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HONEY COLUMN.

CITY MARKETS.

CINCINNATI.—Honey.—No change has taken place in the general feature of the market. Demand is slow for extracted honey, with an abundance on the market. Depression in other branches of business, and low prices, have their bearing upon honey. Better prices will, in my estimation, not be obtained until a general revival of business takes place; our most ardent desires to the contrary notwithstanding. Custom has to be made, even at the short crop of this season. Small lots only of new comb honey make their appearance, and are sold readily, but demand is slow in proportion. Extracted honey brings 4@8c on arrival, and choice comb honey 15@16c in a jobbing way.

Beeswax is in fair demand, and arrivals are good. We pay 20@24c for good yellow.

The following explanation in regard to markets seems to be necessary in order to post some of our bee-keeping friends, and save them from disappointment. When quoting prices "on arrival" I mean to say that honey will bring about the price quoted, or that a figure within the range given will appear reasonable or acceptable to a purchaser. I quote, as near as possible, the prices at which I am buying and selling. I do not mean to say that purchasers are waiting for the arrival of honey, and are anxious to buy at those prices quoted, nor that I am willing to pay those prices on arrival for all the honey that may be shipped here. This latter would require a larger capital than I and two more of the largest dealers in America possess. It is unpleasant for us to be overrun with honey for which I will not pay on arrival, unless agreement has been made previous to shipment.

CHAS. F. MUTH,  
S. E. Cor. Freeman and Central Avenues.  
Sept. 12, 1885. Cincinnati, O.

NEW YORK.—Honey.—There is very little change to note in the honey market since our last, except more activity. New crop comb honey is arriving quite freely, and selling readily at following prices: Fancy white clover, 1-lb. sections, per lb. 14@15c 2-lb. " " 12@13c Fair to good 1 and 2 lb. " " 10@11c Fancy buckwheat, 1-lb. " " 11@12c 2-lb. " " 9@10c Extracted white clover, " " 6@7c " buckwheat, " " 5@6c

Sept. 8, 1885. MCCAUL & HILDRETH BROS.,  
34 Hudson St., cor. Duane St., N. Y.

DETROIT.—Honey.—The market is improving; good honey is bringing 17@18c. A. B. WEED,  
407 Woodward Ave., Detroit, Mich.

Sept 11, 1885.

BOSTON.—Honey.—Best white 1-lb. sections, 15@18c; 2 lbs., 14@15c; extracted, very slow at any price. Beeswax, 25@30c. BLAKE & RIPLEY,  
Sept. 11, 1885. 57 Chatham St., Boston, Mass.

CLEVELAND.—Honey.—The market at present is pretty well supplied with new honey by neighboring apiarists from wagons, which makes the demand from our stores rather light. The price of 14@15c per lb. for best white 1-lb. sections is well maintained, however, and we may look for better sales in the future, particularly if the clouds of dull times, which are predicted to be breaking, leave the commercial horizon bright and clear before long. Extracted, 6 to 7c. Beeswax, 22c. A. C. KENDEL,  
Sept. 10, 1885. 115 Ontario St., Cleveland, O.

CHICAGO.—Honey.—Market is quite good for this season of the year; receipts are heavier, and sales also larger than at last writing; 15@16c per lb. is the price obtainable at present for comb honey of best style and quality. Extracted, 5@8c. Beeswax, 24c. R. A. BURNETT,  
Sept. 10, 1885. 161 So. Water St., Chicago, Ill.

ST. LOUIS.—Honey.—Our market continues quiet, a small demand for extracted in barrels; 4@4½c for Southern. New white clover in cans, retail, 8½@9c. Comb honey, some light inquiry for white clover, choice, 18@17c retail. Beeswax—very dull; stock large, 21@22c. W. T. ANDERSON & Co.,  
Sept. 10, 1885. 104 N. Third St., St. Louis, Mo.

MILWAUKEE.—Honey.—New honey not very plentiful. Demand good. Extracted, quick sale at 8c per lb. Comb, 1 and 2 lb. sections, white, 15@17c; dark, 12@14c. A. V. BISHOP,  
Sept. 10. 142 W. Water St., Milwaukee, Wis.

WANTED.—500 lbs. comb and 1000 lbs. extracted honey. I will pay cash, 14c for comb and 7c for extracted. Honey must be delivered here in good shape; must be all clover or basswood; comb may be in any size of section less than 2 lbs.; all well filled, sealed, and straight. Extracted must be thick. OLIVER FOSTER, Mt. Vernon, Iowa.

WANTED.—Extracted basswood honey, in lots convenient to handle (10-lb. lots preferred). J. G. LEHDE, Gardenville, Erie Co., N. Y.

FOR SALE.—2000 lbs. of white-clover honey (extracted), in barrels. I will deliver it on cars at Ionia, on the C. M. & St. P. R. R., or at Nashua, on the I. C. R. R., at 7 cts. per lb., net. HENRY L. ROUSE, Ionia, Iowa.

FOR SALE.—4 barrels of fine linn extracted honey, ripe, and of the best quality, seven cents per lb., delivered on board cars here. J. B. MURRAY, Ada, Hardin Co., Ohio.

Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is oftentimes quite an accommodation to those who can not afford higher-priced ones.

I have 15 prolific hybrid queens to dispose of, at 25c each, in stamps; 5 for one dollar. W. A. SANDERS, Oak Bower, Hart Co., Ga.

I have 8 hybrid queens, this year, 2 nearly black, others choice queens; \$2.25 for the lot, and safe arrival guaranteed; 3 for \$1.00. Who wants them? B. F. CARROLL, Dresden, Texas.

Ten fine large yellow hybrid queens, six weeks old, bred from pure Italian mothers, which I have taken from a neighbor's apiary, at 25c each; five dark, at 15c each, ready to go by first mail. Safe arrival. F. H. SCATTERGOOD, Winona, O.

I have several black and hybrid queens that I will sell at 25 and 35c respectively. Safe arrival guaranteed. J. H. GINDLING,  
Ohlman, Montgomery Co., Ill.

DADANT'S FOUNDATION FACTORY, Wholesale and retail. See advertisement in another column. 3btftl

FOR SALE.—50 colonies of bees, will sell cheap. Address THOS. R. SMITH, Luna Landing, Chicot Co., Ark.

# DADANT'S FOUNDATION

is asserted by hundreds of practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenest, and neatest, of any that is made.

It is kept for sale by Messrs. A. H. Newman, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; F. L. Dougherty, Indianapolis, Ind.; Chas. H. Green, Berlin, Wis.; Chas. Hertel, Jr., Freeburg, Ill.; Ezra Baer, Dixon, Lee Co., Ill.; E. S. Armstrong, Jerseyville, Illinois; Arthur Todd, Germantown, Philadelphia, Pa.; E. Kretschmer, Coburg, Iowa; Elbert F. Smith, Smyrna, N. Y.; C. T. Dale, Mortonville, Ky.; Clark Johnson & Son, Covington, Ky.; King, Aspinwall & Co., 16 Thomas St., New York City; C. A. Graves, Birmingham, O.; M. J. Dickason, Hiawatha, Kan.; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y., and numerous other dealers.

Write for samples free, and price list of supplies, accompanied with 150 Complimentary and unsolicited testimonials, from as many bee-keepers, in 1883. We guarantee every inch of our foundation equal to sample in every respect.

**CHAS. DADANT & SON,**  
3btfd Hamilton, Hancock Co., Illinois.

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Western headquarters for bee-men's supplies. Four-piece sections, and hives of every kind, a specialty. Flory's corner-clamps, etc. Orders for sections and clamps filled in a few hours' notice. Send for sample and prices.

**M. R. MADARY,**  
9 20db Box 172, Fresno City, Cal.

## VANDERVORT COMB FOUNDATION MILLS.

Send for samples and reduced price list.  
2tfd JNO. VANDERVORT, Laceyville, Pa.

## 72 Colonies of Bees For Sale.

I will sell the above number of colonies of bees on very reasonable terms. They will have plenty of honey to winter on, and are in good condition otherwise; are in 12-frame hives, with about the same capacity of a 10-frame Simplicity. Correspondence solicited.

**H. F. BARGAR,**  
17-19db Border Plains, Webster Co., Iowa.

## TRY THE BELLINZONA ITALIANS,



15tfd

And see for yourself that they are the best.—Warranted Queens, bred from mothers imported direct from the mountains of Italy, \$1.00 each; 6 for \$5.00. Special discount on large orders. Satisfaction guaranteed. Send for circular. Orders filled promptly.

**CHAS. D. DUVAL,**  
SPENCERVILLE, MONT. CO., MD.

## BEE-HIVES, ∴ SECTIONS,

### HONEY-BOXES, ETC. GREAT REDUCTION.

All Dealers and large consumers will find it to their interest to write us for special stocking-up prices, either for present or future delivery. 16tfd

**G. B. LEWIS & CO., WATERTOWN, WIS.**

**Wanted.** A competent man to conduct an apiary, also a poultry ranche. Address with reference,  
**L. A. FITZPATRICK,**  
16-19db Hyde Park, Phillips Co., Ark.

## HONEY AND BEESWAX.

We are now in the market, and will be during the entire season, for all honey offered us, in any quantity, shape, or condition, just so it is pure. We will sell on commission, charging 5 per cent; or if a sample is sent us, we will make the best cash offer the general market will afford. We will handle beeswax the same way, and can furnish bee-men in quantities, crude or refined, at lowest market prices. Our junior member in this department, Mr. Jerome Twiehell, has full charge, which insures prompt and careful attention in all its details.

Sample of comb honey must be a full case, representing a fair average of the lot. On such sample we will make prompt returns, whether we buy or not.  
**CLEMONS, CLOON & CO.,**  
15 2db Kansas City, Mo.

## GET THE BEST BEE-BOOK.

The third edition of **The Bee-Keeper's Handy Book** contains 300 pages and 100 fine illustrations, also a likeness of Rev. L. L. Langstroth, and the late Moses Quinby, two of the most noted bee-keepers of the world. Two hundred pages of this work are devoted to practical bee-keeping, and 100 pages to the best and simplest methods for rearing queens. Mr. Langstroth says this work is the "best authority on queen-rearing," and J. E. Pond says, "It is the best bee-book published in the English language." Send for prospectus. **HENRY ALLEY,** Wenham, Mass.

## QUEENS AT REDUCED PRICES.

Owing to the scarcity of money I will sell my warranted Italian Queens at \$8.00 per dozen; two dozen for \$15.00.

**J. T. WILSON,**  
18tfd. NICHOLASVILLE, KY.

## RASPBERRY TIPS FOR SALE.

I have Raspberry tips for sale at \$9.00 per 1000, of Gregg, Tyler, Souhegan, and Cuthbert varieties.  
18d **L. C. WOODMAN,** GRAND RAPIDS, MICH.

## ↔ For Sale Cheap. ↔

My place, consisting of one 2-story frame house, one two-story shop, 4 lots in one inclosure, 14 bearing fruit-trees, 10 swarms fine Italian bees, one 6½-horse-power engine, and saws for hive-making. Price \$1200. For particulars, address  
18 19d **J. W. HART, L. E., EUREKA SPRINGS, ARK.**

## THE CANADIAN BEE JOURNAL.

WEEKLY, \$1.00 PER YEAR.

**D. A. Jones & Co., Publishers, Beeton, Ont., Can.**

The only bee journal printed in Canada, and containing much valuable and interesting matter each week from the pens of leading Canadian and United States bee-keepers. Sample copy sent free on receipt of address. Printed on nice toned paper, and in a nice shape for binding, making in one year a volume of 832 pages. 9tfd

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**SECRETION; WHAT IS IT?**

**HOW AND WHERE DO THE BEES GET WAX?**

**A.** J. COOK:—Please answer this in GLEANINGS: Do bees digest honey, or do they manufacture honey into wax? Please explain it plainly, as there are parties here who do not agree with your theory in your Manual. I have one, but it is one of the old edition.

J. W. BITTENBENDER.

Knoxville, Iowa, Aug. 13, 1885.

Answer by Prof. Cook.

The question of Mr. Bittenbender's serves admirably as a text for an article which I have long desired to write for GLEANINGS, but for lack of time have deferred till now. I wish to consider the relation of nectar to honey and to the food of larval bees, the relation of honey to wax as secreted by bees, and the relation of the sap of trees to the nectar which is secreted by their flowers or other glandular extra-floral cells.

Secretion, whether of saliva or spittle, in our own salivary glands, whether of milk by any of the mammals, or whether of wax by bees, is always accomplished by cells specially developed for the purpose. These cells may be just blind sacks of protoplasm, as the nectar-glands of plants, or they may be cells conducting to tubes when, as in case of our salivary glands, or the glands in the head and thorax of bees (see Manual, p. 87), they are called racemose glands, from their resemblance to a bunch of grapes. It is the function of these glandular cells to take elements from some nutritive fluid, like the sap of plants or the blood of animals, and from some other substance—the secretion—not found in the blood, or in the sap, as the case may be. A se-

cretion, then, is not a substance simply eliminated from sap or blood; it is a new substance formed from the sap or blood, which, in the economy of the individual, shall be of some service. Thus our spittle or milk is not in the blood. The elements are there, but the spittle and milk are products of the glands, made from elements taken from the blood. So, too, the nectar of flowers, or plant-glands, is not in the sap of the plants, but is made by the gland-cells from elements in the sap. True it is, that these cells will sometimes eliminate foreign substances—may be toxic substances—which are in the blood. For instance, we may feed a cow poison, and find the poison in the milk. The poison is no part of the milk; but the glands, like good Samaritans, quickly spring to the aid of the purely eliminating organs, the lungs and kidneys, in the removal of the harmful substance of the blood.

In case of the poisonous honey discussed in GLEANINGS, I said I did not think it possessed the properties of the sap. First, the nectar is a secretion, and so is made from the sap, but is not the sap. True, the glands might remove a poisonous element in the sap, possibly—as animal glands do upon occasion—but this is not likely, as the poison is not hurtful to the plant, but a normal substance, and there is no occasion for its removal. Again, this poison is always in the sap, yet we have not heard of this honey as poisonous before—not till this year. Plants are in like condition every year, and do not by accident get poison as do animals, which may need elimination. I think it far more likely that the bees got some real poison from other sources; or possibly good honey was a poison to

the persons afflicted, as all honey seems to be poison to some people. "What is one person's meat is another person's poison."

Only a few years ago I received honey from New York State which poisoned several persons, yet we have not heard of any similar poisoning since. It is more than likely that what was true in one case was also true in the other.

To answer the question as to wax. Bees take honey as food. This is digested and absorbed, when it becomes blood, which is the nutritive fluid of the bee, but is not honey, and quite likely contains no honey for the most if not all the time. From this blood the wax-glands secrete the wax scales. Thus the wax of the bee has the same relation to the honey eaten by the bee, that the cow's milk has to the hay which she eats. As stated in all the last editions of my "Bee-Keeper's Guide," from the eighth thousand to the thirteenth thousand inclusive, nectar and honey are not the same. We feed cane sugar to bees, and we get honey sugar, which is quite different in the comb-cells. So nectar is largely cane sugar, and is neutral, while the honey is a different sugar, and is acid. Thus we may say that honey is digested nectar, which is fitted in such digestion to be absorbed and assimilated. Recent experiments have shown that, when we eat cane sugar, it is digested in our stomachs, and in this act converted into a sugar like, if not identical, with honey sugar, whereby it is fitted for absorption and assimilation. Thus we have reason to believe that honey is the best form of sugar, as here the bees have done what otherwise our own digestive energies must have performed.

It is quite likely that honey sugar is most like liver sugar, and that both are widely removed from corn glucose, though all give the same chemical reaction with the copper salts. This view of the superior excellence of honey as a food, gives new force to the commendation, "A land flowing with milk and honey."

Again, bees feed a creamy substance to the larval bees. This substance contains not only oxygen, carbon, and hydrogen, the only elements of pure honey or sugar, but also nitrogen. This last the bees get from the pollen, which must surely be present to rear brood. True honey may contain a little pollen: but to rear any considerable amount of brood, pollen must be present in greater quantities—stored in the cells. This honey and pollen is very perfectly digested by the bees, and so is fitted for absorption, else it would be useless, as the larval bee is not fitted to digest. It is not known whether the digestive juices that produce this change are all formed in the stomach or not. Quite likely the large glands in the head and thorax may aid. This is a question difficult of solution, but will doubtless one day be solved.

A. J. COOK.

Agricultural College, Lansing, Mich.

I have always supposed that the wax secretion in the body of the bee was formed in a similar way to the formation of tallow and lard and fatty matter, in the bodies of our domestic animals. They eat grass, hay, and grain. The nutritive properties of these different kinds of food go into the blood. When all the different functions of the animal are properly performed, there is a residue of a very rich concentrated substance. This substance accumulates as fat. In the body of the bee the process is the same, only

that these flakes exude so as to come out between the scales composing the bee's body. They are not identical in composition with lard and tallow, but they are in many respects similar. With the bee it seems to be a provision of nature—a substance just exactly right to build the cells of the honey-comb. Sometimes these wax scales stick out in such protuberances that they curl up. A few days ago a friend sent us a bee by mail, asking what sort of a fungoid growth it was that was sticking out of and adhering to the bodies of many of his bees. There was no trouble at all, of course. His bees were simply secreting unusual quantities of wax. When we feed sugar heavily in the fall, to get the bees ready for wintering, they often secrete such quantities of pearly-white wax scales that they fall to the bottom of the hive in the form of a dust, and under the microscope they look much like fish-scales. Of course, there must be a waste when this happens; for it doubtless requires a good many pounds of sugar to make one pound of this white wax, just as it requires a good many pounds of corn to make one pound of beautiful white leaves of lard in the body of a hog.

#### PROCEEDINGS OF THE OHIO STATE BEE-KEEPERS' ASSOCIATION.

REPORTED BY G. F. WILLIAMS.

IN giving this report it may be well to announce that, as the regular secretary did not make his appearance nor send any of the papers from the last meeting, we were unable to produce any minutes of said meeting, or even get a copy of the constitution and by-laws. Friend Williams was requested to act as secretary until the regular secretary should appear; but as said officer did not appear at all, the following report is entirely from Mr. Williams:

The bee-keepers of Ohio met, as previously announced, at the State Fair-grounds, and assembled at 9:30 Thursday morning, in room over Aparian Hall. A. I. Root, Pres., called the meeting to order. Dr. Besse introduced the subject of

#### BEEES TRESPASSING.

and cited the case of a Wisconsin farmer who had brought suit against a bee keeper whose bees, he claimed, trespassed on his clover fields. The doctor said, "I don't think bees ever trespass. I think it preposterous for a man to sue for bees trespassing. Bees are an advantage to all farmers, by assisting nature in the fertilization of flowers."

C. E. Jones.—I never had any complaint, and think them a blessing.

A. I. Root.—In my opinion, nothing can be made out of the case.

Secretary.—In our town a neighbor complains of bees trespassing in the kitchens, and of eating their grapes.

A. Benedict.—People think bees puncture grapes; but this is a mistake. They work on grapes after wasps, and other insects having strong mandibles, puncture them. They never injure sound fruit.

President.—We have several hundred grapevines right over our hives, and our grapes are never injured by the bees.

Dr. Besse.—Bees will never injure the tender Delaware grape, unless the skin is first ruptured. Bees are a benefit to corn-growers.

A. Benedict.—After grapes are bursted they soon rot any way, and might the bees not as well get the sweet from it as to let it waste? Bees are a benefit to all fruit-growers.

Dr. Besse.—Fruit-growers ought to be thankful

for the bees. If there were no bees there would be little fruit.

*President.*—A Massachusetts fruit-man once compelled a bee-keeper to remove, because he claimed that his bees injured his fruit. A trial of several seasons without the bees was a failure, and the bee-keeper was prevailed upon to come back.

#### CIDER - MILLS.

*Mr. Benedict.*—I am satisfied that cider mills injure bees.

*Dr. Besse* (who seems to always take the opposite side, in order to draw out all points).—Cider-mills are a good thing for bee-keepers in killing off some of our bees, so that they do not go into winter quarters too strong.

*C. E. Jones.*—I lost 73 colonies, which had plenty of clover honey; cider carried in killed them; had better spent \$10 in screening the mill.

*President.*—As a means of harmony I suggest that bee-keepers furnish some kind of screen to keep out the bees. We furnished one for a neighbor cider-maker which kept out flies, etc., as well as bees, and cost only \$2.00.

*E. R. Root* moved that the President appoint a committee to see that a suitable building be erected by the Agricultural Society of the State on the new fair-ground, for the use of bee-keepers, as a place of exhibition and meeting. Seconded and carried.

*Dr. Besse*, Delaware, chairman; *C. E. Jones*, Delaware; *Aaron Benedict*, Bennington, were appointed the committee.

Next was proposed the subject of having the Ohio Agricultural College take up Apiculture as a branch of study. The President said he thought the college ought to take such measures, and that it would elevate bee culture in our State.

*Dr. Besse* moved that a committee be appointed to confer with the directors of the Agricultural College, to have a station of bee culture established there. Seconded and carried. Ques.—What is to be the object of this department?

*Dr. Besse.*—The object is to test for best bees, best methods of management, to report from time to time, and to educate students in bee culture.

Committee appointed were—*Dr. Besse*, chairman; *J. W. Newlove*, *W. Oldroyd*, *Dr. Mason*, *A. I. Root*, *Chas. Muth*, *Dan White*.

Perhaps I might mention here, that before returning home I had a conversation with some of the friends at the Agricultural College, in regard to the above matter, and they declared that it is out of the question to take up any thing more just now, without more funds and more intelligent helpers. There are already too many things started that amount to nothing, because of the lack in the direction above mentioned; or, to put it briefly, "too many irons in the fire" as it is. I am not competent at present to say just what needs to be done. But it seems to me there is no reason why we should be behind the State of Michigan, or any State, for that matter.

#### WHAT IS THE PROPER SIZE OF A COLONY TO START IN WINTER QUARTERS?

*Dr. Besse.*—I think too many bees do not winter as well as a small colony.

