

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

424.8
947

VOL. XIII. NO. 23.

DECEMBER 1, 1885.

LIBRARY
CURRENT SERIALS
AUG 26 1954
SOUTH PAKIMIL... CULTURE

PEACE ON EARTH
GOOD WILL TO ALL MEN



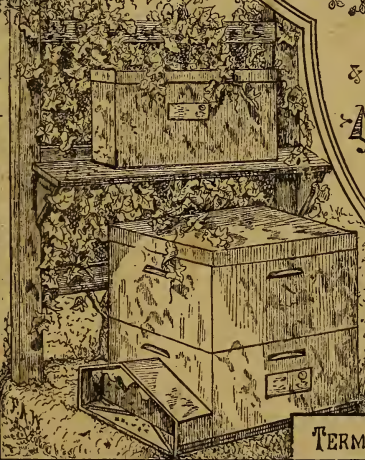
CLEANING IN BEE CULTURE

UK Decker 7-8

DEVOTED
TO
BEEKEEPING

& HOME INTERESTS.

MEDINA OHIO
BY
A. BOOT



TERMS, ONE DOLLAR PER YEAR.

Mc FARRINGTON, DUNCKER, N. S.

ENTERED AT THE POST OFFICE, MEDINA, OHIO, AS SECOND-CLASS MATTER.

ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

Rates for Advertisements.

All advertisements will be inserted at the rate of 20 cents per line, Nonpareil space, each insertion; 12 lines of Nonpareil space make 1 inch. Discounts will be made as follows:

On 10 lines and upward, 3 insertions, 5 per cent; 6 insertions, 10 per cent; 9 insertions, 15 per cent; 12 insertions, 20 per cent; 24 insertions, 25 per cent.

On 50 lines (1/2 column) and upward, 1 insertion, 5 per cent; 3 insertions, 10 per cent; 6 insertions, 15 per cent; 9 insertions, 20 per cent; 12 insertions, 25 per cent; 24 insertions, 33 1/2 per cent.

On 100 lines (whole column) and upward, 1 insertion, 10 per cent; 3 insertions, 15 per cent; 6 insertions, 20 per cent; 9 insertions, 25 per cent; 12 insertions, 33 1/2 per cent; 24 insertions, 40 per cent.

On 200 lines (whole page), 1 insertion, 15 per cent; 3 insertions, 20 per cent; 6 insertions, 25 per cent; 9 insertions, 30 per cent; 12 insertions, 40 per cent; 24 insertions, 50 per cent. A. I. Root.

CLUBBING LIST.

We will send GLEANINGS—

With the American Bee-Journal, W'y	(\$1.00)	\$1.75
With the Bee-keepers' Magazine,	(1.00)	1.75
With the Bee-keepers' Guide,	(.50)	1.40
With the Canadian Bee Journal, W'y	(1.00)	1.90
With all of the above journals,		4.25

With American Agriculturist,	(\$1.50)	2.25
With American Gardener,	(1.00)	1.50
With the British Bee-Journal,	(1.00)	2.25
With Prairie Farmer,	(2.00)	2.75
With Rural New-Yorker,	(3.00)	2.90
With Scientific American,	(3.20)	3.50
With Ohio Farmer,	(1.25)	2.00
With Fruit Recorder and Cottage Gard'r,	(.50)	1.40
With U. S. Official Postal Guide,	(1.50)	2.25
With Sunday-School Times, weekly,	(2.00)	2.25

[Above Rates include all Postage in U. S. and Canada.]

**HEADQUARTERS FOR
Early Italian & Cyprian Queens.**

Imported and home-bred; nuclei and full colonies. For quality and purity, my stock of bees can not be excelled in the United States. I make a specialty of manufacturing the Dunham foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Circular containing directions for introducing queens, remarks on the new races of Bees, etc.

Address
14td **Dr. J. P. H. BROWN, Augusta, Ga.**

FLAT - BOTTOM COMB FOUNDATION.

High side-walls, 4 to 14 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS.
4td Sole Manufacturers,
SPROUT BROOK, MONT. CO., N. Y.

SECTIONS.

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.

22tdfb **M. R. MADARY,**
Box 172. **Fresno City, Cal.**

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

Cash for Beeswax!

Will pay 20c per lb. cash, or 25c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 28c per lb., or 35c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent, I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

A. I. ROOT, Medina, Ohio.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says — "We cut with one of your Combined Machines last winter 50 chaff hives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee hives, etc., to make and we expect to do it all with this Saw. It will do all you say it will."

Catalogue and Price List Free. Address W. F. & JOHN BARNES, 68 Ruby St., Rockford, Ill.

When more convenient, orders for Barnes' Foot-Power Machinery may be sent to me. A. I. Root. 5tdf

PATENT FOUNDATION MILLS 6 inch \$9 10 " \$15
W.C. PELHAM
MAYSVILLE, KY.

RUBBER STAMPS

DATING, ADDRESSING, BUSINESS, LETTER HEADS, ETC.



No. 1.



No. 3.



No. 2.

Address only, like No. 1, \$1.50; with business card, like No. 2, \$2.00; with movable months and figures for dating, like No. 3, \$3.00. Full outfit included—pads, ink, box, etc. Sent by mail postpaid. Without ink and pads, 50 cts. less.

Put your stamp on every card, letter, paper, book, or anything else that you may send out by mail or express and you will save yourself and all who do business with you a "world of trouble." I know, you see.

We have those suitable for druggists, grocery-men, hardware dealers, dentists, etc. Send for circular. A. I. Root, Medina, O.

Contents of this Number.

Absorbents, Upper..... 824
 Alsike Clover..... 828
 Apicultural Sta. at Aurora..... 828
 Banner Apiary..... 809
 Basswood Propagation..... 820
 Bees From the South..... 817
 Bees, Mexican..... 829
 Bees, Removing..... 830
 Bees, Moving in Winter..... 826
 Bees, Attention to..... 822
 Bees, Hauling..... 811
 Bees, Taxing..... 831
 Bee-keeping and Fishing..... 818
 Bee-keeping, Other Side of..... 818
 Canteen Honey-package..... 824
 Carniolans and Comb..... 815
 Carp and Weeds..... 817
 Carp Swindle..... 829
 Cave with Honey..... 829
 Cave for Bees..... 817
 Chaff Packing..... 822
 Combs, Reversing..... 816
 Convention, A Model..... 815
 Cook vs. Rural New-Yorker..... 821
 Cyprians..... 818
 Death from Stings..... 828
 Doolittle's Article..... 819
 Drone-trap, Batchelder's..... 818
 Dysentery from no Pollen..... 829
 Editorials..... 826
 Egg, Stolen..... 826
 Error, Typographical..... 826
 Erysipelas and Stings..... 832
 Eulogy—A Poem..... 814
 Extractor, Home-made..... 829

Extravagant Est'ts on Carp..... 827
 False Statements..... 821
 Fowls on Introducing..... 823
 Frames in Brood-chamber..... 825
 Frames, Reversible..... 816
 Frames, Feeding under..... 830
 Heads of Grain..... 826
 Heddon System..... 828
 Hives in Darkness..... 830
 Honey Column..... 822
 Honey, Extracted..... 813
 Honey, Horsemint..... 831
 Honey, Morning-glory..... 831
 Honey, Poisonous..... 810
 Honey, Yellow-jessamine..... 826
 Humbugs and Swindles..... 835
 McCay's Report..... 818
 Notes and Queries..... 835
 Our Own Apiary..... 813
 Peck's Report..... 827
 Pollen-basket, The..... 834
 Programme of Detroit Con..... 820
 Queens Laying Late..... 828
 Q's, Young, for New Col's..... 819
 Queens, Finding..... 822
 Queens, Black, To Find..... 822
 Queens from South..... 832
 Queens, How Late Fer'd'l..... 825
 Queens, Two in Hive..... 831
 Report from one Swarm..... 830
 Salt at Entrances..... 828
 Separators, Necessity of..... 816
 Swarming, Automatic..... 825
 Texas, Season in..... 817
 Wax-extractors, Solar..... 810

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or \$2.00 per year.

