled with confectionery, and she laughed in spite of herself and knelt, still laughing, and, clasping her hands in mock supplication, said:

"I beg your pardon, father."

He took the bright face between his hands, detaining her.

"That is not enough, Daisy," he said. "You must confess too."

"I have nothing to confess."

"You must confess that you love me?"

"But I don't," she answered, her face crimson with blushes.

But he read a different light in the dark eyes, and, although she is his wife now, he cannot teach her to call him anything but father.—New York News.

A Question of Conscience.

Bender—Middleway says he can't vote for our bill after all. His conscience, he says, will not permit him.

Bowser—Well, I suppose there's no help for it, although I thought when we bought up Middleway that was the end of the business. Go find out how much his conscience will sell out for.—Boston Transcript.

Limited Love.

"When your parents first refused me your hand, I was so wretched that I wanted to throw myself out of the window."

"And why didn't you?"

"It was so high!"—Lustige Blatter.

VALUABLE FORMULAS.

How to Prepare Insecticides and Fungicides for the Destruction of Insects and Scabs.

The following formulas for preparing insecticides and fungicides for the destruction of insects, scab, etc., have been found very satisfactory and are highly recommended by those who have given them a trial:

For destroying the codling moth, canker worm, curculio and leaf insects of various kinds that infest apple, peach, plum, etc., mix a pound of london purple or paris green in a half pail of water, stirring until every lump and particle of dry material is thoroughly incorporated; then dilute with 200 gallons of water for the first spraying. For the second spraying increase the amount of water by the addition of 40 gallons. If a third spraying is required add still another 40 gallons of water. The foliage is more easily injured as the season progresses, therefore the necessity of diluting the material used at each subsequent application. Apply after the bloom falls and at intervals of ten days thereafter.

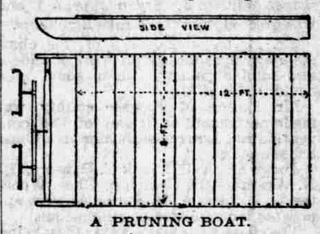
For leaf scab, with which orchardists have had so much trouble and have so faithfully labored to destroy, and mildew on grapevines, grape rot and other fungus diseases, the following has proved efficient: Dissolve six pounds of sulphate of copper in hot water in a wooden vessel. Slack four pounds of fresh lime in another vessel and strain out all the coarser material. Dilute the lime with 50 to 75 gallons of water and then add the sulphate of copper. This is for use on plants in leaf. Copper sulphate solution, which should be used only on plants in early spring before leaves appear, is made by dissolving one pound of sulphate of copper in 25 gallons of water to be used in this form.

A combination mixture for both insects and fungi is made by putting london purple or paris green in a barrel with Bordeaux mixture. The bark louse yields to the following: One pound of common soap dissolved in one gallon of hot water; add two gallons of kerosene and churn, with a force pump if you have one, or by stirring until the kerosene and soapsuds are thoroughly mixed. If the work has been done right the emulsion will have the appearance of very thick cream, and the oil will remain incorporated with the soap and water. Dilute with 30 to 75 gallons of water when using. Any of the mixtures will prove very destructive to the pests if applied properly. They should be applied with a force pump with a spray nozzle.

FOR THE ORCHARD.

How to Build a Pruning Boat for Hauling Away Limbs and Twigs Cut from Trees.

The pruning-boat is a handy, homemade necessity I noticed in a Washington orchard. It is used for hauling away the limbs and twigs cut from the fruit-trees to a convenient place, where they are burned. The boat is nothing more than a sled eight by twelve feet, with a platform of inch boards to receive the prunings. Three



A PRUNING BOAT.

or four men with pruning knives and saws cut the surplus limbs from two rows of trees at the same time, and throw them on the boat, to which a pair of horses is hitched. When a big brush heap is made the branches are drawn away to the fire and consumed. This assists in ridding the orchard of insects and disease germs, and saves the work of collecting the prunings after an orchard has been trimmed. The boat may also be used as a barn-yard manure-sled, and for hauling hay and corn-fodder to the feeding-yards.—Joel Shoemaker, in Farm and Fireside.

ABOUT GARDEN TRUCK.

Roots stored in boxes or barrels and covered with sand are much better than when left to shrivel in a dry cellar.

Novelties are to the garden what sauce is to the pudding. They may be no better than the old varieties, but there is pleasure and satisfaction in finding out.