*A. Benedict.*—I can not quite agree with *Dr. Besse*. I want a large colony of bees; a small one will eat much more honey in proportion to its size than a large one, to keep up animal heat.

*C. E. Jones.*—My experience in this: Get a colony in as nearly a natural condition as possible, large, and plenty of honey.

#### HOW MANY BEES ARE NECESSARY FOR SUCH A COLONY?

*Dr. Besse.*—About 3 lbs.

*A. Benedict.*—I winter out of doors.

*Dr. B.*—I winter in the cellar.

*Mrs. Culp.*—I don't care for such large colonies. I don't stimulate in the fall; am satisfied small colonies are the best. I winter in chaff hives, and stimulate in the spring.

*Dr. Besse.*—Winter half the bees, and extract and sell half the honey.

*President.*—*Dr. Besse* and *Mrs. Culp* may be right, but I think there ought to be caution used here in the use of terms. A large colony will sometimes

contract in cool weather to the size of a popcorn ball, and winter well.

*Dr. Besse.*—If you stimulate in fall, feed early enough so that young bees can have two or three flights before they cluster for winter.

#### WHEN WOULD YOU FEED?

*Dr. Besse.*—Any time—the sooner the better.

*President.*—We have the best results by feeding gradually. Feed, say, ¼ lb. every night; feed during September if possible.

*Mrs. Culp.*—I think my plan of setting away full combs, and giving them in the fall, the best plan.

*Dr. Besse.*—We should throw out the uncapped honey before going into winter quarters.

#### HOW MANY COMBS OF HONEY ARE NECESSARY TO WINTER A COLONY?

*Dr. Besse.*—Twenty-five lbs. of honey.

*President.*—Five full combs.

#### POOR SEASONS.

*President.*—Bee-men are complaining of a poor season. I should like to inquire if it is the fault of the season or the apiarian.

*Dr. Besse.*—May be the fault of the supply dealer (?). You should make ½-inch space for bees between sections; bees will then go up sooner.

*C. E. Jones.*—Don't put on too many sections in a moderate season at one time.

#### WHERE IS THE BEST HONEY LOCALITY IN THE U. S.?

Answers—Central Ohio; California in a good season; Florida; basswood locality of Wisconsin and Michigan.

*Dr. Besse.*—Ohio extracted and comb honey, taken by me to the exposition at New Orleans, took the first premium.

*A Stranger.*—Hardin Co. is as good as any county in the State, for honey.

*Mrs. Culp.*—Franklin Co. is a good locality. I tested one colony, and took 252 lbs. extracted honey. Adjourned to 2 P. M.

#### HOW MANY COLONIES CAN BE KEPT IN ONE LOCALITY?

*President.*—That depends on circumstances.

#### AFTERNOON SESSION.

The subject of

#### MOVING BEES DURING THE WORKING SEASON was first taken up.

*Dr. Besse.*—Move five or six swarms every evening. After bees are all in the hive, set the hives far enough apart to set others between them when moved next evening. Set a board, or three or four sticks of stovewood, in front of the colony moved. I moved 100 colonies 250 or 300 ft., and very few bees, if any, went back. They were caught in a nucleus hive on the old stand. I would advise moving strongest first, then the returning bees would reinforce the weaker ones left.

*A. Benedict.*—When setting bees out of cellar, be sure to put hive on old stand.

*Mr. Gorden, M. D., Mt. Vernon.*—I have no trouble in moving bees short distances, and I don't think it makes any difference whether we set bees on old stand when taken out of cellar or not.

*Mrs. Culp.*—I set my bees further apart last fall, and saw no bad result. I was trying to see if I could make them do as I wanted, and I did.

*Dr. Gorden.*—I winter my bees out of doors, with corn-fodder placed around them, leaving an opening on south side, so the bees can fly on warm days. I move them together and set them on scantling two tiers high.

*Mr. Morris, Fayette Co.*—I wintered my bees in a bee-house for three years, successfully. I never set out of doors for a fly when quiet. The house has a brick foundation, double wall, 1 ft. space filled with sawdust; 1 ft. sawdust on top, cement floor.

*President.*—In regard to cellar wintering, there is a diversity of opinion and experience. Chaff hives seem to be the most practicable, with the variable winter weather we have in Ohio, and public opinion seems to be getting in favor of them.

*A. Benedict.*—Bees need more ventilation in winter than in summer.

*President.*—Our practice is to leave the entrance open full width all winter.

*Mr. Goodrich.*—I prefer cellar wintering; keep bees as near the freezing-point as possible, and think it best.

*Dan White.*—I think the cellar, with an experienced hand, the best place to winter, although I winter

in chaff hives out of doors. I lost half my bees last winter.

*C. E. Jones.*—The cellar is a good place to winter, if properly prepared.

*President.*—The cause of last winter's losses was poor stores and severe weather.

#### WHAT IS THE CAUSE AND CURE OF SPRING DWINDLING?

*Mr. Morris.*—Our spring losses were caused by there being too few young bees when we went into winter quarters.

*Dan White.*—The cure is plenty of young bees.

*President.*—There is some mystery about spring dwindling. A colony dwindling seems to get discouraged, and will not even gather pollen. I am sometimes inclined to think it a disease of some kind, and may be contagious, affecting whole apiaries, and missing others in the same locality. A disastrous winter is a benefit, in one way, by making a demand for bees and honey.

#### IS SORGHUM INJURIOUS TO BEES?

*President.*—Yes, it is a dangerous winter food.

*Mr. Morris.*—Will bees degenerate by in-breeding?

*C. E. Jones.*—We had better introduce new blood.

*President.*—I don't think there is any danger of any harm arising from in-breeding.

#### WHO USES SEPARATORS?

*Dr. Besse.*—I don't, and think it is better without them.

*Secretary.*—I have abandoned them. To get the nicest and straightest combs, use  $1\frac{1}{8}$ -inch sections; such a section,  $4\frac{1}{2} \times 4\frac{1}{2}$ , will hold a pound, and you can have as many rows of sections as you have brood-frames—the frames being spaced  $1\frac{1}{8}$  inches; reverse your sections.

*A. Benedict.*—I use  $1\frac{1}{2}$ -inch sections with no separators.

It seemed to be generally understood that we could all dispense with separators by using narrower sections.

Adjourned to meet in Sec. Chamberlain's office, in State House, at 7 o'clock.

#### EVENING SESSION.

The question was asked, Which is preferable, natural swarming or division?

*Dr. Besse.*—Divide them. I would rather divide three than have one natural swarm. By division you have complete control of the bees. I raise early queens from best stock. Get early drones by inserting a drone comb in the center of full colony. When a colony indicates swarming I divide, putting old queen on new stand and new queen on old stand.

*C. E. Jones.*—I am in favor of natural swarming. I also raised early queens. I make two swarms out of a large one. I think it more natural for them to swarm.

*Secretary.*—I let my bees swarm naturally, or I divide them, according to the circumstances and conditions of a colony at the time. No general rule can be laid down. It may be best to divide one, and best to leave another to swarm. You must learn to determine by experience. I clip my queens.

*Mr. Pierson.*—I prefer natural swarms. I clip my queens also.

*President.*—Where you desire increase, divide. If you wish honey and no increase, let them swarm if you can't help it.

*Wm. Oldroyd* described how he took a swarm out of a very high tree, which led to a discussion on hiving swarms.

*Mr. Benedict.*—I would smoke a swarm down from a high limb by tying burning rags to a piece of iron fastened to a long pole, or I would use a swarming-box. I believe in artificial swarming, and I don't believe in it. I divide by the "drumming" process, which is the most natural. The bees thus swarmed are filled with honey; and as a swarm takes about 6 lbs. of honey with them, this gives them a start. I put the old queen on the new stand, and run the new queen in the other part. In 15 days I can drum again. By putting in the new queen I always have the hive full of bees.

*Dr. Besse.*—Bees usually alight on low bushes.

*Wm. Oldroyd.*—That is not my experience.

*Dr. Besse.*—To hive a high swarm I would shake the bees off on a pole, to which a caged queen is fastened.

*C. E. Jones.*—In swarming time I watch my bees closely. I can tell within 10 minutes of the time when a swarm is going to come out. Bees generally alight low. I take the swarms from a limb in a

swarming-basket with a spring lid. I generally catch swarms in a basket just as they are coming out. If two or three swarms alight together, dump them on a sheet; catch the queens, and divide equally as nearly as possible.

#### HOW CAN WE TELL WHEN A COLONY IS GOING TO SWARM?

*Ans.*—By the commotion in the hive and in front of it. I use a hive with glass on the sides.

*A. Benedict.*—I separate my swarms with my smoke-pole, holding it near the swarm already settled, which will prevent others from settling.

*President.*—We used to keep a caged queen to catch swarms, as stated by Dr. B.

*Secretary.*—Mr. Ed. Miller, a neighbor bee-man, who is a carpenter by trade, and who is away from home during the day, clips his queens, and during the swarming season sticks a stout bush, with some branches on, a few feet in front of each hive, in the ground. When a swarm comes out his "better half" catches the queen, cages her, and fastens the cage in the bush. The bees settle on the bush, and at noon or in evening, after work, Mr. M. hives them.

Adjourned to meet at fair ground, Friday morning at 9 o'clock.

#### FRIDAY MORNING SESSION.

In the absence of the President, Mr. Benedict acted as chairman.

#### HOW CAN WE GET THE MOST HONEY?

*Mrs. Culp.*—I get more than twice as much extracted honey as comb honey, by putting in empty frames.

*Secretary.*—Last season I had a large number of sections filled with empty comb, and I believe it was due to this fact that I had my good yield of comb honey this season. I think if we can always manage so as to get our sections filled with comb we can get as much comb as extracted honey.

*Mr. Benedict.*—We advise beginners to go slow in extracting, and learn the business, or they may produce bad results, and get discouraged. I use a movable bottom-hive, and tier up in extracting. If the colony swarms, I hive it on foundation combs under the old colony, placing a wire cloth between the two for a day or two. The queen begins to occupy lower story; and as the bees hatch out above, the honey is stored in the frames. By this method I get a large body of bees at work in a single hive.

*Mrs. Culp.*—My practice is similar to that described by Bro. Benedict.

*A. Benedict.*—In working for comb honey I use the same method of keeping my colonies strong by hiving back the swarm. If I hive swarms by themselves, I take a section-rack from the old hive and put it on a new one.

*Dr. Besse.*—How soon do you extract after putting swarm back?

*Ans.*—In two or three days, or as often as necessary—whenever honey is partly capped.

*Dr. Besse.*—This, in my experience, won't work well. If you extract next day, the queen will go up and occupy frames, and bees will build drone-comb below. I have no particular method of working for extracted honey. I usually extract from brood-chamber as soon as queen gets crowded. I tier up two or three stories high; always let bees cap about two-thirds of my honey before extracting. Bees work downward; put empty hive under full one.

*A. Benedict.*—In tiering up section cases, always put an empty one beneath a full one.

The convention then adjourned, to meet some time in January.

#### STATE FAIR EXHIBITS, AND NAME TO WHOM PREMIUMS WERE GIVEN.

There was on exhibition by a number of bee-keepers, honey, both extracted and comb, some very fine bees and fixtures, and implements of all kinds. Mr. Goodrich exhibited a nice lot of comb honey, one-pound sections put up in small shipping-cases, also a very fine display of extracted honey put up in many different styles. He received first premium on comb honey, first on general display of comb and extracted, second on extracted.

*Mrs. Culp* exhibited some very fine wax, on which she took first premium.

*Dr. Besse's* display of extracted honey was very fine—the nicest display we ever saw. He took first premium on extracted honey.

*C. E. Jones* took second premium on display of comb honey, and first premium on full colony and manipulation of same.



Brigham and Clayburn exhibited some fine comb honey, and took first premium on single crate of honey.

Aaron Benedict exhibited some of the finest Italians we ever saw, and we have seen and examined many strains since we have been a bee-keeper.

Earl Clickinger also exhibited a fine nucleus.

NAME AND RESIDENCE OF SOME OF THE PARTIES IN ATTENDANCE, WITH TABULATED REPORT OF THE SEASON.

| Names and Postoffice Address.         | Colonies above. | Combs Sold. | Subs. (Cb Honey). | Lbs. Ext. Honey. | The Season. |
|---------------------------------------|-----------------|-------------|-------------------|------------------|-------------|
| H. D. Vansoick, Covington, Miami Co.  | 60              | 22          | 500               | 40               | Good.       |
| B. F. Myers, Mt. Cory, Hancock Co.    | 5               | 2           | 100               | 0                | Good.       |
| A. S. Goodrich, Worthington, Del. Co. | 75              | 7           | 100               | 200              | Poor.       |
| Geo. Allen, Jeffersonville, Fay, Co.  | 5               | 5           | 0                 | 0                | Poor.       |
| Dan White, New London, Huron Co.      | 140             | 64          | 0                 | 6000             | Good.       |
| A. Benedict, Bennington, Morrow Co.   | *               |             |                   |                  |             |
| S. R. Morris, Bloomington, Fay, Co.   | 34              | 38          | 0                 | 0                | Poor.       |
| J. Miller, Thomsville, Perry Co.      | 12              | 4           | 0                 | 0                | Poor.       |
| E. Clickinger, Columbus, Frank. Co.   | 53              | 47          | 100               | 0                | Poor.       |
| W. Shepherd, Rochester, Lorain Co.    | 15              | 5           | 50                | 500              | Good.       |
| M. L. Carmean, Bucyrus, Craw. Co.     | 4               | 1           | 0                 | 0                | Good.       |
| Jennie Culp, Columbus, Franklin Co.   | 49              | 32          | 40                | 0                | Poor.       |
| A. Riechenbacher, Tahana, Frank. Co.  | 68              | 0           | 0                 | 0                | Poor.       |
| A. Graflin, Bremen, Fairfield Co.     | 25              | 19          | 0                 | 0                | Poor.       |
| B. Helphrey, Utica, Licking Co.       | 140             | 100         | 500               | 0                | Poor.       |
| Dr. Besse, Delaware, Del. Co.         | 50              | 15          | 175               | 50               | Poor.       |
| J. W. Newlove, Columbus, Frank. Co.   | 17              | 11          | 150               | 0                | Poor.       |
| W. Artry, Franklin Square, Col. Co.   | 25              | 17          | 0                 | 0                | Poor.       |

\* Queen-breeder.

† Not yet taken.

EXTRACTED HONEY.

How to Produce an Extra-Fine Article.

FRIEND HEDDON IS TAKING THE MATTER IN HAND.

**F**RRIEND ROOT:—In visiting bee-keepers, I find that very few of our brothers know how or are willing to take the pains to produce a nice article of well-ripened basswood honey. It took me years to learn how to take and keep it in a perfect state, like comb honey. I wish every bee-keeper in America could sample my ten tons of basswood and clover honey. I am selling to a large number of producers, and about every one of them sends me a testimonial. I should like to send you a 100-lb. keg of such basswood honey as I think would build up a large demand for extracted honey, if all who raise it would produce a "dead ripe" article, and take the proper care of it. If you say so, I will send you by freight a 50 or 100 lb. keg, such as I am selling at 8 cts. per lb., F. O. B., and keg thrown in, and you may credit me just what you think it is worth, to be traded out with you in supplies, and I will then write an article, if you wish, giving directions how to raise it, and keep it thus perfect. That is, in my opinion, one of the "keys" to enlarging the demand for our product. JAMES HEDDON.

Dowagiac, Mich., Sept. 7, 1885.

Friend H., you have got right hold of one of the most important points, in my judgment, now before us, and I am inclined to think you are master of the situation, judging from the quality of the honey sent us last season. I am well aware that this letter and your forthcoming article will probably be good advertisements for you; but you ought to have a good advertisement. Besides, we expect to advertise honey for anybody so long as he produces a good article at a fair price. While reading your letter I recalled to mind the amount of paper that we used up a few years ago in arguing the respective merits of comb and extracted honey. Offering a fine article of extracted honey, in 50-lb. kegs at 8 cts. per lb., is worth

more than all the arguments that could be put into a large book. Send me a 100-lb. keg, and a 50-lb. keg. I want to see what they look like, each size, and I will pay you the same price for them that the other people do: and send along your article as well.

INTRODUCING VIRGIN QUEENS FIVE AND SIX DAYS OLD.

HOW FRIEND GOOD DOES IT SUCCESSFULLY.

**I** SEND you by this mail the kind of cage I use; and, by the way, it is a good cage for introducing any kind of a queen. I use the Alley method for obtaining cells. With his method we get nice straight cells. I leave the cells in the hive until the queens commence gnawing out, then I cut them out and daub honey on the end of the cells. If that is omitted, many of the queens will starve before they eat out. Then I put the cells in the wooden part of the cage, put the end of the cell through the hole that opens into the wire cage, shut the lid to the cage, and lay the cages in a queen-nursery or on top of frames of a strong colony. I now keep watch of them; and as fast as the queens hatch I remove the cells and fill the wooden part of the cage with the Good candy. The cages can now be laid on top of the frame of any strong colony until they are wanted, and there is no danger of their starvation, even if the bees do not feed them. Now, when the queens are five or six days old (and if they are eight or ten it matters not), I introduce them to nuclei or full colonies, as the case may be. Where they have been queenless for four days, simply swing the lid half way round, so as to give the bees access to the candy, and shove the cage down between two combs, and let the bees eat out the candy, and liberate the queen; and, as a general thing, I have a laying queen in five or six days.

This and last season I had about 100 of the cages in use, and I know whereof I speak. I think many make mistakes in trying to introduce to colonies that have not been queenless long enough.

Nappanee, Ind., Sept. 3, 1885. I. R. GOOD.

I will explain to our readers, that friend Good's cage consists, first, of a little elliptical-shaped box, something like an old-fashioned pill-box. It is made from a piece of 3/4-inch board with a half-inch hole bored through the center. This hole is covered on one side with a thin strip of wood, having a hole in the center large enough to let the lower end of a queen-cell pass through. The other cover has a wire nail at one end, allowing it to swing around to put in the cell, or fill the cavity with candy. Now, attached to the side where the point of the queen-cell is to come through is a little bag of wire cloth. This bag is made in such shape that it will go down between a couple of combs readily. There is something new in this arrangement. You wait until the cells are almost ready to hatch, and then when the newly hatched queen is seen to be down in the wire-cloth box, the cell is removed, and its place filled with Good candy. She is now among the bees of a good colony, and she has plenty of candy where she can get it, but the bees can not get it away from her. No doubt a virgin queen from five to ten days old could by this means be introduced to a colony that

had been three or four days queenless, and she would be ready to take her wedding-flight as soon as she is out. From what experience I have had with bees, I should think that there would be quite a good many losses, unless the one who had them in charge had by experience learned just how to manage every little minute point, as friend Good doubtless has.

#### FRIEND SHUCK'S REVERSIBLE HONEY-BOARD.

ALSO SOMETHING IN REGARD TO HIS REVERSIBLE HIVE.

**F**RRIEND ROOT:—Bro. Heddon's experience reminds me of my efforts to get comb honey in the brood-chamber of the hive some years ago, by dividing a large brood-nest with cases of sections. I invariably got queen-cells in all, except the division occupied by the old queen.

I have raised queen-cells in an upper story when the lower story was occupied by a laying queen. Ordinarily the cells are larger, and the queens of better color, when thus produced. The cells must, of course, be removed for the final emerging and perfecting of the queens.

More than one queen may occupy the same hive by keeping queen-excluders between them. The excluder must divide the entrance so that the occasional passing of a queen around it is prevented. Aside from the fact that the bees occupy the hive and surplus apartment in common, this is simply a modification of the tenement-hive idea. After all, this is a question of arithmetic: A good queen will occupy just about so much space, whether in a hive by herself, or along with another queen.

I send you to-day a sample of my skeleton board, such as I use and sell with my invertible hives. The spaces are readily cleared with a piece of steel, the proper size. I like them for excluding queens when a-swarm is hived, as the swarm can immediately go into the sections, and leave the queen upon the brood-combs. Also if a colony is stubborn about going above, I put the sections *under* the hive, with the skeleton board between; or, rather, turn the whole apparatus upside down, when the bees will be *obliged* to go into the sections.

This board may be modified by extending the metal strips on one end, and thus form a queen-excluding division-board when it is desired to keep more than one queen at liberty in the brood-chamber of the hives.

I first took the idea of this board from the Quinby five-piece honey-board, which I used until sections were introduced, when I adapted it to the use of them. Mr. Heddon's board is a different thing entirely. He cleats it all around so as to get his beespace between it and the sections. I have my beespace between it and the sections. I have my beespace in the hive-body and in the section cases themselves.

If I ever want a drone and queen catcher, I shall get the Alley trap, unless some one invents a better one. Bees well managed do not swarm much. Colonies run for comb honey should not swarm to exceed ten per cent. If run for extracted honey, not more than five per cent; so there is little use for queen-clippers and queen-catchers. However, if I had a valuable queen which I dreaded to lose, I

should lose no time in getting a queen or drone trap.

J. M. SHUCK.

Des Moines, Iowa, Aug. 4, 1885.

Thanks for the honey-board, friend S., and also for the facts you give us. I will explain to our readers, that this honey-board is made of slats of pine,  $\frac{3}{4}$  inch wide, kept at the right distance apart for excluding queens and drones, by a folded strip of galvanized iron tacked across each end. Your idea of inverting the hive so as to bring this queen-excluding honey-board, sections and all, under the hive, is a novel one. You will notice that it is in a line with friend Heddon's recent experiments. Your letter is dated Aug. 4, but it may have been written before friend Heddon's article.

#### CRYSTALLIZED HONEY-DEW.

FRIEND COOK GIVES US SOME ADDITIONAL INFORMATION.

**I**N answer to our request, which see on page 586. Prof. Cook sends us the following in regard to the crystallized honey-dew:

Yes, friend Root, and you may add my thanks for such a mine of sweet, and that, too, from lice, it is good to see. In every case the source of the honey-dew—lice secretion were more appropriate—is found to be aphides, or plant lice. Surely our friend need not condemn such nectar. I am sure the honey from Oregon will lose nothing of its reputation if the nectar is always as sweet and wholesome as this.