\$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or \$2.00 per year.

Those whose names appear below agree to furnish Italian queens for \$1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind, that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen-mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for \$1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

- *A. I. Root, Medina, Ohio.
- *H. H. Brown, Light Street, Columbia Co., Pa. 19tf
- *Paul L. Viallon, Bayou Goula, La. 19tf
- *S. F. Newman, Norwalk, Huron Co., O. 19tf
- *Wm. Ballantine, Sago, Musk. Co., O. 19tf
- *D. G. Edmiston, Adrian, Len. Co., Mich. 21fd
- *S. G. Wood, Birmingham, Jeff. Co., Ala. 19fd
- *S. C. Perry, Portland, Ionia Co., Mich. 21fd
- *E. T. Lewis, Toledo, Lucas Co., O. 3-1
- S. H. Hutchinson & Son, Claremont, Surry Co., Va. 5-3
- *E. Kretzmer, Coburg, Mont. Co., Iowa. 23fd
- D. McKenzich, Camp Parapet, Jeff. Parish, La. 19fd
- Ira D. Alderman, Taylor's Bridge, Samp. Co., N.C. 19fd
- *Haines Bros., Moons, Fayette Co., O. 13-23
- G. F. Smith, Bald Mount, Lack'a Co., Pa. 21fd
- Jos. Byrne, Baton Rouge, Lock Box 5, East Baton Rouge Par., La. 21fd

JOB LOT OF WIRE CLOTH AT GREATLY REDUCED PRICES.

SECOND QUALITY WIRE CLOTH AT 1 1/2 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 seed; and for sifting flour.

Inches Wide.	No. of Rolls.	Number of Square Feet contained in each Roll Respectively.
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 120 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	16	rolls of 233, and 2 of 234, s. f.
34	7	rolls of 281 s. f.
36		
38	27	rolls of 316, 3 of 285, 2 of 317, 1 each of 190, 632, 126, and 215 s. f.
42	1	roll of 245 s. f.
44	2	roll of 366, 1 of 348 s. f.
46	1	roll of 152 s. f.
48	9	rolls of 400, 1 of 100, 1 of 50, 1 of 500 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.

20	1	roll of 155 s. f.
22	1	roll each of 88, 143, 92 s. f.
24	43	rolls of 200 sq. ft. each; 1 each of 80, 96, 120, 168, 190, 100, 150, 140 sq. ft.
26	58	rolls of 216 sq. ft. each; 1 each of 195, 195, 201, 200, 201, 227, 204 sq. ft.
28	76	rolls of 233, 6 of 224, 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, 110, 93, 82 sq. ft.
30	36	rolls of 250 sq. ft.; 1 each of 83, 137, 225, 117, 125, 125, 220, 227, 237, 235, 275, 240, 157 sq. ft.
32	13	of 266, 7 of 256, 2 of 253 square ft.; 1 each of 233, 251, 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.

Oldest Bee Paper in America—Established in 1861.

AMERICAN BEE JOURNAL,
 16-page Weekly—\$1.00 a year.

Sample Free. THOMAS G. NEWMAN & SON,
 925 West Madison Street, Chicago, Ill.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

- A. I. Root, Medina, Ohio.
- P. L. Viallon, Bayou Goula, Iberville Par., La. 19fd
- C. W. Costellow, Waterboro, York Co., Me. 21-23
- Kennedy & Leahy, Higginsville, Laf. Co., Mo. 23fd
- E. T. Lewis, Toledo, Lucas Co., Ohio. 3-1
- H. F. Moeller, cor. 5th st. and Western Ave., Davenport, Ia. 3-1
- E. Kretzmer, Coburg, Montgomery Co., Ia. 23fd
- C. P. Bish, Petrolia, Butler Co., Pa. 15-1

ONE SECOND-HAND CIGAR-BOX PLANER
 —12 1/2 INCH—

FOR SALE.

It has two feed-rollers, and two speeds of feed. Pieces as short as 4 inches can be planed with this machine, without chipping the ends, and it planes from 1/2 inch to 4 inches in thickness. The cutter-head is made of steel, and the cutters capped very close, to prevent tearing the lumber when it is very cross-grained or worm-eaten. The tight and loose pulleys for counter-shaft are 6 inches in diameter and 3-inch face, and should make 1000 revolutions per minute. Such a planer is worth, new, \$70.00. This one has been used in our own shop for two years, but it is practically as good as new. We offer it for sale for \$50.00. It will plane 12-inch barn boards beautifully, or 12-inch plank when cut into short lengths.

A. I. ROOT, Medina, O.

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

HONEY COLUMN.

CITY MARKETS.

BOSTON.—*Honey.*—We think we notice a little better feeling in the honey trade; but prices remain the same. White clover, 1-lb. comb, 14@16; 2 lbs., 12@14. Extracted, 6@8. **BLAKE & RIPLEY,**
Nov. 24, 1885. 57 Chatham St., Boston, Mass.

KANSAS CITY.—*Honey.*—Demand for honey begins to sag under the present comparatively high prices, and recent warm weather. The choice 1-lb. sections are still scarce, and pretty well taken up at 16@17c. We think, however, the top is reached, and any change will be lower prices. 2-lb. frames are selling at 12½@15c. Extracted, dark, 4 to 6; white, 7@8. *Beeswax,* 22½@25.
Nov. 19, 1885. **CLEMONS, CLOON & Co.,**
Cor. 4th & Walnut St's, K. C., Mo.

MILWAUKEE.—*Honey.*—The demand for honey is very fair, and we note some improvement for choice white comb in 1-lb. sections, although values are better, and we continue to quote—15@16c. Extracted in kegs and barrels, 7@8c. The supply of choice comb is light, and encourages shipments.
Nov. 23, 1885. **A. V. BISHOP,**
142 W. Water St., Milwaukee, Wis.

CHICAGO.—*Honey.*—Market shows little change since last quotations. Comb honey is coming forward more freely, and sells at 15@16c., occasionally something fancy at 17c. in a small way. Dark comb honey, very little demand. Extracted sells at 6@8c. per pound. *Beeswax,* 25@26c for yellow.
Nov. 21, 1885. **R. A. BURNETT,**
161 So. Water St., Chicago, Ill.

CLEVELAND.—*Honey.*—There is a good demand now at 15 cts. for best 1-lb. sections; 2 lbs. not so much sought for, at 14; dark honey would not sell very well, as all inquiries are for best white only. Old honey is very dull at 10@12. There is some inquiry for white extracted at 7@8. *Beeswax* very scarce at 22@25.
Nov. 21, 1885. **A. C. KENDEL,**
115 Ontario St., Cleveland, O.