Radish seed will keep in the ground through the winter. If a little place is prepared in some out-of-the-way corner and sowed late this fall, the plants will be up and growing with the first warm weather next spring. They will prove most acceptable then.

Sink a barrel two-thirds of its length in the ground, bank up to the top, then fill with cabbage and put on a covering of boards, straw or old carpet. The cabbage will keep till the last of winter and the barrel is accessible at any time. For heads that are to be kept till spring we like pitting the best of any method.—Up-to-Date Farming.

Ladybugs Sent to Portugal.

Not many years ago Australian ladybugs were imported into California to make war on a species of scale which was then rapidly destroying the orange groves of the Pacific coast. The little mercenaries did their work effectively, and now California has sent them to the aid of Portugal, whose orange and lemon trees have lately suffered from attacks of the scale insect. From a few individuals sent to Lisbon two years ago, millions of the ladybugs have since developed, and it is reported that they are making short work of the scale pest in Portugal.

A MARVELOUS CURE.

"We have discovered," said Dr. Macpherson, "that each bit of a man's body has its particular bit of brain to direct its movements, so that if a patient comes to me and tells me that he has paralysis of the left foot I can put my finger on a certain spot on his head and say with certainty, 'Here is a small abscess on the brain.' Then I send him to the operating room, the abscess is removed, and the man is cured."

"I will tell you a very successful case I had," continued the great brain specialist, "which will show you that the idea of connecting particular thoughts or memories with particular particles of the brain substance has at any rate been dreamed of."

"It was a few years ago, when I was giving all my thought and attention to experiments connected with this subject—the motive areas of the brain—that a gentleman of 80 or so called upon me at my private hospital and said that he had heard of a very successful operation which I had performed on a friend of his. It was the cure of partial paralysis by the removal of an abscess on the brain. The stranger said that my success had made him desirous of placing himself in my care for the treatment of an even more difficult case. I expressed my willingness to do my utmost for him if his particular affliction came within the scope of my powers, and I asked him to describe his symptoms.

"He began by saying that it would be necessary for him to relate in the first place an incident in his life, the unfortunate death of his only child, a boy of 4. The boy had died from drinking a wineglassful of carbolic acid which his father had carelessly left lying about.

"'Three persons had warned me not to leave it where I did,' said the father with such remorse and self reproach in his voice that his story affected me deeply. 'I myself knew I ought not to leave it, and still I did. I had told little Eric not to touch it, and I thought he would have obeyed me. * * * My carelessness was so flagrant and my reason for pouring out the acid at all sounded so incredible—it was for an experiment on a tame pigeon—that I was actually arrested and charged with murder. My grief was so sincere and there was such a total absence of motive for my wishing to kill the boy that the jury acquitted me. Day and night ever since I have had no rest and life has become unbearable through the memory of my crime. If I can find no way of forgetting it, I shall be driven, I know, to the further one of taking the life that God gave me. You must help me to forget.'

"'How?'

"'By a surgical operation. By removing the portion of my brain with which I remember.'

"'But I have no idea how to begin. You surely do not want me to remove part of your brain on the chance that it will be the right one?'

"To my astonishment, he opened a small brief bag, which he had brought with him, and took from it the freshly severed head of a dog. 'I have brought this to assist you,' he said, and he went on to explain. 'I have ever since my acquittal busied myself in experiments with a view to finding out the exact part of the brain which it is necessary to remove. An account of my experiments will interest you, possibly. You must know that I have seven very intelligent dogs and a great number of tame pigeons. The dogs have been trained not to touch the birds. My first step was to induce them to do so by placing every temptation in their way that I could think of. I had considerable trouble with Carlo, the one whose head I have brought you. They were such good dogs that I knew they would feel a considerable amount of shame and remorse after the deed, and as a matter of fact there was only one of them, a comparatively young dog, which did not drop its tail and show every sign of contrition when I pointed to the empty cage.

"'As soon as things were at this point of course I resorted to vivisection and tried the experiment of removing different parts of the brain, an experiment which turned out even more successful than I had hoped. The seven dogs are now dead, but I had the happiness of seeing Carlo before he died gaze at the empty pigeon cage without the slightest expression of remembrance of remorse. I had found the spot in his brain which I needed, and I have brought you his head to assist you in the operation. Do you care to undertake it now?'