As you know, Mr. Editor, the great crystallized masses, large as the end of one's finger, were not only very sweet, but were very pleasant. The lice on the fireweed were of the genus *Aphis*, as shown by the long nectar-tubes, or nectaries. Those on the fir were of the genus *Sachinus*. These must have secreted an immense amount of nectar, to show so much cane sugar. It is a good thing for the sugar-manufacturers that these lice are not very common, or the former would have to go out of the business. Just to think of a single twig, less than six inches long, having more than a tablespoonful of fine sugar on it, and that all crystallized and refined, with no care or labor! As I have always observed, the sweet secretion of these plant-lice is always pleasant and harmless, and I do not believe it will ever be any detriment to honey. We can not say the same of that from bark or scale lice, for that is bitter and distasteful to bees and to us. I say distasteful to bees, for I have noticed that bees will treat bark-louse nectar as they do glucose,—leave it entirely alone if they can get nectar from any other source. This is not true of aphid nectar, which attracts bees even at the very time that the incomparable basswood and clover secretion, or nectar, is abundant.

As Mr. R. suggests, honey-dew does not fall. So-called honey-dew is almost always secretion from insects. It may come from fungi, as shown last year to be true of the ergot; it may come from extra-floral glands, like those of the cow-pea, illustrated in my MANUAL. I think no apology need be spoken for this plant-louse nectar. It will never harm the honey.

A. J. COOK.

Agricultural College, Mich., Sept. 3, 1885.

## MORE NOTES AND COMMENTS.

## THE ADVANTAGES OF A PERMANENT HOME.

**N**OW I do envy those people who can always stay put! I am as fond of a pleasant home, lawn, shrubbery, flowers, trees, fish-ponds, cranberry meadows, graperies, and strawberry-patches—well, as the Editor of GLEANINGS himself—which is saying a great deal. But these things are inconsistent with moving about much, and I have had considerable of this to do in the course of my life, especially of late years. Since my last article appeared in GLEANINGS, I have moved once more. Why do the Scotch call a change of residence "fitting"? It is a much slower affair than a "flit." The worst part of moving is getting things to rights, and settling down to regular habits again. During this interval of interruption, several matters have come up in GLEANINGS on which I wish to say something; and as I must try to squeeze them into one article, I adopt a similar heading to my last, and call these *more* "Notes and Comments."

## A PLEA IN FAVOR OF WINTERING ON SUMMER STANDS.

I want to speak a good word in behalf of friend Reed, of Milford, Wis., whose letter appeared in GLEANINGS of May 15th. I ordered two of those very cheap stocks of bees advertised by him, and found them, on arrival, exactly as represented by him. Some things in a letter from him touched me very much. He said he had cherished the ambition of getting up a first-class apiary, but had been obliged to give up through ill health. An old complaint had been brought back by the exertion put forth in carrying his bees out of the cellar. This is one argument, and by no means a slight one, in favor of outdoor wintering. In the past, when I practiced cellar wintering, carrying out my hives in spring generally brought on an attack of lumbago, and I never kept more than 20 or 25 stocks. Let us not commend bee-keeping as an occupation suited for invalids or weakly persons until we give up the folly of cellar wintering. Had friend Reed wintered on the summer stands, probably he might have been able to continue his much-loved pursuit. Anyhow, I am sure he has the sympathy of all his fellow bee-keepers, and the prayers of many that his affliction may prove for the best.

## CLIPPING QUEENS' WINGS.

By the way, friend Reed has almost converted me to clipping queens' wings, which he practiced. Having to go from home for a few days, June 10th, I carefully searched for queen-cells on the morning of my departure. I was away longer than I expected, and felt pretty anxious about the bees. On returning, my wife said to me, "Some of your bees have had a great fight." I examined the hives, but found no evidence of a fight." Next day, as I was busy writing, my wife said, "Those bees are fighting again." I sallied forth and found the bees not fighting but swarming, out of one of friend Reed's hives. The bees whirled around in the air, but did not alight. So I suspected the queen was not with them, and, on searching, soon found her crawling on the ground. Then I saw what I had not noticed on looking through the hives, that one wing was clipped. I felt pretty cheap; for one argument I have used against clipping is, that it disfigures the queen. However, I picked her up, put her under a tumbler, moved the old hive, set an empty one in

its place, and soon the swarm came back. I ran in the queen, and the whole thing was over in a quarter of the time usually taken in hiving a swarm. I am hard to convert; but undoubtedly I should have lost that swarm if the queen's wing had not been clipped; and now the question is, "to clip or not to clip." One curious thing about the affair is, that the hive is up on a stand two feet above the ground. So on the previous occasion, when they tried to swarm, her majesty must have crawled up one of the legs of the stand, in order to get back into the hive.

## HIVES.

GLEANINGS has had a great deal to say about hives of late. Well, I have tried many—so much the worse for my peace and comfort, and I am settling down on some form of Simplicity. The one you make has many excellent features, and the movable bottom-board just suits my hibernation theory. The Heddon style, too, I like; but that lath honey-board seems to operate as somewhat of a barrier to the bees ascending to the honey-boxes. Friend Lake, of Baltimore, makes some hives with valuable features. His No. 2, especially, is a capital hive, convenient to handle, and a good wintering hive. The Falcon hive, made by W. T. Falconer, of Jamestown, N. Y., is the neatest, nicest, and best-finished form of Simplicity I have seen. It has one feature that is especially good in the working season when the hives are overflowing with bees, and that is a removable side. It comes out readily, and is never fastened with propolis, because there is a division-board and chaff-filled frame between the side and the brood-nest. When these are taken out there is plenty of room to manipulate the frames. I suppose we can not get all valuable features combined in any one hive. I wish we could. But can not all makers of Simplicity or Langstroth frames agree on the exact size of frame to be used? I have had more trouble with frames varying just a little in size, than any one thing in my apiary. You want to change frames from hive to hive for various purposes, and it is most provoking to find one a little too long, and another a little too short. The trouble is mainly with the top-bar.

## WIRED FRAMES.

Both last season and the present I have tried wired frames. I find that the bees nibble round the wire in some cases, and work away for a good while before they accept the situation, and I can not see that there is any particular need of this wire, for I have just as pretty frames of comb as can be produced, built on foundation simply hung from the top-bars. So far, not a single sheet so hung has fallen. I think, however, that in large apiaries where it is necessary to prepare a lot of hives in winter there might be trouble about this sheet getting loose, for extreme cold seems to make the wax very dry and less adhesive. But, can not some cute inventor give us a frame in halves, which, going together and binding all four edges of the sheet of foundation, will secure straightness and firmness, and render reversible frames entirely unnecessary? I have no inventive faculty or I would try.

## EXPRESS COMPANIES.

I got a nucleus the other day from Dr. Tinker, containing a frame of brood, a pound of bees, and one of his Syrio-Albino queens. When I came to open the box I found the brood-comb broken down, many of the bees killed, and among them the queen. The package was admirably put up, and such a dis-

aster as befall it could have been caused only by a fall from the express wagon, or a violent concussion of some kind. There is no excuse for this kind of thing, and it is time a lesson were taught express companies in regard to careful handling of bees. I have had several losses, due to culpable negligence on their part, during my experience as a bee-keeper, but never got any redress. Generally a complaint has drawn out the threat of refusing to convey bees at all. I think somebody will have to enter action for damages, before due care is taken. No one likes to do this. The loss is usually not very large, and the risk of losing costs in an action hinders taking steps for a legal redress. It seems to me that this is one of the directions in which a National League might bring pressure to bear.

WM. F. CLARKE.

Guelph, Ont., Can., July 15, 1885.

In regard to clipping queens' wings, friend C., it turned out very well in your case; but I don't believe a queen *often* comes back, especially where she has to climb up to a hive that stands on legs.—In regard to hives, I have seen so many changes that never "came to stay," that of late I am getting quite backward indeed in regard to adopting any fixture, or any thing that seems to be an improvement, until it has stood the test of use. The Simplicity hive and the chaff hive both seem to settle back to the original plan, about once in so often; that is, things that we at one time thought would be a great improvement are, sooner or later, dropped as too much machinery, or too much bother, and we have left, as before, a plain simple hive without any loose fixtures.—Why, friend C., you yourself give the best reason in the world for having frames wired, but yet you don't seem to see it at all. Had Dr. Tinker had that one frame of brood built on wires as we have them, it would have been almost impossible for even an *express* official to have smashed it up.—A word in regard to express companies. When we first began to ship bees we had troubles from combs breaking down, bees dead, and honey running out of the hive, etc. We brought a bill to the express company, and they paid it. Finally another bill was brought in, amounting to something like \$20.00. They paid that too; but they then declared that hereafter it must be distinctly understood that they are not to be responsible for damages done the bees; that is, they could not stand such losses. They admitted that may be their employes were careless, but they got the best they could, paid good wages, and got along very well with most kinds of merchandise. After studying the matter over a good deal, it occurred to me that there were two sides to this question. One side is, that the express companies ought to employ agents who would handle fragile things carefully. Because they get pay for so doing, it is their business. If we should want to send a basket of eggs by express, or an expensive vase, or a piece of statuary, it is the express companies' business to handle it so carefully that no harm could come. If they did not, they must pay damages. This course of action promised endless quarrels, lawsuits, and other unpleasant things in life. Do you want to know what the other side was that presented itself to me? It was this: Em-

ploy packers so well trained that they could pack a sitting of eggs, an expensive vase, or any thing else, in such a way that it could be tumbled from one end of the room to the other, without injury. It might be a hard matter to do it with the eggs, but with the vase there is no difficulty at all; and, in fact, almost every thing we ship we have learned by experience *can* be so put up that there is very little danger of harm, with such handling as express companies ordinarily give things they carry. We have adopted the latter plan, and we have got along pleasantly with express and railroad companies, and with almost everybody else. Isn't it the better way, to take the world as you find it—that is, within the bounds of reason, and adapt yourself to the world? Of course, there are extremes, such as the following: In loading a half-barrel of honey, one of the railroad employes let it drop. The agent promptly informed me of the circumstances, and asked me to help them out of a bad job, and the money was handed over at once. At another time a cask of beeswax was broken open and a quantity abstracted. The railroad company objected to paying the claim. But their agent, who was a personal friend of mine, wrote to the company something like this: "Mr. Root does a large amount of business with us, as you may know, and I take pleasure in saying that he makes comparatively few complaints. I think his claim ought to be honored." In response to this, the money was handed over at once.—Just one more thought in regard to wired frames. I know the bees do sometimes, when there is a dearth of honey, gnaw the wax away from along the wires; but when put into the hive during a good yield, the wires are very quickly covered and out of sight; and as soon as one set of brood is reared over the wires they are never molested afterward.

#### WHERE DID THE EGG COME FROM?

##### DO BEES STEAL EGGS FROM OTHER COLONIES?

**T**HE condition of the colony was such as to preclude the possibility of its containing an undeveloped egg. In the first place, a swarm was thrown off June 12th, and as soon as queen-cells were old enough all but one or two were taken out and used to queen other colonies. On the 25th of June a second swarm was thrown off. The hive was examined, and a young queen removed, and the swarm ran back. On the 29th the queen was still on deck; but a close examination failed to discover any eggs. On the 8th of July no queen could be found, no eggs in the hive, no unsealed brood, and very little sealed, and that was in a comb that had been used in exchange with another hive, the exchange being made about June 20th, to get queen-cells for the other colony.

Now, suppose this comb had been full of eggs (which was not the case, as the colony it came from had been queenless for three or four days), is it at all probable that any egg in it at that time would have remained undeveloped till the 8th of July, at which time the colony was found to be queenless, and had started queen-cells, in one of which was an egg? Not expecting to find any thing in the cell,

which was about half length, I pulled it down, and, to my great surprise, in the bottom I discovered the egg; and while I still held the frame in my hands it was removed. What was done with it I am unable to say, as I gave the colony a hatching queen-cell on the 10th, placing it between the top-bars, not lifting any frame out. Is it unreasonable to suppose, that, while I had frames out of some other hive, an enterprising bee, instead of stealing a load of honey, helped himself to an egg, and carried it home, and caused more rejoicing there than would a whole frame of honey? I think not.

Quincy, Ill., July 16, 1885.

JAMES KNOX.

Friend K., I presume it is possible for worker-bees to steal an egg in the way you suggest, or in some other way, although I can hardly think it is probable. Cases have been mentioned, quite a number of them, where it was at least very hard to explain where the egg came from, unless it was stolen in some such way.

### BUILDING UP NUCLEI TO FULL COLONIES IN THE FALL.

#### EXPERIENCE OF A NOVICE IN THE MATTER.

I AM glad that I am again taking GLEANINGS, having been without it a year and a half. I subscribed for it in 1883, and thought one year would be all that I should probably want it; but not so. The first number, Aug. 15, has been received, and the first article in it is worth the one dollar to me, if you keep it up in the next issues till you give us one good letter—in detail—on building up nuclei to full colonies. That is just the business I am at now. I am willing to put down some of my experience, and let it go for what it is worth; and I should be glad to read reports from others; but I shall not be satisfied till I see an article from a bee-man of experience.

The first week in July I received and commenced feeding a two-frame nucleus with Italian queen, and, I presume, one pound of bees. There was but little brood in the combs. I fed awhile with candy, then put in one frame of foundation, and fed about half a pound of sugar syrup each day. As soon as one frame of fdn. was nearly drawn out and filled with eggs, I inserted another. Soon I fed 1 pound of sugar. The second and third frames of fdn. were drawn out and filled with eggs in less time than the fourth and fifth. It seems to me I did not get as good work from the bees (in comparison) when I was feeding one pound of sugar as when I fed half a pound. I was trying to get the best hive of bees at the least expense. At this date this is a good colony, strong enough to winter all right in Ohio, if it have 25 lbs. of syrup. I tried black bees as above, and they did not draw out the fdn., except just enough to store the syrup in it. It did not pay to feed black bees; but all my Italian nuclei have done well, and are still doing so.

L. W. GRAY.

Troy, Orange Co., Fla., Aug. 26, 1885.

Thank you, friend G., for your kind and approving words. I think you are on the right track, and I should say you are doing quite well. I think your one experiment with the nucleus of black bees was hardly a fair test, for I am sure they can be worked the same way as Italians; but I am also sure that, as a rule, the Italians would far

outstrip them. Twenty-five pounds of sugar, fed at this date, ought to make an excellent colony, with abundance of stores, until fruit-bloom next season.

#### SOMETHING MORE ON THE SAME SUBJECT.

Please give me a little information in regard to bees. First, I have an opportunity of buying some swarms now, for \$2.00 per hive—the old square box hive. Now, then, I can wait until next May or June, and buy all the young swarms the party has, for \$1.00 per swarm, I furnishing the hive. The party hives the bees and puts them into any kind of a hive I may take to him. Now, Mr. R., I come to you for advice: which must I do? I am a young beginner in the bee business. Shall I buy the old hive, or wait and get the young swarms, putting them in hives that I can handle?

#### WHITEWASHING HIVES.

Do you think it advisable to whitewash bee-hives? The hives are ready made, but the lumber was never dressed, and is still in the rough. I can also have the Langstroth hive cut out with the lumber dressed, ready to nail together, for only 40 cts. apiece. Is that too much, or is it cheap? J. O. BARNES.

Hickman, Fulton Co., Ky., Aug. 29, 1885.

Why, my young friend, I should think you had a splendid chance to build up an apiary, at a very small expense. If I wanted to build up an apiary, I would take box-hive swarms now at this price, say five or ten, according to my means, and then I should be ready to take all the new swarms that can be bought at a dollar a swarm next year, putting them, of course, into modern hives.—I would not whitewash bee-hives. It looks unsightly, and is but little more protection than nothing. It adds to the appearance for only a little time; and when the whitewash is partly worn off, it seems to me they are far more unsightly than plain wooden hives without any attempt at either paint or whitewash. Whitewash holds better on rough boards than on planed boards, but you can not make a good serviceable hive of unplanned lumber very well. If you can get the stuff in the flat, cut accurately, for 40 cts. apiece, I should say it was very reasonable.

### A GOOD-NATURED PROTEST FROM A FRIEND IN ALABAMA.

"FIRST CAST OUT THE BEAM OUT OF THINE OWN EYE."

ON page 566 you tell Bertie Norrell that you are afraid she is a little severe on her neighbors who work in the factory. I agree with you. Although my wife's grandfather was a native of Rhode Island, I know nothing at all of the moral and social status of the "factory folks" of New England, and very little, I admit, of Southern "factory folks," yet I think it hardly charitable to dub either "an illiterate, oily, unwashed class;" for might not some combination of circumstances, such as bereavement, poverty, etc., induce a lady—north or south—who had seen other and better days, to accept factory work as the best employment available, and as being far better than becoming dependent upon others, or allowing herself and family to suffer? I have heard of such cases, and I doubt not their existence.

In regard to snuff-dipping, I think the practice is becoming a thing of the past, though too much of it still exists; and among our colored people the habit prevails extensively. I can not say, of course, how much has fallen under our fair friend's observation; but when she casts a slur upon the good name of Alabama, and the "nicer class of ladies of Central Alabama" in particular, I am hurt, and must protest. That is where I live, and I have a mother, sisters, and wife, to say nothing of scores of relatives and friends belonging, I suppose, to our friend's "nicer class," who do not now, never did, and never will use tobacco, as snuff or otherwise. There are a few, very few, individual exceptions to be found in this class—usually an old lady who contracted the habit years and years ago, and who has not the fortitude or powers of physical endurance to break it off, and who usually makes no secret of it. Our young Georgia friend has evidently been misinformed, or has enjoyed (?) a very limited observation of us. Supposing, however, that it was all true, and more too, why should she so eloquently hold up to the world the faults and moral deformities of others? And you, old friend, had you not better "look out," or you will again feel as you did when writing the foot-note to friend W. F. Clarke's communication on page 376. Now, if the sentiment that prompted that foot-note condemns *this* communication, I'll try to be content. While it does not pertain to bees, I believe it will be heartily indorsed by your Southern subscribers, and not objectionable to others. It is simply an effort to right a wrong; and if Central Alabama, my home, had not been particularized, I would not have said a word.

2—J. M. JENKINS, 30—43.

Wetumpka, Ala., Aug. 24, 1885.

Friend J., I humbly beg pardon. I ought not to have allowed that sentence to appear in print; but I did it mainly that I might say a word of caution to the children about uncharitable speaking. I will try to be more careful hereafter. But we can all gather a moral from it as it is; that is, let us try to maintain the good standing of our respective States. Your communication has brought out this fact, which you all remember that I intimated—that tobacco-using among the ladies is mostly confined to those well along in years, and it is just so here in our State. You will remember that I mentioned, some time ago, that when I was obliged to stay a few hours in a strange town, of going from the station on account of the tobacco smoke, then to the dry-goods store; and, finding that worse still, I went to the hotel. As I found no relief there, they were obliged to put me in a room with the women-folks. In a little while I got into a good chat with quite an old lady, on the subject of religion; but before she could express herself to her notion, she was obliged to fish a pipe out of her pocket, and commence smoking. Now for all that, I believe her to be a real true Christian, and one of God's chosen ones. She was brought up in that way, and I would not think of asking her to put away her pipe in her old age, just because of the trifling inconvenience it gave me. We who are young and strong, ought to be ashamed of such things; and I think, too, we can unite in friendship and kindness in deciding to set the best example we know how, even if we

can't do more. May God bless your friends and relatives, friend J., and the inhabitants of your beautiful State of Alabama; for I know a little about it, even if I don't know very much.

## CARP CULTURE COMPARED WITH BEE CULTURE.

### FACTS ABOUT CARP IN GENERAL.

I THINK every man who has a suitable place should have a carp-pond as well as an apiary; in fact, I believe those who have tried both, find that there is as much profit, if not more, in carp culture than there is in bee culture; or, at least, I find such to be my experience, for I have made considerably more clear money in carp culture than in bee culture, though I am an A B C scholar in both. I will say, however, that I do not expect to make a specialty of either. I have two ponds. Both together cover about one-fourth of an acre of land. I stocked one of them in February, 1883, with only 28 carp, varying in length from 1½ to four inches. In March, 1884, I drew down my water and found only 20 of them, being in length from ten to fourteen inches. The others, I presume, had been destroyed by mud-turtles, some of which I caught.

I sold eight carp to a neighbor, and two more afterward got destroyed, leaving only ten. I succeeded in raising about 150, which spawned about the middle of May last (they having spawned only one time during the season), which were from four to six inches long when I transferred them to my other pond, to stock it. I am confident that I had many more hatched out than were raised, for I could see them swimming on the top of the water in considerable numbers when they were about an inch long. I think that the frogs must have destroyed them, as they were very numerous about the pond. I intend making my ponds frog and turtle proof by setting posts all around, and planking to the posts, letting the bottom plank into the ground, and making close joints, until I raise it 3½ or 4 feet high.

My ponds are ditched, or drained all round, to avoid being overflowed by hard rains. Ponds should be constructed, if possible, so as to have part of the bottom of mud or soft loamy earth; for in freezing weather the fish partially bury themselves in the mud. The rest of the bottom should be top earth, as it will produce more swamp grass, which the fish eat. In excavated ponds the feed is very nearly all supplied artificially, as but little natural food will spring up in such ponds. The depth of the water need not exceed 3½ or 4 feet in this latitude, and only a small channel need be that deep, and the rest of the bottom should range from one to sixteen inches deep, as more grass will spring up and grow in shallow water; and besides, the sun will warm the water quicker, and the spawn will hatch better, than in deep water; in fact, those who have had experience in the business say that water may be so deep that it is doubtful whether the spawn will ever hatch.