ST. LOUIS.—*Honey.*—Since our last report our honey market has been quiet. Quote Southern extracted, in bbls., 4½@5c; half-bbls., 5¼c. Comb honey steady for choice white clover. Quote white clover 17@18c for fancy; 20c retail by single pkg. *Beeswax* weaker, 22@22½c. Extra choice about 23 to 23½.
Nov. 27, 1885. **W. T. ANDERSON & Co.,**
104 N. Third St., St. Louis, Mo.

HONEY WANTED. I shall be glad to correspond with those having honey to sell—comb or extracted.
J. R. LINDLEY, Georgetown, Ver. Co., Ill.

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

WE WILL SELL

Chaff hives complete, with lower frames, for \$2.50; in flat, \$1.50. A liberal discount by the quantity. Simplicity hives, Section Boxes, Comb Fdn., and other Supplies, at a great reduction. We have new machinery, and an enlarged shop. **Italian Bees and Queens.** Send for Price List. 23rfd
A. F. STAUFFER & CO., Sterling, Ills.

AGENTS WANTED

In every township to sell one of the most valuable implements out. Every farmer needs it; now is your time to make some money.

J. G. GRAY, Medina, Ohio.

23, 24d. Mention this paper.

BLACK JAVA COCKERELS.

A few fine birds for sale at \$3.00 each. Warranted to be as good as the best. 23, 24, 1, 2d.
S. W. DARRAH, Chenoa, Ills.

CHOICE TESTED ITALIAN QUEENS

Given away for a club of 5 subscribers at publishers' prices, for any of the leading bee-papers of America. Wholesale price list of 500 papers for 1886 now ready. Address **C. M. GOODSPEED,**
Thorn Hill, N. Y.

EXTRACTED HONEY, 16 TO 20 CENTS PER POUND.

The Canteen honey-package is so funny, everybody wants to eat from it. Will sell like hot-cakes during holidays and all winter. Samples of 5 and 10 cent packages, filled with honey, sent by mail prepaid for 25 cents. Send for price list and full description, and set your honey booming. Address 2td **JOHN H. MARTIN, HARTFORD, WASH. CO., N. Y.**

NEWFOUNDLAND PUPS

For sale, \$10.00 apiece. Beautiful little fellows—children's best friend in times of trouble. Address 23, 24, 1d. **A. J. NORRIS, CEDAR FALLS, IOWA.**

FARM AND APIARY FOR SALE.

160 Acres, 120 in a good state of cultivation, and well fenced; the rest in timber. Good bearing orchard, well watered, and splendid outside range, 4 miles from railroad and County Seat, and a good live town, and plenty of churches, and ¼ mile from school. Will be sold cheap, and on long time. Splendid bee-range; lots of basswood and white clover; 24 stands of bees, mostly Italians, in Langstroth hives. For further particulars, address 23d **JAMES HUMPHREYS, BOX 200, MT. Ayr, RINGGOLD CO., IOWA.**

TWO ENGINES,

All complete, for hive-making; used but a short time' both in good running order, with saw-tables, saws, and belting. Will be sold at a sacrifice. One is a Shipman engine, one-horse power, runs with coal oil; cuts one-inch pine lumber with ease. One 4 H. P. Skinner engine, all complete, saw-table, saw, and belting. Address **J. B. MURRAY,** 23d.
ADA, OHIO.

FOR SALE OR TRADE.

In Dixon County, Nebr., 40 acres of land within 3 miles of the County Seat, ¼ mile of Missouri River; is partly timber land, and excellently situated, and adapted for an apiary, poultry and fruit farm. Price \$500.00, all cash, or will take from \$100 to \$200 in bees, and the rest in cash. Full particulars will be given as to location, character of land, roads, school, etc., on application. Address 23d **J. W. PORTER, Ponca, Neb.**

FOR SALE—or will exchange for choice extracted honey, very fine Wyandotte cocks or cockerels (Handlette's strain, Wellesley, Mass.) and *my strain* Houdans, crows or layers. It would be difficult to buy better birds, I think. **J. EVANS,** 23-24 Schaghticoke, Renns. Co., N. Y.

KIND WORDS FROM OUR CUSTOMERS.

Our advertisement in GLEANINGS sends us a lot of names for sample copies of the *Journal*.
Canadian Bee Journal.

GLEANINGS AS AN ADVERTISER.

Now, I guess I have engaged all the bees I can spare this fall. GLEANINGS is ahead of all bee-journals as an advertising medium, and it paid me well. **S. F. REED.**
North Dorchester, N. H., Oct. 23, 1885.

THE CHINAMAN'S WATCH.

The watch I received was for a Chinaman who works in the garden on the ranch, and he is a very faithful fellow. He was the most delighted individual I ever saw when I gave it to him. He stroked it and held it to his ear, and acted as though it was a young kitten, and he could hear it purr. **Madera, Cal., Nov. 16, 1885.** **C. A. SAYRE.**

his article, although his information has probably got a little twisted. I believe honey is sometimes, to a certain degree, poisoned by the poison of the bee-sting. This is not caused by the bees stinging the honey-comb, certainly not by the stings left behind; for, as Prof. Cook says, even if the bees did sting the comb, the stings would not be left behind.

It is quite possible, that honey may become poisoned through the crushing of bees. I think, though, that this may more often come about from the poison *wiped off* from the protruded stings of angry bees. Who, on opening a hive on a cool morning, has not noticed the rows of upturned stings, each with its drop of poison on the tip? What becomes of this poison? It is very unlikely that it is reabsorbed by the poison-sac. I am familiar with the taste of this poison. I have often tasted it upon my hand, left there by a bee that had not stung me. I have also detected it on the surface of sealed honey by touching it with my tongue shortly after such a display of stings as I have mentioned. Now, I think here is at least one reason why some people can never eat honey; why others are unpleasantly affected by any thing more than the smallest portion, and why a large quantity sometimes produces such severe results.

Let me give some facts in support of this. People have frequently told me that comb honey "did not agree with them," while they could eat extracted honey with impunity. It is easy to see that the poison, being on the surface, would be cut off with the cappings, and ordinarily would not get into extracted honey. Other persons can not eat even extracted honey until it has first been boiled, after which they can eat it freely. In this case, the poison, being volatile, is boiled out of the honey. Again, it seems that honey which has been kept away from the hive for some time may be eaten more safely than the same honey, even when well ripened, when just taken from the hive. Here the poison has evaporated, through the lapse of time.

I do not mean to say that all honey contains this poison. Probably that taken by the skillful apiarist during the honey-flow, when bees are good-natured, does not contain a trace of it. But a great deal of honey is taken at such times, and under such circumstances, that it might easily contain appreciable quantities. Have you not heard some old bee-keeper tell how, without smoker, but with bee-hat and buckskin gloves, with trousers in boots, and sleeves tied down, he sallied forth to "rob his bees"? how the bees covered those gloves with stings until you could hardly put a pinhead on a spot without a sting, and how the air was fairly reeking with the venom of the infuriated insects? Is it not possible, that in such a case a considerable amount of venom is deposited on the comb? Suppose a bee-tree is taken under such circumstances, and the venom of crushed bees added to this amount.

Right here there is a difference between "wild bees" and "tame bees," although, of course, the bees in the forest are no more *wild* bees than are those in the box hives out in the orchard, which the owner never goes near, except at "swarming time" or "robbing time." Gentle bees, accustomed to handling and human companionship, and properly handled, do not get into such frenzies as I have described, while "wild bees" do sometimes, when gone at rough-shod at improper times.