"Well, things wore a different aspect after he had told me about his experiments, and I said that I should be very happy to treat him and that I had every hope of a successful issue to the case. I communicated with his friends and allowed him to enter the hospital at once. That man is now alive and well, and if you tried all day long you could not persuade him that his child's death was in the least due to any act or omission of his."

"Then it is the most wonderful case I have ever heard of in the whole course of my existence," I burst out enthusiastically, and the brain specialist smiled.

"Perhaps it is not so wonderful as you think," he said. "For one thing, he never had killed his child. As a matter of fact, the boy is alive at this moment. You see, the man—as I ought to have guessed at once, although I never suspected it until he produced the dog's head—was a raving maniac. I made inquiries about him, of course, as soon as I had him under lock and key, and I found he had escaped from a private house near. His wife was very glad to let me take him under my charge, with, I am happy to say, the best results. I look upon his complete cure as one of my greatest successes. He was a scientist who had overworked his mind in the pursuit of chemical research and was suffering from homicidal mania. His child was removed out of his way after he had made an attempt of some sort on its life."

"And the dogs?" somebody asked. And the doctor, although he was a vivisectionist, looked grave.

"Yes, the poor dogs were dead," he said regretfully. "His mania was first suspected when one day he cut off all their heads with a carving knife. But their deaths have not assisted in the discovery that may yet come of 'thought areas' in the brain."—Pittsburg Press.

Euchre an Old French Game.

Euchre is the ancient French game of triomphe. The early French settlers brought the game to America and played it with 32 cards. As commonly played in this country today 24 cards are used in four handed games. The books generally give 32 cards as the proper number, but that number is not justified by American usage.

As to Aguinaldo.

"Speaking of Aguinaldo, no country that is too hot to raise cherry trees can ever expect to produce a George Washington.—Detroit Journal.

A Victim of Circumstances.

"You predicted a cold wave, sir," said the citizen.

"Yes, sir," replied the weather man.

"Whereat the coal man raised the price of his wares, and I was forced to go a foot deeper into my pocket. The cold wave didn't come, and now I want to know who's going to indemnify me."—Philadelphia North American.

Too Much For Him.

"The handwriting expert was floored that time."

"How?"

"A woman's letter was produced in evidence, and he couldn't tell whether she wrote the first page first or the last page first."—Chicago Record.

In Thorough Subjection.

Mr. Meeker, who had gone to the front door to answer the postman's ring, put his head inside the door of the room where his wife was sitting.

"It's a letter for me, my dear," he said. "Shall I open it?"

Hypothetical.

"No," she said, "I wouldn't marry you if your pockets were lined with gold."

"In which event," he replied, "I wouldn't be proposing."—Philadelphia North American.

J. H. McMurtry Bankrupt

J. H. McMurtry an old resident and for years a prominent business man of Lincoln has filed a petition in bankruptcy in the United States District Court. The total liabilities are $224,672.22 and assets are placed at $150.00 The debts were contracted in three years from 1894 to 1897.

NOTICE

In compliance with the statutes of the State of Nebraska, in such cases made and provided, notice is hereby given that sealed proposals will be received at the office of the Commissioner of Public Lands and Buildings until 9 o'clock a. m., April 2, 1900, for furnishing supplies for the quarter ending June 30, 1900, for the Hospitals for the Insane at Lincoln, Hastings, and Norfolk; the State Industrial School at Kearney; the Girls' Industrial School at Geneva; the Institution for Feeble Minded Youth at Beatrice; the Soldiers' and Sailor's Homes at Grand Island and Milford; the Home of the Friendless at Lincoln; the Women's Industrial Home at Milford, and the State Penitentiary at Lincoln.

Estimates and blank proposals may be had upon application to the superintendents of the various institutions.

A bond for a sum equal to the proposal shall accompany each bid. All bids to be made in duplicate.

No proposal will be received unless in the office of the Commissioner of Public Lands and Buildings on or before the day and hour above mentioned.

The original of each accepted proposal must bear a 50-cent revenue stamp, which may be affixed after the award is made. No bid in which samples are called for will be considered unless the samples are submitted.

The board reserves the right to reject any and all bids.

J. V. WOLFE, Secretary.

Lincoln, Neb., March 15, 1900.

N. B.—The board will undertake to consider all bids for all goods in one day.

—Washington Star.