My ten fish that are now in my brood-pond are 18 to 20 inches long, three of which are leather carp, the others scaly ones. They are two years old; some of my neighbors who have some three years old say they are from 24 to 26 inches long, and weigh from 14 to 16 lbs. The scaly carp seem to

have the preference for table use, but I think leather backs outgrow them. My fish will eat almost any kind of food that a hog will, such as cabbage, onion - tops, peaches, mulberries, blackberries, grapes, young tender wheat, oats, boiled corn, raw cow-peas (swelled), bread of all kinds, and, in fact, scraps of almost any thing, and even little pieces of dead forest-leaves, or trash, that floats on the top of the pond.

J. D. BROWN.

Bowman, Ga.

### MY REFERENCE BOOK.

THE WAY IN WHICH FRIEND DOOLITTLE CLASSIFIES AND UTILIZES WHAT HE HAS READ AND CONSIDERED.

WHILE reading the bee-papers, it is generally to be noted that nearly all writers tell us about things which are past; this, put with the time it takes the article to get to the publisher, and the same to be placed in our hands through the mails, together with the printing, makes nearly every valuable article which we read a month or more behind the time most appropriate for its use. I am not finding fault with the correspondents of the bee-papers regarding this state of affairs, for it is quite natural that this should be so. There is no time a person feels more like telling what he has done, and how he did it, than just after doing it successfully. There is a certain inspiration on a person at such times which allows of their story being told better than it could possibly be at any other time after several months have passed away, as must always be the case where the story is kept so that it can appear before the public in its appropriate season. Thus it happens that all of the best articles on wintering have appeared in the spring; the best article on securing a large yield of honey after the honey harvest is over, and the same is true of nearly every other subject pertaining to bee culture. Now, our bee-papers are of value to us only in proportion as we remember and put in practice the valuable points they contain; and as my memory is not sufficient to keep track of all that is of value, appearing out of season, I must have some means of reminding me of the valuable points just when they are of use. Again, much of the matter in the bee-papers is of little value to the experienced bee-keeper, except to add a little to the "spice of life" by adding variety to our reading-matter.

There is only now and then an item or an article we wish to look at the second time, so what we want is some plan by which we can get at that which is really valuable when wanted at another time. To do this I struck on this plan: Whenever I sit down to read a fresh paper, I have a pencil with me; and when I find a new idea, or an old one I wish to further experiment with, I mark it. In some instances the marks will embrace a whole article, while others call attention to only a few lines. In future years, or at any time I wish to find that which is really valuable in my store of bee-literature, all I have to do is to read the marked passages, and thus get the cream of a whole year's numbers of GLEANINGS or other papers in a little time. Now, the above would be all that would be necessary, were it not for the matter of most articles being out of season, as spoken of at the beginning of this article, but for this reason I want some arrangement which will cite me to all the valuable points so that I can practice each

in its appropriate season. After further studying on the matter I decided on what I call a "Reference Book," which is simply a small blank book bound in leather. Any memorandum or account-book will answer the purpose, providing it has at least 24 leaves in it. This book I arrange similar to an assessor's book, which has the letters of the alphabet from A to Z on the outside margin of the leaves. Cut the leaves just as you would to letter them; but instead of lettering them, write on the little square of the first, "Jan. 1st;" on the second, "Jan. 15th;" on the third, "Feb. 1st," and so on, giving one leaf, or two pages, for each half-month, to the end of the year. Having the book thus fixed it is kept near the chair which I usually occupy when I read, together with a pencil, so that when I come to any passage, part of an article, or an entire article that I think will be of any service to me, either as something new that promises to be valuable, or some new plan of using something already familiar to me, I mark it with my pencil, and then jot it down in my book, under the date to which it is applicable. Thus I get all the matter which I consider valuable, contained in what I read regarding apiculture, arranged with reference to the time it is to be used, in this book.

When Jan. 1st arrives I look over all there is on this page, and, for instance, try fixing one of my saws so as to make it saw smoothly, as described on page 408 of GLEANINGS, by way of experiment, if I chance to find a note regarding that in this little book. To explain more fully: On page 533 I read how to cut up foundation by using kerosene oil and a butcher-knife, so that thirty or forty sheets can be cut at a time. As I had always used the Carlin wheel, or a stamp cutter like those used by D. A. Jones, for cutting my fdn. starters for sections, I thought this might be better, so the plan was marked. As the first half of May would be the time I would most likely want to use it, I turn to May 1st (by putting my thumb on that date when opening my reference book), and write GLEANINGS, 1885, page 533, "How to cut fdn." When this date (May 1st) arrives I look over all that is written there, and, as I come to this, I turn to page 533, and there is just what I want, at the right time; for in a day or two I must go to work cutting fdn. into starters for my sections. So I go to work and cut a part by the new way, and some by the old. If the new proves the more valuable I mark these words on my reference book with a star; or, if worthless, I draw my pencil across the whole line, thus crossing it off.

If I have made it plain, and I think I have, it will be seen that I have all the real worth of many volumes in this little book, while the matter which was worth only once reading is left out. Different persons would make different selections from what I should; but the plan is a good one, in my opinion, and one which will be of great service to any one who will follow it.

G. M. DOOLITTLE.

Borodino, N. Y., Sept., 1885.

Friend D., your suggestion is an excellent one. It was only the other day that I began to consider that it was almost impossible for me to remember, in time for action, what I had already learned. Somebody comes along and suggests a very decided improvement on what we are doing; and after thanking him for it I remember that I had read the same thing a long time before, but

had forgotten it. Now, your plan, if I understand it, is something like the monthly calendar, found in many books on bee culture, agriculture, etc. As each season comes in turn, you look at your reference book, to see what you had marked down to be done at such a season.

#### DRONE-EXCLUDERS.

Do we Want our Drones Caged Up, or do we Simply Want to Drive them Away?

FRIEND ALLEY CRITICISES THE SPAFFORD DRONE-EXCLUDER SOMEWHAT.

**M**R. SPAFFORD has described and illustrated a drone-excluder which he calls "better than Alley's." The arrangement as shown and described will no doubt work "like a charm"—a fact I discovered more than 25 years ago. The same device described by Mr. Spafford was exactly what I used in connection with my first drone-trap. But I did not only exclude the drones from the hive, but I caged all in a box as they came out to take a flight. From this came my drone and queen trap. Now, if friend Spafford will place a box at the end of the outlet of his excluder he will have the principle of my drone-trap complete. I do not use drone-excluders, and never did in my apiary. They are as useless a piece of furniture in the apiary as one can have. Of what benefit is it to exclude drones from a colony of bees? They return to enter the hive again when they have had a flight. If they can not enter some hive, they will block the entrance and interfere with the working bees. Unless excluders are placed at the entrance of each hive, the drones will soon find a home in some colony in the yard. When it can be done as well as not, why not exclude the drones and at the same time catch and destroy them? Every drone can be entrapped and destroyed with very little trouble to the apiarist; and by the use of the same device his bees can not swarm and abscond.

When I used the device as described by Mr. Spafford, I found the bees would soon gnaw the wood away, and the drones had no trouble in getting into the hive again. I used tin to prevent this, but it was a very unreliable way to manage and control drones in an apiary. As I have before stated, my drone-trap was not perfect until I obtained perforated zinc. As these traps are now constructed, every drone can be destroyed. Those we have made this season have shorter tubes through which the bees pass into the trap. I noticed, when watching the working of the traps, that some of the drones would get half way up the tube; the distance was so great that they would turn about and go back. I soon remedied this slight defect. Then, again, instead of nailing the zinc on the front of the trap, or letting it run in on grooves, I now cut the zinc so that it goes inside the ends of the trap, and the bottom edge runs about half way back toward the hive, thus forming an inclined plane over which the drones pass directly into the tube, and into the trap. As now made, I believe the trap is as perfect as it is possible to make them.

I do not see how any man can claim that the excluder of Mr. Spafford's is better than the one described by me in GLEANINGS some two years ago. The latter was exactly like Spafford's in principle,

and as it is so arranged that there is a chamber back of a piece of perforated zinc, it afforded plenty of ventilation to the hive. Let some one apply Spafford's drone-excluder to a strong colony during a hot day, and see what the effect will be. The colony can not possibly get proper ventilation by such an arrangement. This is not theory. I know from 25 years' experience what I am talking about. Wenham, Mass., Aug. 25, 1885. HENRY ALLEY.

Thanks for your hints, friend A. With the years of experience you have had in this matter of getting rid of drones, no doubt you are right, in the main; but for all that, I think the Spafford implement will answer a very good purpose under many circumstances.

#### PREPARING THE BEES FOR THE HONEY SEASON.

HOW I HAVE WORKED AND SUCCEEDED.

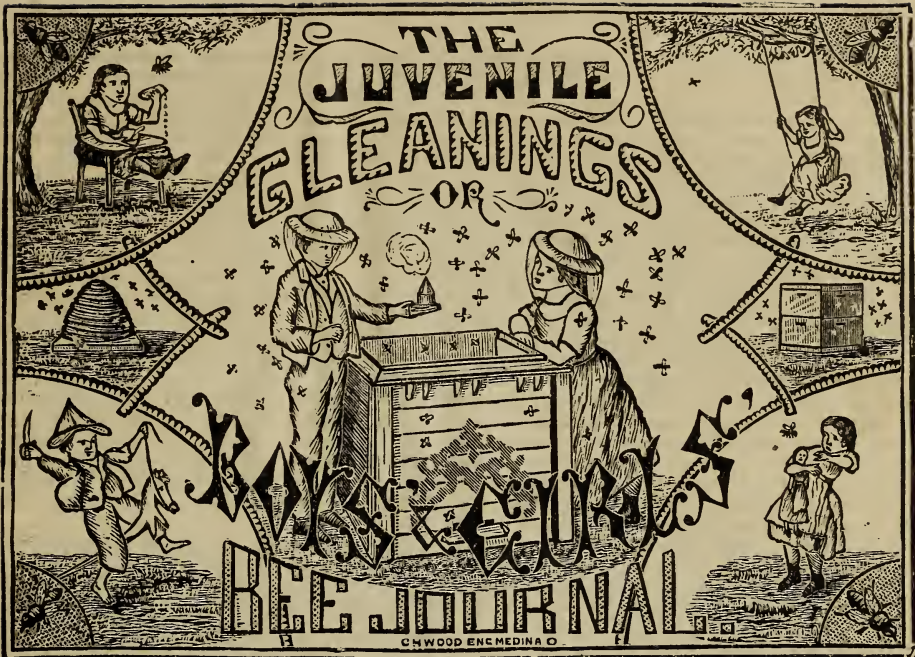
**T**HE outlook for me this last April was splendid. My bees had wintered so well, comparatively (and I had learned, no matter how, how to make them build up in the spring) that I was just going to have my hives roaring with bees when white-clover harvest set in. I was not in the hurry I once was, to remove the winter packing. In some cases I put a frame outside of the division-board; in others I merely uncapped some of the honey occasionally, adding frames of stores as the latter became scarce. I had so many extra frames with more or less honey in them that I did not feed any syrup. I commenced by turning each alternate frame containing brood, end for end. As the bees begin rearing only at the front half of the frames, by this means the two or three frames containing brood would soon be full. Then I would spread the brood, inserting the frame containing none in between.

The above methods, I believe, stimulate brood-rearing as well as any kind of feeding. The area of brood increased so rapidly that early in May I began to remove a division-board in one side, and insert another frame. The methods pursued which, to me, were something of a trial, were succeeding admirably—at least, so it seemed for awhile. But now when clover is beginning to blossom, what is the final result? I am no better prepared for the harvest than I have ever been before. I might almost say that my hives are full of brood and empty of bees. I have not a dozen first-class stocks on the place, while there are no more bees in my 45 hives than there should be in 30. Do not tell me, please, that I have made some prodigious blunders. I think I know where I made some mistakes. The spring has been cold and backward. The different fruits bloomed about a week later than usual. Next spring, however, may be entirely different, and my plan may work well as pursued this season. After all, then, what have I proved? Neither that to stimulate brood-rearing in the spring *will or will not* build up. With two or three exceptions my bees showed but slight traces of dysentery, so they could not have been weakened from that cause.

Mechanicsburg, Ill. GEO. F. ROBBINS, 39-45.

I should say, friend R., that your spreading and changing ends with the brood did more harm in the end than it did good. May be if you had waited until the season was a little further along, however, it might have turned out differently.





He that is faithful in that which is least, is faithful also in much.—LUKE 16:10.

#### MYSELF AND MY NEIGHBORS.

And Abram said unto Lot, Let there be no strife, I pray thee, between me and thee, and between my herdmen and thy herdmen; for we be brethren.

—GEN. 13: 8.

I BELIEVE I have told you something about our honey-wagon that we send around our town every day. Our population is only somewhere about 2000, so that by taking one-half of the town one day, and the other half the next, we go to almost every house every two days. Well, while we are carrying honey around to the houses, we could just as well take something else; and as market gardening is a sort of kindred industry, we have been taking celery, summer squashes, melons, cucumbers, and lettuce, besides fruits, such as apples, pears, peaches, huckleberries, etc. The undertaking was rather a novelty in our town, and it first occasioned considerable remark. Many prophesied that it would not pay expenses, etc. I rather thought it would pay expenses in time, because it is a convenience and saving of time to the people of a town of this size, to have such things delivered right at their doors. It saves them carrying heavy market baskets; it gives them the products of the soil fresh from the ground, and they can see the things before buying, and can buy or not, as they choose. The opposition that at first arose soon gave away, as I expected it would, and eventually the market wagon began to be regarded as a convenience instead of an innovation.

Many of my new enterprises oftentimes make me feel badly before I get them thoroughly established, because they sometimes interfere more or less with other people's business. But this field I regarded as almost unoccupied; and I have for ten years

past felt a longing to open such an industry in our town, because it seemed to need it badly. During the past winter our grocers received from Cleveland many barrels of lettuce, which was sold for as much as 25 cents per pound in winter. Considerable quantities of other early garden stuff were daily brought in by express, during the latter part of winter and early spring. Think of the idea, of an agricultural people sending to the great cities for garden stuff which they could easily raise at their doors, with the aid of a little greenhouse, a few cold frames, and things of that sort! Well, I thought this time I had got a field that was so nearly unoccupied it would harm no one. I found out my mistake, however; for one Saturday evening an old neighbor, whom I had known for years, and who had been most of that time a particular friend of mine, came to see me. I saw by his looks that something was amiss, but could not think what it was, until he commenced as follows:

"Mr. Root, I want you to give me and my boys something to do."

"Why, my good friend, we have nothing for our regular hands to do scarcely; and to keep them busy until another season opens for bee-supplies, we have been making garden, and doing almost every thing we could find to do."

"Well, then I think I had better start a saloon, for a man must do something for a living."

"But, neighbor —, why do you come to me with this announcement? Why am I under obligation to furnish you and your boys work?"

"Well, Mr. Root, it seems to me it is plain enough why you are to blame, when things have got to such a pass that you load up a

wagon full of garden stuff, and send three men around the little town of Medina to peddle it out."

It was all plain enough to me then; and for the first time I remembered that the neighbor before me had for many years been a gardener. His work was principally in vegetables and flowers, however. I remonstrated; but he was somewhat excited, and very positive in his view of the matter. It was true, that we had, during this day, sent out two men, and a boy to drive, for we had quite a quantity of stuff on hand; and as the next day was Sunday, we made a trip both in the forenoon and afternoon. He declared he would have to start a saloon to support his family, unless I stopped that obnoxious wagon. I told him I would think the matter over, and I thought we could arrange it some way so we could get along in a pleasant and neighborly way, as we always had done. But the more I thought of it, the more difficult it seemed to me to avoid striking his old customers, unless I stopped the wagon. But if I did this, how should I dispose of my crops that were just beginning to be ready for market? I hadn't considered the matter very long before I thought of the text at the head of our talk to-day. Of course, he threw it up to me that I professed to be a Christian; and he asked me if it was a Christian thing to do, to break down a poor man's occupation, especially if he had established a business, and earned a livelihood in it for more than fourteen years. He said that he understood that I kept four or five men employed on only ten acres of ground; that I had planted about 8000 stalks of celery, for a little home market like ours. I was obliged to smile in spite of myself when I plead guilty. Yes, and I had to admit it, that the celery-plants were growing splendidly.

I want to digress here enough to say that my friend W. J. Green, from the Ohio Agricultural College, Columbus, has just paid me a visit to-day, and looked at my celery and other plants. There was no celery at the Ohio State Fair equal to ours, neither was there any to be found on the market in the entire city of Columbus, to compare with it; and as my friend took leave he made the remark, "Mr. Root, I think you ought to send a few stalks of that White-Plume celery to Peter Henderson. It might astonish him, even if he is the originator of the variety."

My plans were beginning to bud and blossom, and there had been a pleasant prospect before me for some time of being able to teach our Medina people what could be done in the way of scientific market gardening. But here were my fond hopes, dashed to the ground. It is true, my old neighbor did not do very much at the business, for he never owned even a horse, but did all his work by hand—hiring, perhaps, a man to plow occasionally; therefore the amount of stuff he raised during a season did not amount to very much. But notwithstanding, his little home and his little business were, without any question, in great jeopardy, if I kept on in the way I had been doing. After he had got to talking more coolly, he declared I could not have more effectually broken him

up, had I sat down and planned it out deliberately. Why not buy him out, together with his good will of the business? Several objections met me; first, I might have to buy out every man who owned a little garden. Next he would want me to give him employment. But he drank beer and cider, as many of his countrymen do, and he was in the habit of taking God's name in vain, as I had abundant evidence from his talk then and there. I pondered the question over Sunday. I read that chapter, the 13th of Genesis, and I remembered how Abraham did. It was not an easy matter for me to go away from Medina to start business somewhere else. I stated the question to one of the deacons of our church. He said he thought the claim was a little unreasonable, and that I had a perfect right to go into any such business if I should so choose. But he agreed with me, notwithstanding, that one ought to follow Paul's advice in living "peaceably with all men, so far as in him lieth."

Monday morning, as soon as my work was a little bit ahead, I called on my old neighbor. His wife was sick, and near to death. He was obliged to do his own housework. His boys used to be in my Sunday-school class, but I now remembered that they had not been for some time. As I looked about his garden my heart was touched, and I resolved that, if it were a possible thing, my business should not stand in the way of his business. He seemed sad, but much pleasanter and kinder than he had been the Saturday night before. By the way, dear friends, did you never realize, when you are in difficulty with a neighbor, that it is an excellent thing to see how far you can narrow down your differences until you get at the *exact point* of disagreement? I proposed that we should divide up the garden crops, and that he should raise one thing and I another. I had a great lot of tomatoes, and he had none; he had a large lot of beets, but mine were all sold for the season. So we took up one thing after another, and, to my great joy and surprise, it narrowed down to almost one single vegetable. He had about a thousand celery-plants, and I had eight thousand. Now, said I,—

"Friend —, what will you take for your thousand celery-plants?"

"Why, Mr. Root," said he, "you have eight thousand already, and I am afraid you will not be able to sell them. You certainly do not want to buy any more."

But I assured him that I did want to buy more, and that if he would set a price I thought we could soon make a bargain.

"But, Mr. Root, you are doing this because you want to accommodate me, and not because you want the plants. I feel differently about the matter from what I did, and I guess it is all right. You just go on with your wagon, and we won't say any thing more about it."

"But, how about the saloon? You will not start any saloon, neighbor —?"

"No, I will not start any saloon," and he smiled in such a good-hearted way that I knew there was no danger. Do I need tell you, friends, what a feeling of joy and peace

came into my heart, not because the way was open to me to go on with my experimental farm of ten acres, but because one more of the Bible texts and promises had been tested and tried. The spirit that Christ enjoins had come out once more triumphant.

The wagon came along a few minutes later, and he looked pleasantly toward the boys who had it in charge. As I rode along home with them I told them how it had turned out.

"Now, boys," said I, "don't ever any of you say a word disparagingly of neighbor—or of his products. If his boys are selling things to any of our customers, let them have the trade, and don't call there; and buy their stuff of them whenever they have any thing that you need, even if you sell it without any profit."

Oh, what a very, very pleasant thing it is to lend assistance to a neighbor who is in the same business as yourself, and to let him see that you are glad to help him, and glad to see him prosper! Why, it is worth more than all the profitable ventures any man ever made! There is one thing I am feeling a little badly about; and that is, that no opportunity has presented itself as yet for me to show my gratitude to my neighbor for the kind way in which he has given way in this matter of competition. I have prayed for him and for his motherless boys, for the mother is now, while I write, no more. But such a multitude of cares press upon me, especially since my absence of three days at the State Fair, that many a thing I had planned to do has to be passed by, as out of the question; but yet, amid all these cares a bright gleam of sunshine seems to break forth whenever I think of those words of that old patriarch when he said, "Let there be no strife, I pray thee, between me and thee, . . . for we be brethren." In my case, it is not exactly brethren by ties of blood, but it is an old neighbor; and what term comes nearer to the title of "brethren" than the one of "neighbor"? How very, very pleasant it is to be able to say, "Nothing but love and kindness exists, so far as I know, between *myself and my neighbors*!"

#### A LETTER FROM W. Z. HUTCHINSON.

SHALL OUR CHILDREN HAVE HAMMERS AND NAILS TO LOSE AND WASTE?

**F**RIEND ROOT:—If you are busy now, don't stop to read this letter. It isn't a business letter; it is only, as our little girls say, "Just a 'jibber-jabber' letter." Put it in your pocket, and read it at your leisure, or to Mrs. R. this evening.

I was much pleased at what you said in reply to one of the juvenile letters; i. e., let the little boy use the nails; they are not wasted. Perhaps these are not the exact words used, but that is the meaning. It carried me back to my boyhood days when nails were so hard to get. Just above our place, on the-Butternut Creek, was a saw-mill, and a great many pieces of boards floated down the stream and lodged against logs. From this "flood-wood" we, brother and I, used to pull out pieces of boards,

"edgings" and the like, let them dry upon the bank, and then drag them home to "make things," to build dams, make water-wheels, wind-mills, sawing-machines, etc. But, oh the struggle for nails! Every old board and building was ransacked for them; and if we didn't "find" enough, and took some of father's, then how he *would* "scold."