I have never heard of a single case of sickness arising from honey sold by me; but my customers have frequently told me how often they used to be made sick by honey taken in the old-fashioned way.

J. A. GREEN.

Dayton, Ill., Nov. 18, 1885.

Friend G., we are very much obliged indeed for your report in regard to the solar wax-extractor, and it begins now to be plain to me that we shall have to add another implement to our list of supplies; and that we may be able to offer the best possible solar wax-extractor, I would ask you to make one just as you would have it, without regard to the time and pains it may take you, and then to forward it to us by freight or express, as you deem proper, with a bill for all your trouble and bother. I want to ask if you have tried the machine with two sheets of glass and one sheet of glass. If you have, and if two sheets are an advantage, why not make the machine with an air-space on all sides, so as to confine the heat? The east, west, and south sides should have an outer covering of a sheet of glass, while the north side and the bottom may be protected by an extra thickness of sound lumber, so as to make a dead-air space between the two. We shall probably have to make the machines of at least two prices—one having cheap looking-glass plates for reflectors, and the other having reflectors of tin. The tin reflectors cost so little they can be replaced for a small amount. Just now, however, a cheap grade of looking-glasses may be had for a very small sum. There will be one objection to shipping a machine taking glasses as large as 20 × 21, because of the risk of breakage on sheets of glass so large. Any other important facts in regard to manufacturing these machines for sale we shall be very glad of, and will willingly pay for. I did feel a little astonished at the reports of wax melted by the sun alone; but by the use of mirrors we may get almost any desired temperature. In our philosophies there is record of a machine made with several hundred small mirrors placed so as to throw their reflection on a single spot, that would melt and burn the most refractory substances.—In regard to poisonous honey, I think you are right. The matter was some time ago suggested, that the venom from bee-stings might make the honey deleterious to people very sensitive to bee-poison. I think Mr. Langstroth called attention to it.

HAULING BEES.

WHAT TO DO WHEN A HORSE IS STUNG.

IN increasing my business beyond that point at which I could keep all my bees in the home apiary, one of the greatest difficulties in the way was the matter of hauling. To sit on a load of bees, in momentary fear lest the bees should find their way out, and make a raid on your team, is any thing but soothing to the nerves. In more than one instance I had to jump from my seat, and, with all possible dispatch, unhitch the horse or horses, and take them some distance from the wagon till I could make every thing secure. By the way, it has been a matter of importance, several times, for me to know what to do with a

horse when attacked by bees. In all cases that have come under my notice, the attack has been about the head; and the first impulse of the horse always seemed to be to get to some place where he could rub his head. Latterly, when trouble occurs I spring to the horse's head and commence rubbing it all over with both hands and arms, and he seems satisfied with that, without showing any desire to run. I do not know whether other horses would act just the same in all cases, but it might be worth while to try.

Of first importance is the matter of fastening the bees in the hive. If you have never had any experience in the matter, you will be surprised to find how difficult it is to shut up a number of hives so that no single bee shall be able to get out, on a journey. There must be no half-way work about it; you must be absolutely certain that every spot is tight—bottom, top, and sides. In hot weather, as when moving to get the benefit of a buckwheat field, abundant ventilation must be provided. For this purpose I have replaced the cover of the hive with a frame 3 or 4 inches deep, the entire top of which is of wire cloth. The quilt is entirely removed, and the entrance closed with wire cloth, and in this way I have safely taken them in the middle of a hot day. Generally, however, I haul them in spring and fall (to the out apiary and back again), when not so much ventilation is needed. No ventilation is given, except through the entrance of the hive. The bees are confined to the hive by a stopper made thus: A strip of wood one inch wide, $\frac{3}{8}$ inch thick, and as long as the entrance of the hive is wide; a strip of wire cloth about $2\frac{1}{2}$ inches wide, and as long as the stick already described. Fold the wire cloth double, making a double strip $1\frac{1}{4}$ inches wide, and as long as the stick. Nail the wire cloth on the flat side of the stick, letting the folded side of the wire cloth project $\frac{1}{2}$ inch. The double-pointed tacks lately figured in GLEANINGS are very nice for this purpose. Place the stopper over the entrance, and drive into the stick an inch or two from each end a $1\frac{1}{2}$ -inch wire nail, leaving $\frac{1}{2}$ inch or more of the nail projecting, so that it may be easily withdrawn with a claw-hammer. After these have been used some time, the nail-holes become so large that it is necessary to bend each nail after driving, in order to hold the stopper tight up to the hive.

To make the top of the hive doubly secure, I use a square of cotton cloth 6 or 8 inches larger each way than the top of the hive. Spread this cloth over the top of the hive, letting it project on each side, then put on the cover. If there is no wind this makes all secure; but if windy, the cover must be fastened on by means of pieces of leather or cotton cloth 2 or 3 inches long. Drive a large tack through one end of the leather into the body of the hive, and another tack through the other end into the cover. Let the cover be thus fastened at two opposite sides or corners. As the covers of my hives rest on cleats, I find it quicker to tie them on with stout twine, running the twine under each end cleat, and crossing it in the form of an X on top. I never fasten the frames in the hive in any way, but I never clean the propolis out of the hives in the spring till after hauling. I once had some combs break down when hauling in buckwheat harvest. They were new, not wired, filled with brood in the lower part, the upper cells empty, and not drawn out. With wired or old combs I have no

fear. If I were shipping on the cars, I think I would fasten the frames in the hive.

I had always supposed it necessary to have a bed of hay, or a spring wagon, to save combs breaking down, until Mr. Von Dorn, of Omaha, told me he used a hay-rack on a common wagon, without hay or springs, and I have since carried them safely the same way. Simply nail narrow strips across the rack, and put little blocks at the proper places, so that each hive will be kept in its own place. A common hay-rack will hold about 20 ten-frame Langstroth hives. As I keep only one horse I usually haul my bees on a one-horse wagon, having a light rack made to set over the wagon-box. In this I can haul 11 hives at a load—3 in the box, and 8 on the rack.

To provide against accident it is well to have hammer, nails, and lighted smoker on the way. Over any rough piece of road I drive very carefully; but on nice, smooth road, I sometimes strike a trot.

I like to unstop the hives as soon as they are unloaded. It is most easily done by using a little smoke, although by moving very slowly it can be done without. C. C. MILLER, 179—340.

Marengo, Ill., Nov. 23, 1885.

Friend M., although it may be that you have planned to tell it at some other time, I have been very curious all through your article to know how you succeeded in "carting" your bees around. Did it pay, and have you made "a great big lot of money" with your bees this year, the way you have been doing lately? You speak of drawing eleven hives at a load. I suppose that you know that, if you used Simplicity hives with a sheet of wire cloth over both top and bottom, you could take almost twice as many as with the style of hives having cleats and projections and porticos, and caps to slip over, etc. We have a wagon that was made expressly to hold a certain number of Simplicity hives; and, put up in the way in which I mention, they are so light that even one horse will draw a great many safely. The Simplicity hive is so simple that there is not much danger of bees getting out, with a wire-cloth frame over both top and bottom. We make these wire-cloth frames by securely fastening the wire cloth on just such strips as we put under the cover. In fact, we throw out all imperfect strips in making hives. This gives us a great surplus of these pieces of wood. Why, we have had so many that we have sometimes burned them up, even though they were just as good as any for holding wire cloth.—We notice that you have increased from 179 to 340, and we are glad and thankful for this little piece of news. But, tell us about the honey and—MONEY.