I remember one time when brother and I had carried some butter and eggs to a store about five miles distant, and exchanged them for groceries, and some tobacco for father, I bought two pounds of nails, paying for them out of the butter and eggs, and hid them in a log-heap when we got home. But after we had gotten them in this way we couldn't take any comfort in using them, and finally went and told mother all about it. After that she quite often used to let us have a dozen eggs "to buy nails with." I have not yet forgotten how firmly I resolved, if ever I had any children, they should *have all the nails they wanted*.

Father was a pretty good father, but seldom took much interest in our boyish plans and projects. He had a chest of tools, and allowed us free access to them, for which we have always been thankful.

Well, at last I have children of my own, and they use ten nails where I used one, even if they *are* girls. In the shop are two large boxes in which are thrown all the odds and ends, and the girls understand that they can have any thing they find in those boxes. If they want any thing else they always come with a "Pa, can I have this?" They are at liberty to use the hammers, nails, and saw; and so proficient have they become, that when I hear them sawing or pounding I sometimes think it is somebody else, and go over to see who it is. Their latest production is a little bee-hive, about eight inches long, fashioned after the Heddon hive. They "got stuck" on the frames, couldn't make them, and felt so badly over it that I came to the rescue; and when the hive was finished, then they wanted some bees in it, and teased so much about it that finally I transferred a nucleus to it. The nucleus had a laying queen. The bees were some of those gentle Italians from Cyula Linswik, and the little girls go down and open the hive several times a day and "find the queen," sometimes without smoke, and sometimes they light the smoker and use it so that you can be doing "just as pa does."

How ownership does awaken interest in any thing, doesn't it, friend R.? I thought the girls had asked me about all the questions about bees that they could think of; but when they became the happy possessors of a little colony of their own, when they could take their little chairs and sit down by it and see *their* bees going out and in the hive, *then* the questions came thicker and faster. I got along very well until this one came: "Pa, what shall we do with them so they won't die next winter?" I said, "I am going to feed mine sugar, and put them in a warm cellar." They guessed they "would too." The twins are seven this fall, and Ivy is nineteen months younger.

What a pleasure it is to give pleasure, and especially so to give pleasure to those we love! I wonder if parents realize how much they might add to their children's happiness by taking a little interest in their childish pleasures.

I don't know, old friend, why I have written like this to you. I just "felt like it," and that's all there is to it.

W. Z. HUTCHINSON.

Rogersville, Mich.

Well, I suspect, friend W. Z., you just felt like winking as you did, because you knew it would hit me exactly. Huber has arrived at the age of nails and hammers, or pretty nearly so. Only yesterday I scowled up my face, and was going to remonstrate pretty earnestly at the awful clatter somebody was making while I was trying to talk; but after I got where the sounds came from I found it was Huber with a three-cent hammer, a tin dish of nails, and a lot of sticks such as the girls have to put in the A B C book to keep the edges from getting injured in the nails. His face was so full of enthusiasm, and he was having such a real good time, that I let the scowl on my face slide off, and I turned around and went away, and didn't scold a bit. Yes, let even the girls have their nails and their hammers and bee-hives, and whatever else they take a notion to, that will not do them harm, and especially these things that will teach them to love rural pursuits and God's own handiwork. Yes, I remember when I wanted to make a corn-planter, when I was a small boy, my father objected; but I told him if it did not work I would take every nail out, without bending it, and bring them all back to him. I did it, too, and I think it taught me a useful lesson, to remember that nails cost money.

#### LETTER FROM ONE OF OUR JUVENILES AFTER SHE HAS GROWN UP.

FROM 25 TO 63, AND OVER 1250 LBS. OF HONEY.

FATHER came through the winter with 25 stands. They began swarming the 27th of April, and they just kept swarming until, after all he has said against the old plan, he was compelled to hive in boxes, half-barrels, or any thing. He is a nurseryman, and while attending to his trees, building the new house, and such little jobs, he hadn't much time to look after the industrious pets. They increased to 63, and he has taken only about 50 lbs. to the hive, and left them plenty for winter. The honey is good, well flavored, and thick; but the little scamps have put in a spot of bee-bread every once in a while in the most of it.

I have just been watching the bees dig the "tripolis" off the sides of an empty hive. They carry it away in their leg baskets. I suppose they want it to chink up cracks with. Father has killed some loaded specimens for me, but I suppose they will not reach you in very good shape. There were all kinds at the work—Holy-Lands, blacks, and hybrids.

#### ALSIKE CLOVER.

Father has some alsike clover. He makes hay of it, and likes it better than any other clover. Several of the neighbors have sown test pieces of it, and, so far as I can learn, they are well satisfied with it.

When I "chipped in" once you mistook me for a juvenile. I am one of those care-free, independent "old maids;" and as I signed only my initials, several who wanted to learn something about Oregon wrote to me and addressed me as "A. M. Hall, Esq.," and "dear sir." I enjoyed the joke very much, but still I thought it was a little rough on the innocent inquirers, and so I shall give my proper name this time.

ANNA M. HALL.

Beaverton, Oregon, August 31, 1885.

Thank you, friend Anna, for your kind re-

port. The spots of bee-bread you say you saw through your comb honey are very unusual, and I should think likely it was caused by something in the arrangement of the surplus boxes in regard to the brood-nest. I have often noticed the bees carrying their propolis in the same way they do their pollen, and I believe you are right in your conjecture that they wanted it to chink up with in anticipation of winter. The specimen you mailed showed the gum still adhering to the little leg.—I believe that some of the best friends I have in the world, Anna, belong to the class which you are pleased to say you represent. You see, women who do not get married always want something to do. I happen to be one of those individuals who always have lots of schemes and plans, and so I am always needing skillful helpers. Well, women who are free from the care of families are just the ones to help me. I help them, and they help me. Isn't that a pleasant relationship?

#### MRS. CHADDOCK'S LETTER.

She Proposes Starting a Class in Botany Among the Juveniles.

#### LESSON I.—THE PUMPKIN.

I WANT to study botany; and as it is such lonesome work studying any thing alone, I wonder if the juvenile readers won't help me. Let's begin with the pumpkin. How many of the little folks can tell me to what family it belongs? and who will tell me about the two kinds of flowers found on the same vine? Describe the stamens in each, and tell me where the pistil is. This is a short lesson, but I believe in short lessons and quick answers.

MAHALA B. CHADDOCK.

Vermont, Ill., Aug. 20, 1885.

Mrs. C., I do not know very much about the botanical character of the pumpkin, but I do know this: That Italian bees seem exceedingly fond of the large squash and pumpkin blossoms. The other morning, when I was picking green corn I bumped one of these great posies with my rubber boot (for it was a dark and wet morning), and out came so many Italian bees, one after the other, that I almost began to think they had started a nucleus there. Some years ago a field of pumpkins near our apiary yielded honey enough to settle the hive on the spring scale a little every morning, when the weather was favorable. The trouble about our juvenile class, I fear, will be this: There will not be room enough for a tenth part of the answers.

#### HOW TO CATCH BUMBLE-BEES.

#### A NOVEL PLAN.

I WILL write a letter for the juveniles. Under one of my strongest colonies of bees was a nest of bumble-bees, which annoyed me very much. Whenever I went to pull the grass about the hive, out they would come, and smoke would do no good; they would follow me all over the apiary. Yesterday one stung me on the head, and how to get them destroyed I could not think. If I moved the hive I was afraid I should destroy too many bees. My daughter told me to "jug them," and I did.

I took a jug, and filled it about half full of water, and set it by the side of the hive, took a long stick, punched under the hive, and in fifteen minutes they were safely juggled. I think the happiest sight to me that I ever saw was those bumble-bees going "thud" into that jug.

R. ROBINSON.

Laclede, Fayette Co., Ill.

Friend R., I have heard before of setting a black jug near to a bumble-bees' nest, in the way you have described. I never had much faith in it, because it seemed so unreasonable. If it is really true, however, that the bumble-bees will, the whole of them, one after the other, duck down into that black hole, it may be, perhaps, the easiest way of getting rid of such intruders.

There rose upon the waters  
A shout of thanks profound,  
From those who, by the or-  
ders,  
Were so securely bound.

[Blessing, and honor, and glory, and power, be unto him that sitteth upon the throne.]—REV. 5: 13.

Let us all prepare ourselves  
For this wave of unbelief  
That o'er our land is sweeping,  
Bringing many hearts to grief.

[But the fearful and unbelieving shall have their part in the lake that burneth with fire and brimstone, which is the second death.]—REV. 21: 8.

For 'twill pass upon its way,  
And leave our ship unharm-  
ed;

[Blessed are they that do his commandments.]—REV. 22: 14.

But hard's the fate of those  
By this sad tale be warned.  
Mogadore, O., June, 1885.

## A JUVENILE'S EXPERIENCE IN RAISING QUEENS.

### SOME QUERIES ABOUT IT.

I AM trying to raise queens. I got four nuclei of you at two different times, and have them all in working order now. About a month and a half ago I gave my nuclei some eggs from an Italian queen that produces good three-banded workers. The nucleus drew out some cells; and when they hatched, some of the queens were light and some were dark. About twelve or fifteen days ago I gave them some more eggs from the same, and I now have one virgin queen one or two days old, and she is as black as any black queen could be. There was a swarm came from her mother's hive, and the queen in it is a bright yellow. Now, Mr. Root, can you tell me the reason that the mother is yellow, and her eggs produce yellow workers but black queens?

One of papa's Italian hives sent out two swarms, and after that we thought it was queenless; so we gave them brood to test them, and so, sure enough, they went right to work making cells. After they had sealed them all over, papa cut them all out except one which he left for the queen to tear down. He then caged a virgin queen and put her in the hive and left her there. The cage had some candy in one end, and they ate her out. When I went there the next day they were balling her a little, but I gave them a smoking and left her. The next time I went there I could not find the queen, but found, instead, a cell sealed, which I think was a fertile worker. When papa came home he tore down the cell and hung a laying queen down in their combs, and left her there from Saturday till Monday morning. Then he took the plug out and was going to tie a paper over the cage, when the queen got out and flew away, but soon came back, but flew away the second time, and then we caught her and put paper over the cage. The next day the paper was gone; the queen was gone, but they had a cell instead, which I tore down. Now, Mr. Root, would you please tell me what you would have done with that hive?

IRVING D. BANKS.

Princeton, N. J., August 12, 1885.

Friend Irving, it is quite a common thing to find Italian queens producing full-blood Italians, but whose daughters are very dark. It is common for the same queen to produce dark queens early in the season, or when the cells are reared in small nuclei, while during the summer time her queens will be large and yellow—that is, providing they are reared in good strong colonies.—There is nothing else to do with the hive you mention, but to give them some more brood, to be sure they are queenless; and when you

## THE WAVE OF SKEPTICISM.

BY HARTIE MEACHAM.

A gallant ship was riding,—  
A ship long tried and true,—  
Upon the heaving bosom  
Of the ocean broad and blue.

And as it glided onward,  
A song rose loud and clear,  
Whose every note was brimful  
Of kindly love and cheer.

At peace were all its workers,  
As was the briny deep,  
When in the hazy distance  
A wave was seen to leap.

At first a tiny wavelet  
Was all that could be seen;  
But as it rolled onward,  
Fast grew its silv'ry sheen.

And as the captain viewed it  
With trusty glass in hand,  
He said, "Of all the wonders  
I've seen on sea or land,

This wave so lone, so frightful,  
In its march across the sea,  
Is strangest of all wonders  
That e'er were shown to me."

Then as onward still it came,  
He cried in tones of night:  
"Let every man unto the ship  
Lash himself so fast and tight,

That the wildly raging wave  
Do not wash him overboard."  
Faster came the rising swell,  
And louder still it roared.

Some hastened to obey his word;  
But some of the goodly crew  
Said: "Who's afraid of waves-  
lets  
On this ship so strong and true?"

Some clung unto the rigging,  
And thought by their own might

To resist its wild fury  
And be victor in the fight.

Oh, the wail of the lost ones  
As it struck that ship so brave,  
And dragged the unsecured ones  
Down to a watery grave!

Then those poor deluded ones  
Who clung by their own strength—

Methinks I hear their shriek-  
ing  
As they each gave out at length,

And dropped into the waters  
Of that seething, surging

For strength and courage  
praying  
When 'twas too late, alas!

And as the wave proceeded  
Upon its cruel way,  
And left the ship uninjured  
By its great watery fray,

[Thy word is true from the be-  
ginning; and every one of  
thy righteous judgments en-  
dureth for ever.]—PS. 119: 160.

[Thy statutes have been my  
soil and hideth himself.]—PS. 119: 54.

[Great peace have they that  
love thy law.]—PS. 119: 165  
[My peace I leave with you.]—  
JOHN 14: 17.

[A prudent man foreseeth the  
evil and hideth himself.]—  
PROV. 27: 12.

[And then appeared another  
wonder in heaven, and be-  
hold a great red dragon hav-  
ing seven heads and ten  
horns, and seven crowns upon  
his heads.]—REV. 12: 3.

[And all the world wondered  
after the beast, and they  
worshipped the dragon which  
gave power unto the beast;  
and there was given unto  
him a mouth, speaking great  
things and blasphemies, and  
power was given unto him to  
continue forty and two  
months.]—REV. 13: 4, 5.

[That we be no more . . . car-  
ried about by every wind of  
doctrine, by the sleight of  
men, and cunning craftiness,  
wherewith they lie in wait to  
deceive.]—EPH. 4: 14.

[Therefore, my brethren dearly  
beloved and longed for,  
my joy and crown, so stand  
fast in the Lord, my dearly  
beloved.]—PHIL. 4: 1.

[Take heed, brethren, lest  
there be in any of you an  
evil heart of unbelief, in de-  
parting from the living God.  
But exhort one another dai-  
ly, while it is called To-day.]  
—HEBREWS 3: 12.

[O God the Lord, the strength  
of my salvation, thou hast  
covered my head in the day  
of battle.]—PS. 140: 7.

[There shall be weeping, and  
gnashing of teeth.]—MATT.  
24: 51.

[Let him that thinketh he  
standeth take heed lest he  
fall.]—1. COR. 10: 12.

[They that were ready went in  
with him at the marriage,  
and the door was shut.]—MAT-  
THEW 25: 10.

[The gates of hell shall not  
prevail against it.]—MATT. 16:  
18.

see cells started, introduce another queen, or let them raise one. Sometimes it takes so long to get a certain queen introduced into a certain colony, that one is sorely tempted to let them perish; but that will never pay, you know.

### FESSLER'S BEES.

BY JAMES WHITCOMB RILEY.

"Talkin' 'bout yer bees," says Ike,  
 Speakin' slow and serous-like,  
 "D'ever tell you 'bout old 'Bee'—  
 Old 'Bee' Fessler?" Ike says he:—  
 "Might call him a bee expert,  
 When it come to handlin' bees,—  
 Roll the sleeves up of his shirt  
 And wade in amongst the trees  
 Where a swarm 'ud settle, and—  
 Blamedest man on top o' dirt!—  
 Rake 'em with his naked hand  
 Right back in the hive agin—  
 Jes' as easy as you please!  
 Nary bee 'at split the breeze  
 Ever jabbed a stinger in,  
 Old 'Bee' Fessler—jes' in fun,  
 Er in a'nest—nary one!  
 Couldn't agg one on to nuther,  
 Ary one way er the other!"

"Old 'Bee' Fessler," Ike says he,  
 "Madc a spesbyality  
 Jes' o' bees, and built a shed;  
 Len'th about a half a mild!  
 Had about a thousan' head  
 O' hives, I reckon—tame and wild!  
 Durndest buzzin' ever wuz!—  
 Wuss'n telegraph poles does  
 When they're sockin' home the news  
 Tight as they kin let 'er loose!—  
 Visitors rag out and come  
 Clean from town to hear 'em hum,  
 And stop at the kivered bridge;  
 But wuz some 'ud cross the ridge  
 Allus, and go clos'ter—so's  
 They could see 'em hum, I s'pose!  
 'Peared like strangers down that track  
 Allus met folks comin' back  
 Lookin' extra fat and hearty  
 Fer a city picnic party!"

"Fore he went to Floridy,  
 Old 'Bee' Fessler," Ike says he,—  
 "Old 'Bee' Fessler couldn't 'bide  
 Children on his place," says Ike.  
 "Yit for all they'd climb inside  
 And tromp round there, keardless like,  
 In their bare feet. 'Bee' could tell  
 Ev'ry town boy by his yell—  
 So's 'at when they bounced the fence  
 Didn't make no difference!—  
 He'd jes' git down on one knee  
 In the grass and pat the bee;  
 And, ef 't adn't stald stuck in,  
 Fess 'ud set the sting agin—  
 'N potter off, and wait around  
 Fer the old familar sound.  
 Allus boys there, more or less,  
 Skootin' round the premises!  
 When the buckwheat was in bloom,  
 Lawzy! how them bees 'ud boom  
 Round the boys 'at crossed that way  
 Fer the crick on Saturday!  
 Never seemed to me su' prisin'  
 'At the sting of bees 'us pizin'."

"Fore he went to Floridy,"  
 Ike says, "nothin' 'bout a bee  
 'At old Fessler didn't know,—  
 W'y, it jes' 'peared like 'at he  
 Knewed their language, high and low!  
 Claimed he told jes' by their buzz  
 What they wants and wishes wuz!  
 Peek in them-air little holes  
 Round the porches of the hive—  
 Drat their pesky little souls!—  
 Could a skinned man alive!  
 Bore right in there with his thumb,  
 And squat down and scrape the gum  
 Outen ev'ry hole, and blow  
 'N bresh the crumbs off, don't you know!  
 Take the roof off, and slide back  
 Them-air glass concerns they pack

Full o' honey, and jes' lean  
 'N grabble 'mongst 'em for the queen!  
 Fetch her out and show you to her—  
 Jes', you might say, interview her!"

"Year er two," says Ike says he,  
 "Fore he went to Floridy,  
 Fessler struck the theory  
 Honey was the same as love,—  
 You could make it day and night.—  
 Said them bees o' his could be  
 Got jes' twic't the work out of  
 Ef a feller managed right.  
 He contended ef bees found  
 Blossoms all the year around,  
 He could git 'em down at once  
 To work all the winter months  
 Same as summer. So one fall  
 When their summer's work was done,  
 'Bee' turns in and robs 'em all—  
 Loads the hives then, one by one,  
 On the cyars, and 'lowed he'd see  
 Ef bees loafed in Floridy!  
 Said he bet he'd know the reason  
 Ef his didn't work that season!"

"And," says Ike, "it's jes'," says he,  
 "Like old Fessler says to me,—  
 'Any man kin fool a bee,  
 Git him down in Floridy!'  
 'Peared at fust, as old 'Bee' said,  
 Fer to kind o' turn their head  
 For a spell—but bless you! they  
 Didn't lose a half a day  
 Altogether!—Jes' lit in  
 Them-air tropics, and them-air  
 Cactusses a-ripen-in,  
 'N magnoliers, and sweet peas,  
 'N 'simmon and pineapple trees,  
 'N ripe bananners, here and there,  
 'N dates a-danglin' in the breeze,  
 'N figs and reezins ev'rywhere—  
 All waitin' jes' fer Fessler's bees!  
 'N Fessler's bees, with gaummy wings,  
 A-gittin down and whoopin' things!  
 Fessler kind o' oversecin'  
 'Em, and sort o' 'hee-o-hecin'!"

"Fess, of course, he took his ease,  
 But 'twuz bilious on the bees!—  
 Sweat, you know, 'ud just stand out  
 On their forreds—pant and groan  
 And grunt round and limp about!—  
 And old 'Bee,' o' course, a-knowin,  
 'Twuzn't no fair shak to play  
 On them porc dumb insects, ner  
 To abuse 'em that-away.—  
 Bees has rights, I'm here to say,  
 And that's all they ast him fer!  
 Cleared big money! Well, I gness  
 'Bee' shipped honey, more or less,  
 Into ev'ry State, perhaps,  
 Ever put down on the maps!"

"But by the time he fetched 'em back  
 In the spring agin," says Ike,  
 "They was actin' s'picious like.—  
 Though they 'peared to 'lost the track  
 O' every thing they saw or heard,  
 They'd lay round the porch and gap'  
 At their shadders in the sun,  
 Do-less like untell some bird  
 Suddently 'ud may be drap  
 In a bloomin' churry-tree,  
 Twitterin' a tune 'at run  
 In their minds familarly:  
 They'd revive up, kind o', then,  
 Like they argued,—'Well, it's ben  
 The most longest summer we  
 Ever saw or want to see!—  
 Must be right, though, er old 'Bee'  
 'Ud notify us! they-says-ee,  
 And they'd sort o' square their chin  
 And git down to work agin—  
 Moanin' round their honey makin'  
 Kind o' like their head was achin'.  
 'Tetchin' fer to see how they  
 Trusted Fessler that away—  
 Him a-lazin' round, and smerkin'  
 To hisself to see 'em workin'!"

"But old 'Bee,'" says Ike, says he,—  
 "Now where is he? Where's he gone?—  
 Where's the head he belt so free!—  
 Where's his pride and vanity!—  
 What's his hopes a restin' on?—  
 —Indianapolis Journal.



Every boy or girl, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from \$1.00 to \$1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock six different books, as follows; viz.: Sheer Off, The Giant-Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room. We have also Our Homes, Part I, and a Bar-Room, Part II. Besides the above books, you may have a photograph of our old house apiary, taken a great many years ago. In it is a picture of myself, Blue Eyes, and Caddy, and a glimpse of Ernest. We have also some pretty little colored pictures of birds, fruits, flowers, etc., suitable for framing. You can have your choice of any one of the above pictures or books for every letter that gives us some valuable piece of information.

"A chiel's amang ye takin' notes;  
An' faith, he'll preut it."