OUR OWN APIARY.

SNOW AS A PROTECTION, IN THE ABSENCE OF A WIND-BREAK.

TO-DAY is Thanksgiving, and the snow is from four to five inches deep. Many of the hives are banked up with snow. Some of the empty Simplicity hives are almost covered; for, as a general thing, we leave our summer hives out the year round, and then they are all ready for next season.

OUR EVERGREENS AS A WIND-BREAK.

Our apiary has no wind-break in the way of a tight board fence, such as we had formerly at the old home. There is, however, as you doubtless know, an inclosure of evergreen-trees that, in a few years, will afford us the best of protections. The trees when first planted (1878) were from three to four feet high, and at present date they are all the way from six to eight feet, and several are nearly ten feet high. They do not as yet afford much protection, for the reason that they have not begun to bush out, and, as a consequence, the wind makes its way through, the space between the branches being about two feet. With all the advantages of a wind-break, it seems to me there is at least one advantage in having the hives exposed to the wind. Where we have an abundance of snow, the wind, having free access, banks up the hives much better than if the apiary were protected. Our hives being thus exposed to the wind on three sides—north, west, and south—present quite an array of little pyramids. The space between the hives is thus dished out, and the snow banked just where we want it. But for all this, we would by no means say that a protection is not necessary, for in this locality we do not always have snow when we like it. The importance of a good wind-break can scarcely be overestimated. It is only necessary to refer to the successes in wintering of Cyula Linswik and her sister in their home, surrounded by an immense forest. When there a few years ago, the stillness, occasioned by the absence of wind, impressed itself upon me as remarkable.

RABBITS FOR KEEPING DOWN GRASS AROUND HIVES.

It will be remembered, that something over a year ago we made mention of some rabbits. For the past three months we have had a pair of them in our poultry-yard. The number has now increased to nine, though had it not been for the inroad of a certain cat we should have had twice this number. As Mr. Fradenburg has said, they will keep down the grasses to quite a little extent; and if a good number of them were fenced in an apiary they might do good service in the way of keeping down the grasses around the hives. On the whole, however, I think I should much prefer a lawn-mower, as the rabbits are a little inclined to pick out precious morsels of herbage, while the former does smooth, even work, irrespective of taste.

TINKERING WITH HIVES DURING WINTER.

The general work among the bees has, or ought to have, ceased by this time. Of course, if there should be days when the bees can fly, colonies that have insufficient stores can be fed up. Good colonies, when well packed for winter, ought, as a general rule, to be left entirely alone till spring. I remember one winter, that while working with my microscope I had occasion to get a good many bees for dissection. There was one colony in particular, in the house apiary, from which I took my victims. If I am correct, father was not aware that I was getting bees in this way, though I did not attempt to conceal it. But without any thought that I was endangering the colony, several times during the winter I went there, took a few bees and hastily closed the hive, feeling sure that this slight disturbance could do no harm. The following season showed that this colony was dead, when the rest had wintered comparatively well. Merely opening the hive during cold weather will often break the cluster, and the result of exciting the bees is as I have

said. It must not be inferred, however, that a colony must *never* be opened. We sometimes take a queen from a hive in mid-winter, but the weather is such as to permit it.

PREPARING FOR NEXT SEASON.

During the winter months it is well to consider our plans for next year. Sections and hives must be put together, etc. Many new improvements have been suggested during the past year. It is best for us to re-read and consider, so as to be ready for the coming season. For instance, the favorable reports of the sun wax-extractor will warrant us in giving the matter some attention. Perforated zinc is slowly coming into prominence, and should be further experimented upon. Side storing versus top storing; separators or no separators; the best method of preventing after-swarms; clipping queens' wings, etc., are matters of discussion; and your locality, coupled with personal experience, will largely decide which is best. Put yourself at your wit's end. If you have any new scheme, formulate it ready for practice next year. If you have observed any thing new, let us have it, being careful to report exactly what you *did* see; for, as one writer has said, "Men see one thing, and are *apt* to infer another." Let there be none of this in our work. E. R. ROOT.

EXTRACTED HONEY.

PUTTING IT UP FOR MARKET; HOW A LARGE DEALER AND HONEY-PRODUCER MANAGES IT.

BY to-day's mail I send you a small can of honey, put up in the winter of 1882-3. Its exterior is rather rough, it being the last of my stock of that season, and has been handled a good deal as a sample can by which to sell the stock. Is it candied? I put up a considerable part of my product in this style of can, weighing 1, 2, and 3 lbs. respectively. For convenience and expedition in canning honey, I have a coil of block-tin pipe placed in a steam-chest, one end of the pipe protruding from the top of the steam-chest, and reaching to a tank (holding 3 or 4 bbls.), which is placed directly above the steam-chest. The other end of the pipe protrudes from near the bottom of the steam-chest, and to it is attached a small faucet. Now, when ready to go to canning we turn a jet of steam into the chest, or box, in which the pipe is coiled; turn the stop-cock at the bottom of the tank, or top of pipe, to permit the pipe to fill from the tank, and draw off or fill the cans from the small faucet at the bottom of the steam-chest. The honey in passing through the pipe in the steam-box, is heated; one hand draws off the honey, two tinners solder the cans as they are filled, while a hand takes care of the cans as soldered, and labels them.

How is the tank kept supplied? Why, the above work is done in the basement of a plant on a hill-side; the tank is supplied from a heater just above it, which is fitted in the floor of the upper story. This heater will hold 2 or 3 bbls. of honey. The top of it is even with the top of floor. A zinc plate is placed on the floor beside the heater, a barrel of honey is rolled up to the plate, hoops knocked off one end and the head taken out, then the barrel is turned upside down on the zinc plate, the barrel pried off the honey (my honey is always candied solid at this time of year), and the honey swung, or shoved into the heater. A jet of steam is then thrown about the heater; and as the honey melts it

runs through a pipe in the bottom of the heater to the tank below it, which supplies the steam-chest.

As stated above, the building is on a hillside. On the upper side we drive up to the door and unload the honey on a level from the wagon to the floor of the upper story; on the lower side we load honey from the basement—canned, cased, and ready for shipment, into a wagon, without having to elevate it, the bottom of the wagon and basement floor being on a level. Thus, you see, we do the work expeditiously, accurately (damaging no honey by coming in too close contact with fire), and easily. The tinner is never given any extra resting-spells waiting for the candied honey to melt.

We put up about 1500 cans a day, working by daylight. During the past three seasons I have made use of the sun evaporator, for the purpose of more thoroughly curing my crop (I extract all my honey). The honey discharges itself from the extractor into a funnel covered with chees-cloth. It is then conveyed by a short pipe through the wall of the honey-house, and emptied into the evaporator. When thoroughly cured, a pipe, entering the evaporator in its bottom, conducts the honey back through the wall of the building into the basement, and discharges into a large tank, or other storage vessels. The evaporator is placed on the south side of the honey-house, with tin reflector above it. Where I have not a sun evaporator in my apiary I extract none (except as compelled to do sometimes from brood-combs) until fall, but tier my hives up, 3, 4, 5, and even 6 stories high.

Having some time ago read an account of friend Muth's mode of heating and handling honey, and thinking his plan must be very tedious, where so large a quantity is handled, induced me to give you my plan.

Smithland, Iowa, Nov. 16, 1885.

A. CHRISTIE.

I will explain to our friends, that friend Christie probably sells as much extracted honey in small packages as any other one man, unless it is friend Muth, of Cincinnati. While friend Muth makes glass jars his specialty, friend Christie has a special style of tin can, partly described in the above article. I will explain further, by saying that this can is not unlike the ordinary Jones can, as we have called them, except that a tin cover slips on or off at pleasure; and underneath this tin cover is a second top, made of the thinnest kind of taggers' tin, and it is therefore easily cut open with an ordinary penknife; and after this taggers'-tin cover is cut out and thrown away you have a tin box or pail, as the case may be, with a nice-fitting slip-over cover. Below we give a copy of friend Christie's labels as they read on his one-pound honey-package:

PURE HONEY FROM THE APIARIES OF

AUG. CHRISTIE,

SMITHLAND, - IOWA.

Friend C.'s peculiarity in his method of melting candied honey is this: Instead of running steam through a coiled pipe, he runs the honey through the coiled pipe, and the steam is let into the steam-chest surrounding it. I believe there is an advantage in this, because a lower temperature of steam would melt the honey rapidly, and make it flow freely. The sample received was not candied, and I think it quite likely that honey sealed up in this way, when heated to

about the right temperature, would remain in a liquid state until the can is cut open. Although we may not, many of us, go to the expense of just such an apparatus as the above, there are many hints given in the article that will doubtless be a benefit to many of us.

The following is the contents of a circular label on top of the cover. Perhaps we might add, that friend Christie is our largest customer for honey-labels, from which we judge that he sells immense quantities of honey in this way.

This end of this can is simply a slip cover. To open it, cut the label around the edge of this cover, and pull the cover off; then cut out the soft thin end now under the cover, and you have an open can which you can shut and open at pleasure, while using the honey.

A EULOGY UPON SOME OF OUR PROMINENT BEE-KEEPERS.

Well, now, if I did, in a former song,
If I did in *that* do the lion wrong,
I beg his pardon; I'd rather kneel,
Than to be for him a single meal!
But he stands to-day
In proud array —
His fame is fixed and sure.

Here's Jones and Benton — noble men,
They're marching in the van;
Bring out your heroes, one by one,
And match them if you can.
They marched through many a burning isle,
And swept the eastern seas,
To furnish man and woman kind
The finest race of bees.

And there is Root — "foremost" this Root,
I ne'er can find a rhyme to suit,
Although I start in wild pursuit;
Yet, where is the man with bee repute,
Or any other, that will dispute
That this is a kind and tender Root?

And, lo! afar in summer sky
I see a banner floating high;
And written there in living light
Are words that give the heart delight:
"If all my customers among,
There's any I have done a wrong,
Then let me know, and I will try
My utmost them to satisfy."
'Tis Hayhurst's banner floating high.

For honesty of purpose, sterling worth,
There beats no heart upon this blooming earth
More true and steadfast—none that I would trust
Sooner than Heddon, for I believe him just.

And there is Cook—an honored name,
That stands full high on the roll of fame.
Whether he's tall across, or long and slim,
I also have a "crow to pick" with him.
I'll tell it to you at some other time,
Either in saddest prose or merry rhyme;
How he, from this "vain world" did almost jolt
Your humble servant, with "his little colt."
But there he is—a paragon of men,
A master of the heart, the ear, the pen.

And Mrs. Axtell—there she stands,
Beloved in this and other lands,
A purer faith—a prouder fame,
"Than gathers round Marengo's name."

Another hundred I could name, and more,
That stand full high in apicultural lore.
There's Mrs. Harrison, and Chaddock too,
Might be a fit example unto you.
Cyula Linswik, in her forest home,
And Nellie also, to my memory come.
These names with tenderness I now recall.

These are a few—only a few—
Photographs I present to you.
Sift them and weigh them, one by one.
Humble and poor they all began,—
With head and hands they worked again.

San Diegoito, Cal.

J. P. ISRAEL.

A MODEL BEE - KEEPERS' ASSOCIATION.

THE EDITOR OF GLEANINGS IS ASKED TO ANSWER SOME QUESTIONS PROPOUNDED BY THE FAYETTE COUNTY (OHIO) B. K. A.

NINE months ago the bee-keepers of our county organized an association, and up to the present time the readers of your worthy journal, except our own members, are in the dark as to what we have and are doing. We started out last February with a membership of 10, and now number 34. We have monthly meetings, holding them around at the homes of the different members, each taking his basket well filled, and having a regular picnic dinner; and with our wives, sons, and daughters, we have a general good time, socially as well as mentally. If you will allow me a little space, I will refer briefly to our last meeting, which was held at the home of Bro. Lewis Haines, Oct. 22d. The day being bright and beautiful, added much to the enjoyment of the occasion. The time till noon, as is our custom, was occupied in looking at some of the outdoor attractions; namely, his hexagonal apiary of Italian bees in the Root chaff hive; also his machinery for manufacturing bee-keepers' supplies; and last, but not least, his beautiful carp-pond, situated near and fed by a never-failing spring. The day being a little cool, we did not get to see any carp; but Mr. H. assured us they were there all the same.

This brings us up to our bountiful feast, of which we all freely partook. After dinner the meeting was called to order by Vice-President Bay, who gave us a brief but appropriate address. There having been no special work assigned to any member, our question-box was opened, and the following questions read and discussed very interestingly:

What is the best mode of wintering bees?

Is it too late to feed for wintering?

What is the best mode of spring management?

Will bees permit a queen and fertile worker to remain in a hive at the same time, and both raise brood?

How would you Italianize an apiary in the spring, without interfering with your crop of honey?

Are bees rearing brood now? if so, is it best for them to rear brood so late in the season?

Is it best to feed our bees sugar syrup, and sell the product for honey? This last question arose from the fact that our market is being supplied now from Columbus with this kind of honey.

An answer to part or all the questions discussed in our last meeting would be very acceptable.

The foregoing questions being very interestingly discussed, the meeting adjourned to meet at the home of J. H. Ferguson, four miles east of Washington C. H., on the Circleville pike, Nov. 19, 1885.

Bloomington, O. S. R. MORRIS, Sec.

Friend M., I congratulate you on your having got started in such a healthy and inexpensive way of conducting a local bee-keepers' society. With pleasure, I answer, to the best of my ability, the questions propounded, in order:

The best mode of wintering bees must depend on the locality and other circumstances. As a general rule, I would say chaff hives, arranged as described in the A B C book.

It is never too late to feed for wintering

while there is weather warm enough for the bees to fly.

The best mode of spring management must also depend on circumstances. Watch the bees; love them and help them.

Neither Italians nor common bees will, as a rule, permit a fertile worker to remain in a hive while they have a queen; but the Syrians and Cyprians both at times are guilty of this misdemeanor.

To Italianize an apiary in the spring, without interfering with the honey yield to some extent, might be a very difficult matter; but the advantage of Italian blood would, under almost all circumstances, be such that they would catch up, and more too, before the season is over, so in the end your crop of honey would be greater.

Bees will be rearing brood now where the colony has a young queen, where they have been fed, or where they get late forage; and sometimes strong colonies will raise brood in November any way.