**M**Y little friends, we have not got quite so many juvenile letters this month as usual, but they are extra good, as you may notice. The reason is this: I have been obliged to let Ernest look them over, because of my multitude of cares, and he thinks a letter should not be published, even from the little ones, as a rule, unless it contains something of value. I presume he is right about it, but it seems a little hard to refuse to give place to any little letter, even though it may not be of much account, or a repetition of something that has been written a great many times before. You will all have to learn this lesson some time or other; and perhaps it may be as well to learn it now; that is, there is no excellence without great labor; and those who work industriously, and try hard, are the ones who will succeed. And to be consistent with my own teachings, I will stop right here and make *my* little letter (or letter to the little folks) a short one.

#### A HORSE STUNG TO DEATH BY BEES.

Two years ago this summer our bees stung my uncle's horse to death. My pa bought one of your Italian queens, and the ants killed it.

La Otto, Ind., Aug., 1885. ELLIS SIMON, age 10.

#### STUNG THIRTEEN TIMES.

Bees were first introduced into California in 1850, and into South America in 1840. The bee is the most useful insect there is. I was once stung thirteen times at once. I struck the hive once with a stick, and they swarmed upon me.

EUGENE HOLZ ER.

Allerton, Wayne Co., Ia., Feb. 13, 1885.

#### POKING THE ENTRANCE OF A HIVE.

Sometimes when I go past the hives to swing in the hammock, the bees sting me. I have been stung four or five times. Last summer I took a stick and poked it into the entrance of a hive, and the bees

came out and stung me in several places. I don't think I shall do it again. A few days ago one of my little kittens scratched me on the arm.

Acushnet, Mass. BERTIE BENNETT, age 3.

#### HONEY, BUT NONE TO EAT.

My pa took some honey out of the hive Saturday. The bees work very well. We have plenty of flowers around the grove for the bees to gather honey from. I like honey, but ma doesn't let me have much, for she wants to sell it. We have lots of applea and plums. We have lots of little pigs.

HULDAH WILLIAMS.

Banks, Minn., Aug. 23, 1885.

#### MARY'S NEW HOME.

My father and mother have just moved to our new home in the woods. My mother had to go to town the other day, and left me at home to keep house all alone. I looked out that no cattle came around to tip our bees over. We have six hives of bees, and want to get more. I like to read the children's letters. I never went to school, nor to Sunday-school, and I never had one of your books.

Campo Seco, Cal. MARY A. LEUCK, age 8.

#### HONEY, FISH, AND CIDER.

We had 26 hives of bees when I wrote you the other letter. We got over 500 lbs. of comb honey. It hasn't a very good sale here. We get 15 to 17 cents per lb. We are making a fish-pond now, of 2 acres. There is a cider-mill going to start up pretty soon near our house. Do you think the cider will hurt the bees?

FRED W. ISRAEL.

Damascus, O., Aug. 7, 1885.

See A B C book in regard to cider-mills.

#### HOW MY PA CHANGED A BOX HIVE INTO A FRAME HIVE.

I must tell you how my pa fixed his box hives last spring. He took out the box above, and bored five rows of holes in a straight line, and he made frames to fit, and filled them with foundation; then put them in the space between the holes. We got plenty of honey. This way of getting honey from box hives is something new here, but it was a real success.

CHARLIE T. STEPHENSON, age 10.

Ripley, Ohio.

#### THE KITTEN, AND HER EXPERIENCE WITH BEES.

I have a little kitten named Moose. It was playing one warm day in front of one of pa's hives; and seeing the bees crawling out, it ran and put its paw on one bee, and then another. It thought it had found something funny to play with; but the bees got too hot for Moose; and I tell you, you would have laughed to see him run and tumble and mew. Poor fellow! He never went back there again.

Boothsville, W. Va. MAGGIE NUZUM.

#### BEES GOING AFTER WATER.

There is a meadow just below our house, which is rather swampy, and the day after a rain storm you may see a great number of bees going to and coming from this meadow before the water settles into the ground.

MILTON BENNETT, age 6.

Acushnet, Mass.

Friend Milton, the bees go down into the swampy ground for water. We have a fountain for ours, and we let on just water enough so that it drips over the edge slowly. The bees alight all around the edge, and seem to enjoy having a place where they can get water every day.

## SELLING HONEY AT THE FAIR.

My grandpa has ten stands of bees. They are doing well. He and I went over to the fair to see if we could sell some honey.

Dexter, Maine.

BENNIE ELLIS.

## A NOVEL WAY TO HAVE A SWARM.

Papa bought a hive of bees a year ago last December, at an auction, but they all died last March. The fore part of June, papa put the hive, full of empty comb, up in the top of the chimney. In a few days a swarm came and went into the hive. Papa took them down and put them on a stand, and they did very well. The fore part of August they swarmed. We now have two colonies of bees in box hives.

Lanesville, Conn.

FRED J. WANZER.

## THROWING DIRT TO BRING DOWN A SWARM.

My father keeps bees, but I do not have much to do with them; but when they fly away, then I help to chase them. I helped stop a swarm this summer by throwing dirt at them. They are doing well. Father has kept bees a number of years. He can handle them without much trouble; he has them in the Simplicity hive, and has taken 96 lbs. of honey from 3 hives.

CHARLIE HUNT, age 11.

Amboy, Ill., Aug. 6, 1885.

## WILLIE'S LETTER, AND HIS OPINION ABOUT SWEARING.

We had a swarm of bees come out three weeks ago last Sunday. Our bees nearly always swarm on Sunday. I am only a little boy, but I want to be as good as I can. On Sunday some of my neighbors' little boys swear, but I don't. I think it is awful wicked. Pa has an incubator. We have nice large Plymouth Rocks that were hatched in the incubator. The last time I wrote to you I had only one sheep; now I have two.

Memphis, Ind.

WILLIE COOMBS.

I agree with you, Willie, that it is "awful wicked" to take God's name in vain, and it makes me feel glad to know that there are little boys who can not be hired to do such wicked things for any consideration whatever.

## MELONS INSTEAD OF BEES.

My father put 13 swarms in the cellar last winter. All came out alive in the spring. He had 10 hives transferred into the Simplicity; they are doing well. He has 27 swarms now. He has them in a plum orchard, and hardly ever loses a swarm; but he had one come to him. He thinks they are part Italians. My brother and I can make more raising melons. We have a large patch. We sold 12 dollars' worth last summer. There is something we can do, if we can not handle bees.

GEORGIE HUNT.

Amboy, Ill., Aug. 7, 1885.

By all means, raise melons, Georgie, if that kind of work suits you. The boy who *loves* the business, and sticks to it until he becomes an expert, will be almost sure to make money at it; and we might almost say the same of any other rural industry.

## BEES STINGING CARP.

My father wintered, last winter, 140 stands of bees, losing one in March. We are feeding our bees now. The drought last fall killed the white clover here. Our bees have not made any honey this year to amount to any thing. We had 94 German carp, and our bees stung two in the mouth and killed them. Our carp are very tame. We can hold a

piece of bread in the water and they will come and eat out of our hand.

ANNA QUINBY, age 14.

Edenton, Clermont Co., O., Aug. 24, 1885.

## BEES WORKING ON BUCKWHEAT.

My uncle has eighteen colonies. They are very busy nowadays. Uncle works among the bees, and they alight on his hands and on his back, but don't sting him, while if others go near the hives they get stung. If we go by the buckwheat and listen, we can hear the bees humming as they do around the hives.

ETTA B. PECK, age 13.

Banks, Faribault Co., Minn., Aug. 22, 1885.

## AN OBSERVATORY HIVE; NOTES TAKEN BY A JUVENILE.

We have an observatory hive in our window, which has been there about three months. Pa uses it to raise queens. It had a queen fertilized last week; she was absent from the hive 38 minutes; she is now introduced to a fall colony, and the observatory is raising another one now. Pa has taken 457 lbs. of honey from six colonies, and increased to 14.

J. A. SHENEMAN, age 12.

Pharisburg, Union Co., O.

## HOW TO GET A SWARM FROM THE TOP OF A YOUNG MAPLE-TREE.

My grandpa has 18 colonies of bees. He had a swarm in the top of a maple-tree. He tied the clothes-line to the top of the tree, then he bent the tree over and tied it to a plum-tree, then he swept the bees into the hive. My grandpa has two acres of buckwheat. Grandpa has two wild geese. They are so tame that they will eat right out of your hand. Their names are Punch and Judy.

CLIFFORD BUSS, age 9.

Banks, Faribault Co., Minn., Aug. 23, 1885.

## BEES FOR MEDICINE, ETC.

I have been a reader of GLEANINGS ever since I was old enough to read. Pa started in last spring with 36 stands; increased to 46 by swarming. He does not let them swarm very much. He gives them plenty of work to do. Pa sold about \$100 worth of honey last summer, and every time he goes to town some want to know if he has got any more honey to sell, and he has to tell them no. He uses the Langstroth hives and the chaff hives. Did you ever hear of bees for medicine? Ma's baby was sick with the hives, and the woman doctor took one dozen bees and made tea of them, and the baby got well.

JESSE O. SWITZER, age 14.

Bueklin, Linn Co., Mo., Feb. 12, 1885.

Yes, Jesse, I have heard of bees for medicine. Your little story is almost a joke, but I presume you did not know it. You see, if the baby was sick with the "hives" it would be the most natural thing in the world to give it a tea made of bees. I suppose that by the term "hives" you mean a sort of breaking-out in large red blotches. Well, the poison from bee-stings is a remedy used very much by a certain school of medicine. That the remedy is a powerful one, there is no doubt. In some of our back volumes I have told you about selling poison-bags to the doctors for so much a thousand. Now, it would not be at all strange if this poison from the bee-sting were just the proper remedy, if administered in exactly the right quantity. A very little bee-poison will make one feel quite sick.



## WARREN'S LETTER.

Thirteen years ago Eagle Lake was a forest, and now it has 300 inhabitants. My uncle is in the bee business. He makes his own fdn. My father is a soldier. I'd like to see Huber.

Eagle Lake, Minn. WARREN KEEBAUGH, age 12.

## PROPOLIS MADE OF PAINT.

The bees do funny things sometimes. Pa made some paint, to be used hot. Some was left, and thrown out. When pa opened one of his hives ma said, "That is funny-looking propolis." Pa scraped some off, and smelled of it, and said it was some of that paint he threw out. There was nothing poisonous in it, except a little red lead.

## ANNA BARSHAM RUSSELL, age 10.

Osteen, Fla., Aug. 5, 1885.

## BROTHER FRED'S MISCHIEF: 25 STINGS ON HIS HEAD.

My papa has 50 stands of bees. He lost 16 swarms through the winter. We have taken off 800 lbs. of honey. I have one swarm of bees. My little brother Fred is two years old, and is very mischievous. He got stung 25 times on his head.

## LINA LANGTON.

Windham, Portage Co., O., Aug. 9, 1885.

Whew! So your two-year-old brother got stung 25 times, did he? Why, some of the old veterans would make a howl if they got that many all at once. I should think your brother must be pretty good grit—is he not?

## A "BIG GOOSE"; A SAD EXPERIENCE.

Grandma Koosa gave brother and me a pet goose. To-day it was going by the bee-hive, and the bees saw her, and oh how they did sting her! She ran and turned over and over, and jumped on the bee-hive, and rubbed her head, and you don't know how sorry we were. Our bees are good; they don't sting us at all. I think it is because none of us use tobacco. You know they don't like tobacco.

Border Plains, Ia., Aug. 8, 1885. FRANK KOOSA.

Why, Frank, that goose must have been a "big goose" for sure, to jump on the bee-hive after she had been "goose" enough to get so near the bees as to get stung. And so you think the reason why your folks don't get stung by the bees is because your folks do not use tobacco.

## LETTER FROM A FLORIDA JUVENILE.

I have lived in Florida nine years, and have just started to make a flower-garden. Flowers do nicely, if anybody will take care of them. I have several kinds of flowers. I got a few geranium cuttings from Eva S. Glawson. She has quite a number of flowers. I think roses and magnolias are the prettiest kinds of flowers. I have got a nice maderia vine climbing up the window. It is about a foot long. They have a pretty flower.

I have four tame blue-jays. They will come and eat out of my hand. They are a pretty bird, and very tame. There are a great many kinds of birds here.

The bees have not done much this year. I like honey cappings better than extracted honey. Our oranges will soon be big enough to eat. The insects are not bad this summer. I guess they have all gone north to spend the summer. I got a letter from my aunt some time ago and she said that she saw a few flying about after dark, so I guess it is true about what I said.

MINNIE S. MENDEL.

Hawk's Park, Fla., July 29.

## SEASON NOT FAVORABLE FOR BEES; STRAWBERRIES BY THE THOUSAND QUARTS.

Our bees are not doing very well; for in spring it was too wet and cold, and now it is too dry. They are working some on sand mint. This is the worst season for bees we ever had. We have 15 new swarms. We had lots of strawberries. Sometimes my brothers shipped as many as a thousand quarts a day. We did not have so many raspberries or blackberries, as it was too dry and hot here. I like to take care of bees better than I used too. I hived them barefooted.

FRED WIRT, age 15.

Keithsburg, Mercer Co., Ill.

## HOW JOHN'S FATHER MAKES A "POLLEN-SCRAPER."

The bees are getting lots of pollen from corn. Pa has made some pollen-scrappers. He takes a strip of tin as long as the entrance of the hive, and makes a row of holes in it, each a scant 3-16 of an inch in diameter, and nails the tin over the entrance; and when the bees go in it scrapes the pollen off their legs, and about noon I brush the pollen away, and take off the tins so the bees can take out the dead ones; and in the morning I put the tins on again.

JOHN RALSTON, age 14.

Vinton, Benton Co., Ia.

Very good, John; but what in the world does your papa or anybody else want a pollen-scraper for? I have heard of the friends having too much pollen in the hives, but I never saw a hive with too much pollen in it yet, especially if I were raising bees and queens for sale. And although I may be mistaken, it seems to me you will do your colonies damage by depriving them of the pollen they worked so hard to gather.

## EDNA'S REPORT.

Our bees are working as fast as they ever have. They will be so thick in the air that I ask ma or pa if they are not swarming. They look just as if they were. I am watching the bees now. We had one swarm this forenoon. We have lots of new honey. Some is so white you can hold it up to the light and look right through it and see things. Our bees are not cross one bit. When the bees swarm and pa is not at home, and ma is doing something, and her sleeves are rolled up, and there is not a bonnet or bee-veil in reach, she will run out bareheaded to look for the queen, and the bees will not sting her. I have to laugh at her. Pa is not at home now. He is at the upper bee-yard, a mile from here. Novice watches the bees there; and when they swarm he runs down and tells pa, and then he rides up with pa. We have three large rabbits and seven young ones. We did have four. One was lemon color. We got them of Mr. Fradenburg. The lemon-colored one got away.

EDNA A. BOOMHOWER.

Gallupville, Schoharie Co., N. Y.

Thank you, Edna. It does us lots of good to hear from little girls whose papas we have known for many years, as we have your pa. You see, we shouldn't know that the papas had any little girls, if these same girls didn't write us nice little letters like yours.

## HOW THE BEES ROARED ON BUCKWHEAT WHERE CORENA LIVES.

We have a big piece of buckwheat. The other day when I went to dig potatoes the buckwheat was covered with bees. I looked all over, and thought it was a thrashing-machine. I stiek the foundation into the boxes for pa, and put them into the frames.

The queen that he bought of you a short time ago has done well. She filled the ten frames in Simplicity hives with brood over a week ago.

One day we had a swarm, and a king-bird caught the queen, and from one swarm the queen did not come out.

CORENA WILLIAMS.

Banks, Faribault Co., Minn., Aug. 23, 1885.

Well, Corena, that is pretty well expressed. The bees made such a roaring on your buckwheat that you thought it was a thrashing-machine. I should think likely your buckwheat is doing nicely. We have a field of about one acre that begins to look very handsome; in fact, it pleases me the best of any piece of buckwheat I ever had. It was sown with a grain-drill, and we put in 300 lbs. of phosphate to the acre with the seed. The next time I hear bees humming on it in the morning, I will stop and listen, to see whether it sounds like a thrashing-machine or not.

## TOBACCO COLUMN.

### A NEIGHBOR'S INFLUENCE.

**I** SOLD a neighbor a few colonies of bees last spring; and as they were blacks I told him he would need a smoker. He thought he couldn't afford to get one, so I told him about your offer in GLEANINGS. Well, he came over to-day and asked me to send for a smoker for him. He said he had used no tobacco for six weeks, and thought he could "stiek to it" (he has used tobacco for twenty years). He says, "Tell Mr. Root if I ever use it again I will pay for the smoker." If he doesn't, I will.

S. L. ESLER.

Duplain, Mich., August, 1885.

I saw in your journal that you would give a smoker to any one who would give up smoking. I gave it up the 4th of July, and intend never to smoke again, whether you send the smoker or not. I have three hives of bees.

HOMER CHARLTON.

Gorham, N. Y., July 21, 1885.

I have read GLEANINGS some, and saw your offer to give a smoker to those who quit using tobacco. I have, with the help of God, quit chewing and smoking. Will you please send me a smoker? If I use tobacco in any form again I will pay for the smoker in full.

C. W. TRACY.

Plymouth, N. Y., May 26, 1885.

I have received the queen and frame of brood. The bees you sent me are all right, and I am well pleased with them. I introduced the queen to a hive that was queenless, and it works well. One of my neighbors has quit using tobacco. Will you please send him a smoker? If he ever commences using tobacco again I will make him pay for that smoker, if you send him one.

W. HIESTAND.

Palm, Pa., July 17, 1885.

I have quit the use of tobacco. After using it and cigars for ten years, I came to the conclusion I would try to quit chewing and smoking. I have done so; and now if I am entitled to one of your smokers, please send me one. If I begin using it again I will pay you for it. We have four stands of bees, and they are doing extra well for this season. Basswood has been booming.

ELMER OWENS.

Woodstock, Ohio.

You have persuaded me to quit the use of tobacco. Thanks. You may send me a smoker; and if I am not faithful I will pay for it.

B. H. MOBLAY.

Girard, Ga., May 23, 1885.

QUITTING THE USE OF TOBACCO WITH GOD'S HELP.

I have not used tobacco for about four weeks, and I intend, with God's help, never to use it again; so, please send a smoker, and help a brother in need.

S. H. WETMORE.

Wellsboro, Tioga Co., Pa., May 22, 1885.

HOW FRIEND C. QUIT THE USE OF TOBACCO.

In the year 1858 I quit the use of tobacco, having chewed and smoked the filthy weed for ten or twelve years. I found it was injuring my nervous system. It was a three months' fight; but, the victory was gained, the battle does not have to be fought over again; why? Because I gave my testimony against it — "This is the victory that overcomes the world, even your faith." Faith in whom? In God our Father, and Jesus Christ our Savior.

J. C.

INFLUENCE OF A FRIEND.

I was at the store to-day and met one of my neighbors who is a bee-keeper on a small scale. He purchased 5 lbs. of tobacco, and I told him of your offer to give any one a smoker, who would quit the use of tobacco in every form. He said that if I would write to you for a smoker he would quit. I told him I would do so. He gave back the tobacco and took coffee instead. He promises to pay for the smoker if he ever breaks over. I have induced another one of my neighbors to quit, and he makes the same promise. I think they will hold out. They are both members of the Christian Church.

Quinnimont, W. Va.

S. L. CARPER.

QUITTING THE USE OF TOBACCO "FOR CHRIST'S SAKE."

I have procured you a new subscriber to GLEANINGS. He is trying to quit the use of tobacco for Christ's sake. He has not used it now for several months. He was an inveterate smoker and chewer, but is determined, by God's help, never to use it again. Can you not give him a smoker to encourage him? He is a poor man, with a small mortgaged farm; enlisted in the army when he was fifteen, and served through the war; and through my influence he is becoming quite interested in bee culture. I think you will receive an order from him this fall.

J. F. TEMPLE.

Packerville, Ct., June 5, 1885.

ONE WHO HAS USED TOBACCO FOR THIRTY YEARS.

I can not do without GLEANINGS, even if it is a little mixed with bees, fish, potatoes, strawberries, and tobacco. I am glad to see some one keeps trying to break the chains of that miserable slavery of tobacco. I was a slave to it for over thirty years, both chewing and smoking to such a degree that I knew nothing but smoke, first in the morning before I could dress; at night I lay down with my pipe in my mouth. It often cost me 30 cents per week, besides ruining my health, dulling my nature to any thing but tobacco. I made up my mind to quit on the first day of Jan., 1881, and have never touched, tasted, or handled since; but I tell you it was a struggle. I do not write this to get a smoker. I have one of your make. I am well paid in health, as well as a dozen other ways. I think if a man gains his hearing in one month, he is well paid.

Marlette, Mich.

J. H. KIRK.

## OUR HOMES.

I, even I only, am left, and they seek my life, to take it away.—1. KINGS 19:10.

I SUPPOSE most of the friends are familiar with the circumstances under which Elijah spoke these words. Elijah was a great prophet. God honored him in life, and God honored him by translating him that he should not see death. He commissioned him to perform miracles such as no human being had been permitted to perform before. Elijah was a great reformer. He surely hungered and thirsted after righteousness. But with all his bravery, and with all his devotion to the cause of righteousness, he seems to have been human, like ourselves, and was given to complaining and fault-finding at times, it would seem. James mentions this where he says:—

Elijah was a man subject to like passions as we are, and he prayed earnestly that it might not rain; and it rained not on the earth by the space of three years and six months.—JAMES 5:17.

He was just the man for the place and the times: and when God commissioned him to meet Ahab, to tell him of the famine that was to come on the nation, he took up fearlessly the task that perhaps no other man in the kingdom would have dared to perform.

We know nothing of the early history of Elijah. We only know that the general impression seemed to prevail that God was accustomed to deal with him in a miraculous manner. Even as good a man as Obadiah, was afraid that God might take the prophet away by some sort of "sleight of hand," and leave himself the victim of Ahab's fierce passions.