It is *never* best to feed bees sugar, and sell the product for honey. Honesty used to be the best policy, and I guess there is no doubt but that it is yet. Dear friends, are you sure that anybody is putting a product on the Columbus market, under the name of honey, that is only sugar fed to bees? This is a serious charge, and we ought to be very careful that we are right before we accuse anybody.

CARNIOLANS AS COMB-BUILDERS.

NOT DISPOSED TO MAKE PROPOLIS; SOMETHING ABOUT BREEDING THEM.

FRIEND ROOT:—I herewith send you a letter that was written to me, which I think gives more information regarding the Carniolan bees than any thing I have seen in any of the bee-journals; and if you think it worthy of a place in GLEANINGS I should be glad to have you publish it.

CHAS. D. DUVALL.

Spencerville, Md., Oct. 20, 1885.

We give place to the letter below:

Mr. C. D. Duvall:—

I have raised over 100 Carniolan queens this fall, and find more yellow in the race than I expected, though some queens, whose bees show considerable yellow at first, raise very nice bees when six months or a year old, as their yellow mostly proves to be a reddish band, as Mr. Benton calls it. But I find there are some Carniolans that resemble the cross between them and Italians. The yellow is in drones as well as workers, and in imported stocks as well as home-bred queens. The first queen I sent you was raised from an extra imported queen; but if she is mated pure it must have been with one of those yellow drones, and those yellow drones you will find to be all through the race; but some queens raise much finer-looking ones, and of a more uniform color, than others.

It is much harder to get good specimens of this race than Italians, and some have so much yellow in markings, that, if we raise them for sale, we shall have to test them and price them according to grade and markings of bees. The most reliable test for some is, that pure Carniolans carry no propolis, but they will make use of it if there is any on frames. I could mail you a piece of duck

cloth for reference, that has covered frames all season. I have two queens that met hybrid drones, and one hybrid queen and several Italian queens mated with Carniolan drones. These queens were raised in the fore part of the season, for experiments. The ones that have black blood in are smaller, with very little down on some, and a rather bad disposition to sting, which the Carniolans have not, as I have not had a smoker lighted, except when uniting them, for three months, or since I got stocked up with Carniolans, and have got but a few stings.

The Carniolans are very hardy, and are the best comb-builders I ever had, and make the nicest section honey. They protect their hives as well as Italians, as far as I am able to judge. I have some Carniolan swarms that built more comb in August and September than the best Italian stands did in the honey season. They also work on red clover as well, if not better, than Italians. But you will find them to swarm more, and some queens raise very poorly marked bees. In raising queens I have much better results after going over my bees the second time, and excluding all queens and drones that had many yellow ones among them. In breeding them I would buy some drones from darkest queens, if they are uniform in color, and also breed from darkest queens. The thing we want is a black underground, or scales, with heavy stripes of down on workers; and queens that raise these without yellow ones among them are hard to get, but they are as fine-looking bees as the best Italians. It takes the very best queens of this race to have good results in raising them; and even then some are not fit to send, as folks will call them hybrids, when pure.

I. F. SHANNON.

Spring Hill, Ind., Oct. 12, 1885.

And so, friend S., you would endeavor to breed out the yellow bands from the Carniolans, would you? It seems to me this is going to complicate matters quite a little. If it is really as you say, that the Carniolans are disposed to show yellow bands, even when not crossed with Italians, wouldn't this indicate that the race itself is a cross? and how are we to know when they have become crossed with Italians, and when they have not? I am glad to hear of the good report you make in regard to them. If it is true, that they collect less propolis, this will be quite an acquisition, and we will take particular pains to notice them in our own apiary next year.

REVERSING COMBS, ETC.

GOOD REPORT OF THE HONEY SEASON.

I THINK that, as others have something to say in GLEANINGS in regard to reversible frames, I have the same privilege. Like all new things, there is more or less doubt; but there is no doubt in my mind as to their utility. I tried a few last season, simply by sawing off the end-bars and driving a long wire nail to take its place, hoping in time something would come along for the much-needed purpose of a perfect reversible frame, and all the while I have been working for it. I tried quite a number, especially the wire you have. I liked that best of all, on some accounts. One great objection is, when we desire to run stays down between the frames, the side wires are much in the

way; and, too, unless they are perfect, the frames will easily hang out of true, and one must have a very nice tool to clinch them to the end-bars.

As we are all a little selfish, I am going to tell you I have made a reversible frame I like best of all. I send you a sample with this. The wire is right in the center of the end of frame, so it can not but hang true, and the frames do move so easy, and no job to reverse the wire! It takes only about half the wire that yours does. To be sure, it takes 3 half-inch screws to an end of frame, but they cost only one cent per dozen, and you see these wires can be used equally well on side-storing frames or on a full set in upper story. I have made a machine to make them on, that cost about 50 cts., aside from a vise that I use. I do not use the spring wire, but the common, as it works much better, and is good otherwise.

SOME ADDITIONAL ADVANTAGES OF REVERSIBLE FRAMES.

I have such a love for reversing, that I shall use such frames, if for nothing but to fill out the bottom of the combs. But there need not be the usual space, if the fdn. is set within $\frac{1}{8}$ inch from the bottom-bar—no matter about a little space at top; that will be all filled. I used to set it up close to the top; and where it was $\frac{1}{2}$ inch too narrow to fill the frame, the space was always left. But the thought occurred to me, that it would work to leave the space above, which is very plain—don't you see? I know that, by having full combs, it takes quite a number less in a certain number of hives; and, too, the bees can reach all the comb quicker, and they are so much stronger, also. By reversing and extracting I can run a queen on seven frames that without would need 8; and how much better the bees take to the sections! I also find that it pays to use full starters in sections, and I learned from W. H. Norton that the starters, to work best, should be cut about $\frac{1}{4}$ inch narrower at the bottom than at the top, and I find it much less work to put such into the boxes, as they do not catch on the sides.

SEPARATORS.

I have used separators wholly this season, and must say I can never do without them, and I have a case that I can use them on or not, and can use a few or more boxes, narrow or wide. I can take out a full box, and replace one with fdn., and it will be filled and no bulging, which otherwise it would be.

I think I have learned one way to foretell when a queen will be killed. When from any cause a queen goes about with her wings up as if she were about to fly, and drags herself along, they are about sure to be killed; at least, I had two Syrian queens and one Italian thus this season. I presume there is some disease that causes her to appear so.

This has been the best season here ever known, and such white goldenrod honey I never saw. I had, I think, 75 lbs. brought in in seven days by one colony (of the best late honey). I have my bees all fixed for winter, with about one-half natural stores, with racks over the frames for $\frac{1}{2}$ -inch passage, and they are mostly on only five frames, and are strong in bees. I have on more warm packing than I used to, for I believe nature is something to go by, as it says, "Stop all upward escapes," and mine that had the most packing last winter came out the best, and ate the least. They are all in chaff hives, and I use a good large bran-sack of leaves over all the cloths, etc.

I am standing on my tiptoes, awaiting the deef-

sion of those bee lawsuits, but I do not fear much, for we must have bees as well as sheep or grapes, and neither are harmed by them. As I grow all sorts of fruits, I have no selfish ends in view.

No. Auburn, Me., Oct., 1885. E. P. CHURCHILL.