Elijah had a simple, childlike faith in God that fitted him for the work he was called upon to do. There was nothing in his composition to indicate the least particle of pride or love of display. The historic mantle, which has been a synonym for ages, was probably a simple garment made of sheepskin or leather; and whether he was alone in the wilderness, or standing before the king, his attire was probably just the same. He was one of the great minds of the age, and eminently fitted for calling down fire from heaven, or invoking the storms from across the sea; and through it all we may readily believe there was not a spark of pride or self-glory. It was God's honor he was defending, and God's righteousness that he wished to see prevail; and because instant reform among the children of men was not a prompt result of his great miracles, he became dissatisfied and impatient, and complained even to the angel of the Lord himself.

How often we see the same spirit manifested nowadays, even by some of God's greatest servants! and most of us, too, perhaps, who have been hungering and thirsting after righteousness have felt some of Elijah's impatience and want of faith, because God's work seems in our eyes to move with unreasonable slowness. Every little while somebody says the cause of temperance is not moving on a bit—we are just where we were years and years ago. All

the energy and zeal which has been put forth amounts to just nothing, or, at least, the effect is so soon swallowed up in this gulf of iniquity that we might as well give up and let the thing go on.

A friend of mine once said to me, "The men *all* drink—at least, there is hardly an exception." I think of it sometimes when it transpires that one whom we supposed was almost the soul of honor and temperance, has been taking stimulants for his health because "the doctor advised it," or something of that sort; and when after a little time he turns out to be openly intemperate, I begin to wonder if there is really *anybody* to be relied on. I feel ashamed of myself, however, soon afterward; for if I don't remember the words of reproof that God used in replying to Elijah, I at least recover my own good common sense. In the 18th verse of the same chapter our text comes from, God tells Elijah that there is not only *one* more like himself who is hungering and thirsting after righteousness and godliness, but that there are in Israel *seven thousand* whose knees have never been bent for one moment to Baal, and whose lips have not touched the disgusting idol. And now, then, the point of my talk to-day, dear friends, is going to be a good deal in the same place where it has been so many times before—more faith in God, and more faith in our fellow-men.

A few weeks ago I wonderfully enjoyed paying a visit to our friend Terry, of potato notoriety. After I got home I wanted to tell all about this visit, on about four pages of GLEANINGS; and as some would say it was not bee culture, I concluded I would put in two extra leaves, making it gratuitous. It seemed to me that the amount of good done by a minute account of friend Terry's farm and farming operations would warrant the outlay. Perhaps I shall do it yet; but I think I could have done it better while the incidents of the visit were fresh in my mind, and when I was full of enthusiasm on the subject. Why didn't I do it? Well, because I began to be afraid it was not best.

A year or two ago, while our daughter was in school, she felt greatly hurt because the lady who had charge of her department objected to her making occasional visits home, even when she was terribly homesick. I wrote to the lady principal in regard to the matter, and she replied that she knew it seemed hard, but that she could speak positively from years of experience, that, when pupils went home, their mind was for the time taken from their studies, their interests were divided, and it was very undesirable. Where you wish to have a pupil make steady and healthful progress in her studies, her interest must center all about these studies, and we should aim to avoid any sort of diversion or a dividing of these interests. Well, I was led to think that even these two leaves, given gratuitously, might divide the interest of the readers, and that perhaps a little book about the size of the potato-book, with proper illustrations, would be the better way, then those who don't care about Terry and his success in agriculture need

not even have the matter brought before their eyes unless they care enough about it to send for the book. Now to get back to our subject.

At the same time I visited friend Terry I called on and took along with me Mr. D. E. Fenn, of Tallmadge, O., a relative, and a very successful farmer, fully up to the times. It was a rare treat to me to hear these two great enthusiasts talk as we walked over the fields and went through the barns. Both Mr. Terry and Mr. Fenn have nice tools and farming machinery, clear up to the times, and Mr. Terry has just built the most beautiful tool-house I ever looked at or thought of. It is just "a thing of beauty," and, I dare say, to him "a joy for ever." I am going to give you a picture of it some time, any way. I want to mention right here that Mr. Fenn has a German in his employ who is so careful of his hoes and spades that he keeps a cloth in the proper place, with which to wipe off all the dampness and soil before they are put away for the night. After they are wiped so the bright polished steel is handsome to look at, he takes another cloth, saturated with oil, and oils all the bright parts. This absolutely prevents any rust on their bright surface; and if you do not know the difference between a bright shining hoe and one covered with heavy rust, when you start out to work just try two hoes—one rusty, the other bright. A man would accomplish a fourth more with the clean bright tool, and save his strength besides, because the bright hoe slides into the soil so easily, and the same soil slides off so that the tool will keep itself clean. Mr. Terry keeps the tools in his tool-house a good deal in the same way. They are nicely put away, and very handy and convenient doors right in front of each tool permit it to be reached at once without clambering over other tools. The same with his plows and harrows.

We are getting further and further from the subject of Elijah and his complaint, are we not? Well, let us see. I asked Mr. Terry if he was in the habit of lending these nice tools to his neighbors. He replied, that it was generally understood that he did not lend any thing: it was impossible for him to do so. The importance of succeeding with his work as he does succeed, depends greatly on having the right tool ready to be used the very hour it is wanted, and sometimes without the delay of even five minutes, when the weather is treacherous, as it has been this season. Mr. Fenn remarked, that one of the greatest troubles in his life was the trouble in regard to borrowing tools. As the conversation was started in this direction, one told a story about the annoyances he had suffered, and another told a story, and these stories reflected so sadly on my fellow-men that I felt badly about it, and have been feeling badly about it ever since. May be I told some of the stories too. When my conscience began to trouble me I remarked, "But, Mr. Terry, you surely have some neighbors who would take as good care, or better care, of borrowed tools than they would of their own, — who will always return a tool exactly as they promise to do, or sooner, who also recognize what it costs you

to keep such a stock of tools carefully housed, and will insist on paying you handsomely for the use of these tools?"

Now, I do not know that the above are exactly the words I used, but it is what I had in mind. Mr. Terry is a Christian man, and, as a rule, is not uncharitable. He sees the faults and failures of his brother-farmers; but I do not believe he exaggerates — at least, as a general thing. I wanted to hear him say that there were at least a few around him who were exceptions to the general run of people who borrow, and I also wanted to hear Mr. Fenn give a good report of at least a few of his neighbors of the township of Tallmadge, where every farmer seems to be thriving and prosperous, but I was disappointed. Mr. Terry said he did not know of any such. Mr. Fenn said the same thing substantially. Now, then, my friends, you and I are the folks who borrow tools. Do we average better than Mr. Terry's and Mr. Fenn's neighbors? I don't think we do, unless it is because we read bee-journals and agricultural papers, and their neighbors don't, but I can't believe that is so.

Elijah kept saying over and over, "And I, even I only, am left." Had he reflected a minute he would have recollected the fifty prophets that Obadiah mentioned; but he had in mind at the time only Ahab and Jezebel — those hateful persons and their worshipers, and he "sort o' forgot" about the rest who did not force themselves upon his notice. Now, I am inclined to think that it was the same with our good friends Terry and Fenn. When I asked them to recall to mind, they did not think of certainly a dozen good honest unselfish men — men who are never known to put anybody out of the way without making restitution so far as they could. Yet I think there must be at least a dozen in their own vicinity who have never troubled them by borrowing tools; or if they did, who gave value received, or more, in other ways. We remember things and people that vex us, but we don't remember things and people that don't vex us; that is, we forget favors, but we don't forget perplexities so easily.

Now, then, what is the result of settling down to the decision that mankind are so depraved we might as well give up? Elijah went away into the woods and sat down under a tree, and asked God to take him out of the world. He gave as a reason for his request, that he was not better than his fathers. He was discouraged and disappointed. He was displeased with God just as we are displeased with him when we complain in that wholesale manner of our fellow-men. Is it a good fraze of mind to be in? Are we standing just where a Christian man ought to stand, when we decide that the bulk of mankind are so slipshod, lazy, indolent, selfish, that there is no use in trying to be neighborly? I hope friend Terry will excuse me if I seem to be personal. I do not mean to be; or, at least, I mean to put myself in the same boat when I criticize. In the potato-book, friend Terry tells us about what it usually cost one of his neighbors to get his potatoes dug. The neighbor

remarked that it generally cost him so much a bushel, including mowing down the weeds to get at the potatoes. Some of friend Terry's neighbors will have to mow down the weeds this fall before they can dig their potatoes, I fear; and the general appearance in his vicinity indicated that his neighbors — at least some of them — were not more go-ahead than he had given them credit for being; that is, in his writing on agriculture. And the need of reform is not confined to his own locality — it is widespread. But, dear friends, we make a sad, sad mistake when, in looking at these evils to be encountered right and left, we forget or omit to take into consideration the good traits as well. I shall have to confess right here that it comes so extremely natural for me to find fault, and to criticise, that I find it hard to get over my besetting sin in my *illustrations* even. Let me try here.

My cousin, Mr. Fenn, told a story something like this: He had a nice new harrow, with the teeth all bright, and the woodwork nicely painted, and he was so choice of it that he would not even let it be out one minute in the rain. A neighbor wanted it. He hated to say no, just as you and I do; and after a fair and square promise that it should come right straight back because he was going to need it, it went out of the barnyard. The time came when he wanted to use it, and business was hurrying, and there was no time to go after it, so he got along with a rickety old one. Finally he met the neighbor who borrowed it, and asked him about it.

"Why, I lent it to Dr. W., and he said he would fetch it right home, just the minute he got his ground fixed."

It did not come, and after a few days they got over needing any harrows. Some time in the middle of our last long cold winter, Mr. F. was passing the doctor's residence, and down in a sluice-way by the side of the road he saw some sharp points sticking up out of a huge block of ice. These points looked like the teeth to that nice new harrow. He is quite a man for dry jokes, so he stopped at the doctor's residence and called attention to the matter something in this way:

"Look here, doctor, there are some sharp-pointed instruments sticking out of that block of ice down there that seem to me a little dangerous. If somebody should get thrown out of a vehicle, and alight on them, it would be a terrible place to fall."

Having delivered his message, he turned around to go; but the doctor exclaimed, "Why, I declare, neighbor F., I do believe that those points are the teeth to your harrow, which I very carelessly neglected to return as I promised to do. I am very sorry—" etc. I do not know when the harrow got home—probably some time in the spring, when it got thawed out of the ice. Do you ask why I tell such a story as this when I am trying to make a plea for poor humanity? Well, I have told it because I want to say that, in all probability, Dr. W. is a good man in spite of this bad habit of his. As his profession implies, he is a public servant, and, I dare say, a whole-souled, and, generally

speaking, faithful servant. Borrowing tools, and leaving them to be frozen in blocks of ice, is a grievous fault, I admit; but it is by no means the worst fault a man can be guilty of. Perhaps it does not compare with things that you and I are guilty of at this very moment. Men who are guilty of these faults are, as a rule, those who are large-hearted, liberal, and accommodating. I do not recommend this kind of "large-heartedness," mind you, but I do recommend that we take hold of such obstacles fairly and squarely and cheerfully. What I mean by obstacles is sins like those I have mentioned. Don't get into a way of saying, "'And I, even I only,' am the only good man in the neighborhood." Why, what an awful thing it is for you to get the idea into your head that your neighbors are all full of faults, and that you alone are perfect! May be you are ahead of them in some thing — you ought to be — but very likely they are ahead of you in ever so many other things. "We be brethren" is a thousand times better to think, than to get up on our high-heeled shoes and keep saying over and over to yourself, "'I, even I only.'"

We have trouble with the railroad and express companies. We say they have no souls. Words and phrases have been coined, especially by the farming community, to express how these large corporations will cheat and swindle people. I am guilty too, dear friends, and I pray that God may forgive me, and help me to do better. I know I have taken the part of the railroad and express companies several times; and after having done so there is a kind of feeling in my heart that I have done right. I feel a great deal happier for having tried to think of their good qualities, than to settle down into such wholesale denunciations as we often do. Almost while I am writing, some money has been handed in from the railroad company for wax they lost out of a barrel last February. It took a long while, it is true; and I think I have been in the habit of saying, in an ironical sort of way, "It takes them for everlasting to right a wrong, if they ever *do* get to it at all." Such an expression is not right. Our shipments go over a great many different railroad lines, frequently. It is a complicated matter to trace it back and decide where the fault lies, even if it is possible to decide at all. Our short line of road, to whom the complaint is first made, receives only a few cents for handling a barrel of wax. In running over the papers for tracing up overcharges, shortage, etc., I have sometimes noticed that one company would receive an amount as small as nine cents, seventeen cents, or some odd amount of change, showing how carefully and minutely the profits were divided up. Now, with even this small pay they frequently have to go through a whole string of papers to get a little wrong righted. Is it any wonder that it takes them a considerable amount of time? Are we not, dear friends, a good way off from where a Christian ought to stand, when we speak as we do about their delinquencies? "We farmers are honest; but the railroad companies steal and lie and cheat, and won't make any thing right, even

where we place it plainly before their eyes." Does it help one along in life to get into this frame of mind? and does it help him on in the pathway to eternal life?

Such a spirit of complaining, and rushing to the conclusion that somebody is false while we alone are true, grows on one. It is like intemperance and other terrible sins. If you rush to the conclusion that one of your neighbors is dishonest, in a few days you will discover that another one is more dishonest, and so on. Pretty soon you become a misanthrope, hating your fellow-men; then you hate God, then creeps in the hideous demon of suicide, and the end is—where? The direct opposite of this is a bright faith in God and in man. A few days ago a difficulty was laid before me, between a purchaser and a shipper of queens. Because of some trifling misunderstanding, one called the other a liar. Why, my friends, such words are awful. No doubt the man who sent out the queens was in the wrong; but what he said was nothing near what might be called a deliberate lie. It is a fearful thing to get into such a state of mind over business matters that you feel like calling one of your fellow-men a liar, and still worse when you do so far forget yourself as to put it in words. When you get into such an attitude of mind that you feel like being cross at every thing and everybody, please remember the words of the angel of the Lord to Elijah—"Yet I have left me seven thousand." Since that history was written, the world has improved in godliness and righteousness. I think there is no question of that. There is iniquity abroad in our land, it is true; but we can always rest assured of this, when we feel tempted to give way to uncharitable thoughts and feelings: As we are, so is the world. The generality of your fellow-men average, in God's sight, about as you do. You have no right for a moment to insist, or to allow yourself to get into a way of thinking, that the rest are corrupt, and that you alone are pure. In fact, the truest indication that a man is getting to be low down in the scale of godliness is his inclination to exalt himself and to decry others. Find a really godly man—one whom the world unites in reverencing and respecting, and watch his conversation, and see if you can get him to denouncing people as a class, corporations as a class, or even political bodies. I tried the experiment only yesterday. An old friend who is known because of his Christian spirit and faultless life, took supper with us. I hope he will forgive me when I say that I purposely started him on politics, and led the way a little, to see if I could get him to speak ill of any of our political parties, or even of politicians as a body. His childlike simplicity, and faith in his fellow-men, as he plead for them all, one after another, was a lesson and a rebuke to me. May God help me to carry such a faith and charity and loving kindness toward all my fellow-men! to be ready to defend them, and to speak of their good qualities whenever they are assailed by this sort of unkind wholesale criticism that I have been trying to speak against in my talk to-day. How very, very closely does love to our fellow-

men come in with love to God! and this brings us back again to the words of Jesus to the wise lawyer:

Then one of them, which was a lawyer, asked him a question, tempting him, and saying, Master, which is the great commandment in the law? Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment. And the second is like unto it, Thou shalt love thy neighbor as thyself.—MATT. 22:35-39.

For a month or two back I have been very happy, and I think the happiness has a great deal of it, come along in the line I have just been talking about to-day. When somebody or some class of people have been censured severely, I have tried what the effect would be to take their part, and remonstrate against unjust and uncharitable criticism. I have tried to think of the better phases of humanity; and doing so I have become happier, and, I trust, better myself. It needs only a very little remonstrance, or a very little suggestion, kindly put, to stop conversation when it starts in this line. People are usually inclined to assent when we put in a plea for an absent one, and I have generally found them quite ready to take up with the better side of almost anybody, when it is suggested to them in a Christianlike spirit. Such an attitude is a hopeful one. One who loves God and his fellow-man is always hopeful. He is always glad that he is alive, and, no matter what trials or obstacles beset him, he has something to rejoice over.

Years ago, during my first Christian experience, I mentioned that there were times when God's love seemed very precious to me—that I could feel, as it were, a sort of companionship—that I was not alone. Well, I have felt this a good deal lately. Sometimes bitter denunciations have been uttered in regard to certain political parties, or certain religious sects, it may be. When I have taken the part of these people or classes, a feeling has come over me as though some presence were near; and this presence seemed to say, "Dear friend, you are getting on the right track; go on, and fear not." And when I have put in a plea in the way I have told you, I have thought of this text I have quoted: "I have left me seven thousand in Israel, all the knees of which have not bowed to Baal." There is something wonderfully comforting in this thought: That God's own image is still to be found in humanity, with all its sins and weaknesses, and that often only a little encouragement is needed to bring out this image of God, and let it shine forth. Who could for a moment think of considering life a burden, or mankind as enemies, or the pleasures and pursuits of the world as unsatisfying, while his heart is filled with these bright hopes that only a faith in God can inspire? There is a little verse in the last chapter of Zephaniah that I sometimes think of at such times. It is a little odd and singular; but yet after such experiences as I have told you of, there is wonderful beauty in it.

The Lord thy God in the midst of thee is mighty; he will save, he will rejoice over thee with joy; he will rest in his love, he will joy over thee with singing.—ZEPHANIAH 3:17.

# GLEANINGS IN BEE CULTURE.

Published Semi-Monthly.

A. I. ROOT,  
EDITOR AND PUBLISHER,  
MEDINA, O.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, SEPT. 15, 1885.

Thinketh no evil.—COR. 13:5.

## OUR SILVERHULL BUCKWHEAT AT THIS DATE.

TO-DAY, Sept. 14, the bees are just roaring on our Silverhull buckwheat. If it is not beaten down by the storms, nor killed by premature frost, we have the promise of an abundant crop.

## MORE SLANDERS ON THE BEE-MEN.

AND this time it is the N. Y. *Witness* that goes on fearfully about the way that honey is adulterated, comb honey at that, and ends up by saying, "Let us have pure honey, Mr. Bee-man." And now we say, Mr. *Weekly Witness*, be sure you are right, before you accuse your neighbors of fraud.

## EXHIBITS OF HONEY ON THE FAIR-GROUND.

AS we go to press we are busy filling the little building, 12x16, which has been put up at our own expense on our county fair-ground. The building cost about \$100, and is to be permanently our property. It covers a pyramid of packages of honey, both comb and extracted. The latter embraces every thing from an iron-jacket can down to a paper pail of honey small enough to be retailed at a nickel. The managers of our fair give us the ground for the building and permit us to retail honey during the three days of the fair, in consideration of the display we make, and that we keep a man present to talk with bee-men, and explain all about a hive of bees kept near by, and the various implements for bee culture kept on exhibition.

## GOODS FOR NEXT SEASON'S USE.

ON hives and other fixtures that are purchased now, to be used during the season of 1886, we will allow a discount of 5 per cent: and this offer will be good until Nov. 1. We mention it thus early, that the friends who have small orders to make this fall may be induced, by the discount, to have heavier articles for next season go with them, thus in effect saving freight. Simplicity hives, honey-extractors, section boxes, brood-frames, etc., would come under the discount given. Chaff hives would not, as they are mainly intended for winter use. This discount comes in addition to all other discounts given for other reasons. Comb fdn. ordered now, to be used next season, will be subject to a discount of 10 per cent, and the above-mentioned 5 per cent, from our list price. We do not change our prices on comb fdn., because we are unable to say how the wax market will stand next spring.

## THE STATE FAIR AT COLUMBUS; THE HONEY YIELD FOR OHIO, ETC.

PERHAPS I owe an apology to the bee-friends in Columbus for not being present the last day of the convention held during the fair. I visited the Agricultural College and Experimental Farm early Fri-

day morning, and was prevented by a rain from getting around as I had intended. The show of comb honey at the State Fair was not extra this year, owing to the fact, probably, that the yield of honey round about Columbus has been rather poor. The northern part of the State of Ohio, and also in Michigan and other northern States, the yield seems to have been excellent on the whole. The honey on exhibition was mostly built without separators. This of itself, however, need not necessarily have made it not first class in appearance; but coupled with the poor season it would probably have that effect. The nicest honey we have ever handled we are selling now, and it was all secured without the use of separators; but the sections are the narrow ones, only seven to the foot.

## MATTER THAT WE CAN NOT FIND ROOM FOR.

IT pains me almost every day to be obliged to forego the pleasure of publishing good letters on many subjects. For instance, some very kind words, and some very able papers, have been written in regard to the "mix" in GLEANINGS; but as the matter has been sufficiently discussed already, it does not seem to me that we can afford to take space for it any further; the same in regard to "dry faeces." It seems to me that this question, like a host of others, can not be settled definitely. Both parties are right in one sense, and both parties are wrong in one sense. It seems to be more a matter of opinion in regard to terms, than because there is any thing further to be brought to light; and, like many other questions that are hotly discussed at great length, I can not discover that there is any important point involved in the matter. May be I am not posted. If so, it is my misfortune, and I shall be glad to hear what the friends may have to say, that I may become better posted. But I hope you will excuse me for declining to put them in print, unless something very much more important is submitted than has been brought forward.

## REDUCTION IN PRICES OF THE PASTEBOARD BOXES, OR "CARTONS," FOR HOLDING THE ONE-POUND 4 $\frac{1}{4}$ x 4 $\frac{1}{4}$ SECTIONS.

AN immense trade has sprung up in these boxes; and as a consequence of being able to give the manufacturer larger orders, we are able to put the prices as follows: Single boxes, 2 cts.; in lots of 25, in the flat, 30 cts.; 100, \$1.00; 1000, \$9.00; 10,000, \$80.00. If wanted by mail, add \$1.00 per hundred for postage. Colored lithograph labels, \$3.00 per 1000. There are two different kinds of these labels, so you can have the two sides of the carton show a different picture. Where you wish the labels pasted on before shipment, add 10 cts. per hundred for putting them on. Sample box by mail, with a label on each side, 5 cts.

Your name and address, and the kind of honey, may be printed on these labels, the same as other labels. The charge for so doing will be 30 cts. per 100; 250, 50 cts.; 500, 75 cts.; 1000, \$1.00.

There has been quite a little call for a similar box to hold a 2-lb. section. The trouble of getting this up is, that there is no regular size for a 2-lb. section, as there is for a 1-lb. section. We can have them made, however, to order, for just about double the above prices, and the manufacturers could not very well make less than a thousand of any particular size. If the friends will agree on the dimensions of a 2-lb. section, we can have a box made for about a half more than the one-pound.

## KIND WORDS FROM OUR CUSTOMERS.

Please forward, as soon as possible, goods named in order. I sold the other crate of smokers all in a day, and they went like "hot cakes." S. FOFT.  
State Center, Ia., July 28, 1885.

The goods ordered of you July 2d arrived on the 18th inst. Every thing was entirely satisfactory in time of transit and quality of goods. G. W. MORE.  
Puyallup, Wash. Ter., July 20, 1885.

The queen you sent me came all safe, and is now doing her duty. She was the best-looking one I ever received. Many thanks. L. H. LANGWORTHY.  
Riceville, Pa., August 10, 1885.

I thought that I would write you that I have received the honey-labels all right. They are very much nicer than the one in the sample-book, and are the neatest and prettiest honey-labels I ever saw. Bees are doing pretty well now.  
Slaught's, Colo., July 12, 1885. W. H. PRICE.

A notice of the A B C of Carp Culture appeared in the last issue of the *Aegis*, a copy of which I send. I have carefully read the work, and think it and the A B C of Potato Culture should be in the hands of all intelligent agriculturists. W. M. H. CATHER.  
Asheville, Clay Co., Ala., July 3, 1885.

I sold out my bee business last fall, but I like your journal well enough to continue taking it, whether I invest in bees again or not. Continue your footnotes and Home Papers, by all means. I should be glad to hear more of Florida, Cuba, and Apis dorsata. E. LOOMIS.  
Anamosa, Ia., June 21, 1885.

I received the A B C book, together with GLEANINGS and your price list, last Saturday. I have run my eye over the book, and I see a great improvement on the copy I had lent me. I am pleased and delighted with the book, and I consider it well worth the price. ALFRED DONBAVAND.  
New York, Feb. 9, 1885.

The select imported queen was received all right; some of her queens are out, and are perfect beauties. Thanks for promptness. I know what it is to receive queens by return mail, and shall try to fill my orders hereafter in like manner, as nearly as possible. I like to treat customers just as I like to be treated myself. C. WECKESSER.  
Marshallville, O., July 20, 1885.

### SENDING NUCLEI TO THE ROCKY MOUNTAINS.

The two-frame nucleus ordered of you came through in splendid condition. I don't know what the little fellows thought when I turned them loose up here in the Rocky Mountains, 10,000 feet above sea-level; but I do know that they went to work like "Trojans," and I never saw bees do better in my life. J. C. PADDOCK.  
Brookside Ranch, Leadville, Colo., Aug. 10, 1885.

The select tested queen to replace you sent Monday, the 24th inst., arrived in good shape on the evening of the 25th. On the morning of the 26th I killed the drone-laying queen, got this queen from the postoffice, and introduced her in the afternoon. She was accepted by the bees the next day, and laying eggs. She is a fine queen and a good layer, for she has now laid about half as many eggs as the other did during the whole time I had her. Please accept thanks. A. VANDEREIKE.  
Lake Mills, Wis., Aug. 29, 1885.

### OUR 24-LB. SCALE.

I received the double-beam scale and other goods, in first-class shape. A neighbor said the other day, "It's queer you have to send to Root for every thing." He then hunted up his price list of scales, and could find nothing that would suit us for less than double the price of your scales. It's worth something to know that you will get honest goods for your money, and that they are safely packed to ship. T. YOUNG, JR.  
Lasalle, Ill., Aug. 8, 1885.

[Many thanks for your kind words, friend Y., and I will try to deserve them.]

I received the bill of goods you sent, long ago, and it seems that I might have reached the limit of your patience in waiting for me to remit the balance. But your patience and kindness are only exceeded by your promptness and care in sending the goods. This is a good bee country. The season has been almost a failure so far. The main honey harvest is from sourwood, which opens in July.

W. J. TIDBALL.  
Kilby, Alexander Co., N. C., June 22, 1885.

This is to thank you for the timely and excellent Home Paper in your issue for Jan. 15. It is an excellent lay sermon, and came from the heart, and will strike many, and, I hope, call a halt. Could it be preached from all the pulpits in the land—that is, the text as appropriately handled, it would do great good, and check a little the struggles which make so many Americans unhappy, and so many homes miserable. There is not, and never has been, such a tendency in the old "slave States" to "drive for wealth." There is more ease and leisure, if less of luxury, and I regard it as well that it is so. I have had to struggle against the very tendency to overdo, and yet I often find myself wishing that I had a less exacting business and more freedom. It is not *all* caused by a desire to display, but more to surround the house of the dear ones at home with comfort, which prompts so many Americans to strive as they do. J. W. PORTER.  
Charlottesville, Va., Jan. 27, 1885.

Allow me to express my sincere thanks for the promptness and care with which you filled my order, together with the good judgment displayed in sending just what I wished for, as I could not have been better suited had I selected the articles myself.

The A B C book pleases me very much; it is really an excellent work on the subject, and should be found in every library, also in possession of every one who intends embarking into this most interesting and instructing subject. The further I read, the more I like it; for its arrangement is so perfect that, should the bee-keeper find himself in any predicament, or want of information, it may be found and read in this valuable book in a moment, leaving the apiarian to proceed knowingly, and without further trouble.

GLEANINGS is a very good paper on the subject, and should be in the hands of every progressive bee-keeper, that he may read and be benefited by the experience of all the noted apiarians, as well as to give his own, or ask for information in regard to difficulties which may arise. Taken in all, I would not part with either, for any consideration, were it impossible to procure another. C. H. THEBERATH.  
Newark, N. J., Aug. 21, 1885.

I have inclosed a dollar bill in this to renew my subscription to GLEANINGS. I am sorry I have neglected it so long past the time it ought to have been paid, for I don't want to miss one number, for myself and family are greatly pleased with it, especially its Home Papers and children's columns, and all of us only wish we could be more personally acquainted with the man who can write such nice papers. I see some readers are wishing you to leave out Home Papers, articles on fish, potatoes, etc. For my part I should be very sorry to see it done, for those Home Papers are doing a work that can not be done in any other way, for hundreds see them who would not take a religious paper at all. I take a number of papers myself on various subjects, but I should like to see GLEANINGS continue as it is. Go on, Bro. Root, and may God bless you in your work.

As to bees, I am not a very large bee-man. I bought three swarms two years ago this spring; increased to four the same summer; went into winter quarters last fall with the same number (having no increase at all last summer); lost one in wintering and had three this spring—two weak and one moderately strong. I have had but one swarm this summer, and that went off to the woods after hiving it two or three times, so that I am just where I started, as regards number, though I can not say that I am any money out of pocket by bees, for I think the honey I have received from them has more than paid all I have spent on them the two years past. It has been from 30 to 40 lbs. per colony. This year does not seem to be a very good one for honey. We had but little white clover, and that is our chief crop, as we have no basswood nor any thing of the kind here. I have wintered each winter on summer stands at the east end of the



house, with rough boxes outside of hives, packed with chaff. I left in all the frames just as they were in summer, and entrance all open, with mats and brood-frames and chaff cushions on top of mats.  
Oil City, Pa., Aug. 3, 1885. H. C. FINCH.

**HOW AN A B C SCHOLAR "ROLLS UP THE BARRELS OF FINE HORSEMINT HONEY."**

I don't know that I can tell you why it is that I have for a long time wanted to write, thanking you as I feel I ought, for the many good things you have taught. When I was introduced to you in Dec., 1882, we received the sample copy of GLEANINGS, and for some time afterward I also thought I objected to the mixed matter in GLEANINGS. But after a better and more intimate acquaintance of three years, I want to say that any other GLEANINGS, than GLEANINGS as it is, would not be GLEANINGS at all. In greedily devouring, as it were, the "bee-talk" of GLEANINGS the first year, and its inimitable offspring, the A B C book, I could see queen-rearing, extractors, barrels of extracted honey, Italian bees, etc., as one sees objects in a dream; but through your teachings I have been enabled to see it all practically in my own apiary, and to roll up the barrels of fine horsemint honey, two, three, four, and five deep. Besides the enjoyment, or, as you say, "rare fun" of working with the bees, I have become a closer student of nature; and many beautiful and strange things have unfolded before me. "Myself and My Neighbors," and "Our Homes," have enabled me to see human nature in a different and better light, and to make our own duty plainer in our daily walk toward our "home above."  
H. A. GOODRICH.

Massey, Tex., Aug. 24, 1885.

[Friend G., your letter makes me almost tremble in my shoes, as such letters have many times before, for fear I shall in some way prove unworthy of such very, very kind words; and all I can say at such times is, "May God help me to come even a little way toward deserving it all."]

**[ADVERTISEMENT.]**

**The Largest Cabbage Growers in the World** (W. M. Johnson & Co., of Chicago), use upwards of five thousand acres of land for growing cabbages. Last season they manufactured nineteen thousand six hundred barrels of sourkroot, besides shipping four hundred and sixty-seven carloads of cabbages to eastern cities. They use and recommend Tillinghast's Puget-Sound Cabbage Seeds. The disseminator of this renowned brand of seeds, Isaac F. Tillinghast, of La Plume, Pa., in order to introduce them into every county in the Union, has organized a Seed and Plant Growers' Association. One reliable party in each town in the Union is being enrolled as special agent, and is supplied with seeds in trade marked packages, and also instruction books which will enable any one to grow cabbage-plants successfully anywhere. Parties desiring seeds or plants, will, upon application to Mr. Tillinghast, be furnished with the addresses of agents nearest them from whom they may be obtained. Purchasers are thus saved unnecessary express charges, and assured of obtaining the best strain of cabbage seeds or plants which can be procured.

This association thus furnishes one man in each town—the appointed agent—a good cash-paying business in selling seeds and growing and supplying plants. There are still many excellent localities unoccupied, and any one so situated as to act as agent for this association should address Mr. Tillinghast as above, for particulars in regard to it.

Mr. Tillinghast has also just put upon the market a "Cabbage-Pest Powder" which is entirely harmless to the plant at any stage of its growth, and also harmless to persons eating them, yet the most effective destroyer of lice, fleas, and worms, which has ever been compounded. It retails at 24 cents per pound,  
18d

## LOOK HERE!

To introduce my strain of pure bright Italians, equal to any in the United States, I will offer for August, tested queens, \$1.00 each; extra fine, selected, \$1.50 each; one-frame nucleus, consisting of one extra select queen, one frame of brood, ½ lb. bees, for \$2.00. If you want any bees, send me your address on postal and I will send you sample by return mail. Beeswax or honey taken in exchange.  
15tfdb

**THOMAS HORN,**  
Box 691, Sherburne, Chen. Co., N. Y.

## The best Queens out.

I will furnish queens from July 1 to September 1 for one dollar; warranted tested, \$2.00; after then the price will be the same as in A. I. Root's list. Queens all bred from an imported mother.

**G. F. SMITH,**  
16tfdb Bald Mt., Lackawanna Co., Pa.

## FOR SALE.

2) Colonies of Pure Italian Bees in Langstroth frames, straight pretty combs, with honey, in **DOUBLE-WALL OBSERVATORY HIVES;** Been used two seasons with one-pound boxes, and for extracting. Complete on board cars, for \$8.00 per colony, or \$14.00 for the lot.

**JAMES CRAIG,**  
16 17 18d MT. MERIDIAN, VA.

## MUTH'S HONEY-EXTRACTOR, SQUARE GLASS HONEY-JARS, TIN BUCKETS, BEE-HIVES, HONEY-SECTIONS, &c., &c.

Apply to **CHAS. F. MUTH, CINCINNATI, O.**  
P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers."  
1tfdb

## FULL COLONIES PURE ITALIAN BEES FOR SALE.

Address for sample workers,  
18 19d **S. F. REED, North Dorchester, N. H.**

**FOR SALE. 25 COLONIES OF ITALIAN** and hybrid bees in ½-story: Simplicity hives (painted). One colony, Italian, \$6.00; one colony of hybrids, \$5.00. Five or more colonies, 10% discount. Delivered at express office. Address 18d **A. B. JOHNSON, Elizabethtown, Bladen Co., N. C.**

## SECOND-HAND FOOT-POWER SAWS.

We have, subject to our order, two Barnes foot-power buzz-saws, which we have taken from parties whose business has enlarged so much that they have no further use for them. They are all nearly new, in good order, having all the latest improvements. We will sell them for one-fourth less than the regular retail price; that is, we will sell a \$40.00 saw for \$30.00.

**A. I. ROOT, Medina, O.**

## Queen-Rearing.

How to rear queens by the best and simplest methods. For particulars address  
16tfdb **HENRY ALLEY, WENHAM, MASS.**

**WANTED. A SITUATION** with some bee-keeper. I have had one season's experience. Address **L. C. DUNLAP,** 18d **NASHUA, IOWA.**

**FOR SALE. ONE TO FIFTY COLONIES OF BEES.**  
17-18d **W. S. WARD, Fuller's Station, Albany Co., N. Y.**

**DADANT'S FOUNDATION FACTORY, WHOLESALE and RETAIL.**  
See advertisement in another column. 3btfdb

CONVENTION NOTICES.

The Maryland, Virginia, and West-Virginia Bee-Keepers' Convention will meet at Hagerstown, Md., in the court-house, on Wednesday, Oct. 21, 1885, at 10 A. M. By order of D. A. PIKE, Pres.

The N. J. and Eastern Bee-Keepers' Association will hold their Semi-annual convention in Grand-Jury room of Court-House, in Trenton, N. J., on Thursday and Friday, Nov. 5 and 6, 1885, at 10 o'clock A. M. We extend a cordial welcome to all. W. M. B. TREADWELL, Sec.

The Western Bee-Keepers' Association will hold its fourth annual meeting in Independence, Mo., Thursday and Friday, Oct. 10 and 11, 1885. The association will endeavor to make this the most interesting meeting yet held, and will spare no pains within its means to make it in every sense valuable to all. Several of our most prominent bee-keepers have signified their intention to be present. C. M. CRANDALL, Sec.

We have received the following from the Kentucky State Bee-keepers' Association:

Dear Sir and Bro.:—You are invited to meet with us in the State Bee-Keepers' Society, in Walker Hall, Covington, Ky., on the 23d and 24th of September, 1885. This is expected to be the most interesting meeting ever held in the State. Rev. L. L. Langstroth, the father of American apiculture, and Mr. Charles Dadant, the great comb-foundation manufacturer, will meet with us, as well as many other noted apiarists. We hope to see you at the Convention. L. JOHNSON, President. J. T. CONNLEY, Sec'y.

EXCHANGE DEPARTMENT.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error.

WANTED.—In exchange for new varieties of strawberries and raspberries, Plymouth Rocks, Light Brahmas, Pekin Ducks, new varieties of potatoes, and small-fruit plants, cherry and quince trees. P. SUTTON, Exeter, Luz. Co., Pa. 16-23db

WANTED.—Extracted fall honey (buckwheat or goldenrod) in exchange for hives, sections, etc., either from my catalogue, or made to order. Will pay white-clover prices for a few hundred pounds. C. W. COSTELLO, Waterboro, York Co., Maine.

WANTED.—To exchange bees for small plauer for wood, also one for iron. 18-19-20d HENRY PALMER, Hart, Mich.

WANTED.—To exchange for bees, 10,000 Mammoth-Cluster Raspberry-plants; \$1.00 per 100; \$6.00 per 1000; also 20,000 Strawberry-plants, Crescent Seedling, Cumberland Triumph, Sharpless, and Glendale; 75c per 100; \$4.00 per 1000. 18d W. J. HESSER, Plattsmouth, Neb.

WANTED.—To exchange No. 1 Model printing-press, self-inker, chase 5x7 1/2 inches, type and type-cases, for Italians or hybrid bees. 18-19d A. P. SHARPS, Exeter, Luzerne Co., Pa.

WANTED.—To exchange for well-ripened honey fit for winter stores, thoroughbred P. Rock fowls, pure Corbin strain; a Franz & Pope family knitting machine, almost new; a new model-maker's drill-lathe, eight-inch swing, two-foot bed. 18-19d M. FRANK TABER, Salem, Ohio.

WANTED.—To exchange hybrid bees and queens for fdn., fdn. mill, honey-extractor, saw-mandrel, or offers. Will exchange Blue-Ridge Raspberry-plants for fdn. Correspondence solicited. 18tdfb JOHN W. MARTIN, Greenwood Depot, Alb. Co., Va.

FULL COLONIES FOR \$3.00.

18tdfb R. HYDE, Alderly, Wis.

W. Z. HUTCHINSON, ROGERSVILLE, GENESEE CO., MICH.,

Can still furnish Italian queens, bred from the best of mothers, and reared in full colonies. Single queen, \$1.00; six for \$5.00; twelve or more, 75 cents each. Tested queens, \$2.00 each. Make money orders payable at Flint. 18tdfb

DADANT'S FOUNDATION FACTORY, WHOLESALE AND RETAIL. See advertisement in another column. 3tdfd

JOB LOT OF WIRE CLOTH AT GREATLY REDUCED PRICES.

SECOND QUALITY WIRE CLOTH AT 1 1/4 CTS. PER SQUARE FT.

SOME OF THE USES TO WHICH THIS WIRE CLOTH CAN BE APPLIED. This wire cloth is second quality. It will answer nicely for covering doors and windows, to keep out flies; for covering bee-hives and cages for shipping bees; making sieves for sifting seeds, etc. Number of Square Feet contained in each Roll Respectively.

| Inches Wide. | No. of Rolls.   |
|--------------|---|
| 10           | 3 rolls of 75, 72 s. f.   |
| 12           | 2 rolls, 100 s. f. each.  |
| 20           | 3 rolls of 166 s. f. each.  |
| 22           | 4 rolls of 181, 1 of 169 s. f.  |
| 24           | 6 rolls of 200, 1 of 180, and 1 of 180 s. f.                                      |
| 26           | 7 rolls of 217, 38 of 216, 2 of 195, 1 of 156, 1 of 152, 2 of 215, 1 of 210 s. f. |
| 28           | 13 rolls of 233, and 2 of 234, s. f.  |
| 34           | 7 rolls of 313 s. f.  |
| 36           |   |
| 38           | 23 rolls of 316, 3 of 285, 2 of 317, 1 each of 190, 632, 126, and 215 s. f.       |
| 42           | 1 roll of 215 s. f.   |
| 44           | 2 rolls of 366, 1 of 318 s. f.  |
| 46           | 1 roll of 152 s. f.   |
| 48           | 10 rolls of 400, 1 of 200, 1 of 50 s. f.  |

FIRST QUALITY WIRE CLOTH AT 1 1/4 CTS. PER SQUARE FT.

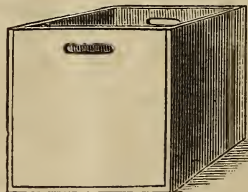
The following is first quality, and is worth 1 1/4 cts. per square foot. It can be used for any purpose for which wire cloth is ordinarily used; and even at 1 1/4 cts. per sq. ft. it is far below the prices usually charged at hardware and furnishing stores, as you will ascertain by making inquiry. We were able to secure this very low price by buying a quantity of over one thousand dollars' worth.

| Inches Wide. | No. of Rolls.   |
|--------------|---|
| 20           | 1 roll of 155 s. f.   |
| 22           | 1 roll each of 88, 143, 92 s. f.  |
| 21           | 43 rolls of 300 sq. ft. each; 1 each of 60, 96, 120, 168, 190, 250, 150, 140 sq. ft.  |
| 26           | 58 rolls of 216 sq. ft. each; 1 each of 195, 195, 200, 200, 201, 227, 201, 204 sq. ft.  |
| 28           | 76 rolls of 233, 6 of 221, 3 of 219, 8 of 222, 7 of 221, 2 of 219, 1 of 117 sq. ft.; 1 each of 70, 210, 245, 257, 240, 215, 119, 93, 82 sq. ft. |
| 30           | 36 rolls of 250 sq. ft.; 1 each of 82, 137, 115, 117, 125, 125, 220, 225, 227, 237, 235, 275, 240, 157 sq. ft.                                  |
| 32           | 14 of 266, 7 of 256, 2 of 253 square ft.; 1 each of 233, 251, 117, sq. ft.  |
| 34           | 31 rolls of 283 sq. ft. each; 1 each of 62, 113, 198 sq. ft.  |
| 36           | 22 rolls of 300 sq. ft. each; 2 of 72, 1 each of 288, 150, 279, 285 sq. ft.   |
| 38           | 1 roll each of 300 and 316 sq. ft.  |
| 40           | 1 roll of 233 square feet.  |
| 42           | 1 roll of 350 square feet.  |
| 46           | 1 roll of 192 square feet.  |

A. I. ROOT, Medina, Ohio.

POTATO-BOXES

(TERRY'S).



These are made of basswood, lined with galvanized iron. The galvanized iron gives strength, and the basswood strength and lightness. These hold exactly a bushel when level full, and may be piled one on top of another. Although they are made especially for potatoes, they can be used for fruit, vegetables, picking up stones on the farm, and a thousand other purposes. When piled one above the other, they protect the contents from the sun and rain; and from their shape a great many more bushels can be set into a wagon than where baskets are used. They are also much more substantial than baskets.

Price 25 c each; 10, \$2.25; 100, \$20.00. In the flat, including nails and galvanized iron, \$1.75 for 10; 100, \$16.50; 1000, \$150. A. I. ROOT, Medina, O.