Friend C., your reversing device is all right, only that the frames hang on a single bearing. This has been submitted a great many times, and such frames have been used for a time. The objections are, that if you move the hive they swing like a pendulum; and if one side of the comb is loaded more with brood, pollen, or honey, than the other, it throws it to one side. It is true, you can have spacing-strips at the bottom; but then the top must always come in just such a place, and then we have frames at fixed distances again. We thank you for your report of reversible frames in general, and especially for the important facts you bring to light. If you can make seven frames hold as much brood as eight do ordinarily, and thus compel the bees to put their surplus into sections, it will certainly be worth while.—I have often noticed the peculiarity you mention, of queens going about with their wings partly spread; and, so far as I can remember, I have always found such queens faulty in some respects, sooner or later. I do not know that the matter has ever before been in print; but it may be well to warn the brethren, that when a queen carries her wings thus we have good reason to suspect she will not amount to much. Queens, after having been shipped long distances, sometimes show this peculiarity. In regard to the quantity of packing to put over your bees, if you use forest-leaves in a sack, I, too, would say, the more the better; for forest-leaves can not well obstruct ventilation, any way.

A NATURAL CAVE FOR BEES.

HONEY SEASON IN TEXAS.

AT the left of my front yard, a path winds down to a cave some 25 feet below the level, whose cavernous mouth is an arc of 60 paces in front, and would store 10 times as many hives as I have, if needed for winter quarters. Evergreen live-oaks, heavily hung with long gray Spanish moss, with undergrowth of laurel and cedars, cactus villages, algeritas, etc., make a nice mat just over the cave. Right back of our lot is a reservoir, stocked with fine carp, a little over a year old, and over a foot long; and although 12 feet deep, you can see every thing in it and on the bottom, as through glass. Food carp need no feeding here, for its waters, taken from the monstrous spring of 8 acres, grow quite fast the same aquatic plants and grasses that fill the "river head," and it takes a great many carp to keep them down. I think I have the most romantic spot within half a mile of the court-house. There are many fine buildings along the heights. My neighbors (but I refrain from making a letter of length, that perhaps would not interest you), I only wish you could call and see for yourself. Our Texas Chautauqua Literary Society and Summer Institute is also on this height, with our almost boundless view of the prairies.

I ought to say, our many hundreds of Simplicity hives about this place are as overloaded with honey now (although extracted clean in July), as at any time this year. Many are extracting heavily now, and bringing them to one story high. Many new queens are just beginning to lay. I had a fine one hatch to-day, in a full hive. The weather is fine, crops fine, brood heavy yet, and honey and pollen coming in to do the work. The dengue fever has given everybody through here a shake-up.

CARP, AND THEIR UTILITY IN KEEPING DOWN WEEDS.

I wish some enterprising man would dare to come and go into carp-raising, with three ponds on the slope from the reservoir exactly suited to it. I can furnish the ground, and the water is the overflow of the reservoir, always 72°, summer and winter. Until carp were growing in there it was often necessary to rake out the masses of spontaneous growth. Now it is gaining on them, and nearly a foot deep on the bottom. I will tell you of Mr. Mitchel's fountain and tank of the hydrant water. He put in some breeding carp where cresses and water-grass were filling up his pond as fast as he could get time to take it out. They grew to great size, and kept things in check. He put brush all around in the water to facilitate laying, etc. This became a mass of glittering verdure, reminding one of a cypress swamp in the Yazoo-River bottoms, densely hung with moss. Well, after the young appeared in thousands, and began to grow, they soon picked the brush clean, and kept nipping the germs, and showing their shiny sides all through it, and they grow like pigs. The large ones are 2 years old and about 20 inches long, 8-pounders. San Marcos, Texas, Nov. 1, 1885. A. W. BRYAN.

Why, friend B., it seems to me that you folks down there in Texas ought to be happy with all these advantages, and I expect to hear that you individually are now going to settle down and make the most of these advantages, instead of traveling about from one place to another, as you have done for so many years. I can readily understand how a lot of carp may be able to pasture off the weeds and water-plants that fill up your lakes and rivers.

SHIPPING BEES FROM THE SOUTH.

FRIEND MASON GIVES SOME VALUABLE FACTS FROM EXPERIENCE.

ON page 732, Nov. 1, is an article from L. W. Gray, and your comments, which interest me, as we are always short of bees in Maine in spring. I have done quite a large business in shipping bees from the South for the last ten years. I have received bees from more than a dozen of as careful bee-keepers as there are in the South. I have had shipped to me from one pound of bees to full colonies, from April to July, and even August. While some lots came in fine condition, others came all dead, without any apparent cause, packed precisely the same; and while it is a pleasant and profitable business to both the shipper and receiver when a lot goes all right, the next lot, perhaps, is received with a heavy express bill, all dead, or nearly so, which makes the business unprofitable and unpleasant for both the parties. I am satisfied, on the whole, that it is unprofitable to ship bees by rail, where they will be on the road

over four or five days. I find that, where they are more than three or four days in transit, they usually destroy all unsealed brood.

I had one lot of bees the past season from Louisiana. These came by water to New York, and were seven days on the road to New York; then they were sent by freight to Mechanic Falls, Me., which took three days. These bees were in shipping-boxes, on ten L. frames. An opening one inch wide, clear across the bottom, was covered with wire cloth. A 1½-inch hole was made in each end and side, near the bottom, and a 4-inch chamber above the tops of the frames, open at both ends, which was covered with wire cloth; a ½-inch-thick cover had an inch hole in its center; over this hole was tacked a ball of burlap as large as your two fists. This cover was nailed down on burlap, and water poured into this hole, and I have no doubt the captain had instructions to water those bees, and also parties in New York, who see to the transfer of them; at any rate, they arrived here the 11th day after shipment, and there was not half a wine-glassful of dead bees per hive, and the hives were as crowded with bees as I ever saw one that was ready to swarm, and two actually did swarm the next day after they arrived, in regular order, leaving queen-cells all ready to hatch.

I like your idea as to a party being located at some central place, and receiving bees, and letting them have a fly. After they are all right they will stand a two to four days' trip by freight nicely, and come to the purchaser in good order, and reasonably, too, as the expense by water is extremely low. The only question would be, how much this middle-man's services would add to the cost.

Mechanic Falls, Me., Nov. 6, 1885. J. B. MASON.

Friend M., we are very much obliged indeed for your report, showing that what I suggested has actually been put in practice; and from the testimony you give, I should say that this matter of shipping by water should certainly be more fully developed.—The arrangement you mention, for giving the bees water, is also quite an ingenious idea.—So the bees really made preparations to swarm on the way, and did swarm immediately after. Now, then, where is a bee-friend on the sea-coast, who can act as a middle-man for us?

AN A B C SCHOLAR'S UPS AND DOWNS.

HOW HE AT LAST SUCCEEDED; FROM 7 TO 40, AND 1023 LBS. OF HONEY.

THREE years ago I started at about the foot of the A B C class. I thought I possessed more knowledge than I really did. I bought 8 stands of black bees in March, 1883; in June I had three left. Some swarmed out, and some died. I investigated a little and found mice-nests in the hives, from the size of a tin cup up to the size of a hat. The trouble was, there were but few bees and less honey when I bought them. I learned one lesson then.

A GOOD WORD FOR CYPRIANS.

I had three left in American hives. I watched them closely. They did not swarm that summer. On the 10th day of July, 1883, a swarm of pure Cyprians came and made application for a hive, and, of course, I gratified them. I gave them a hive with old combs. They cast a good swarm the 14th

of August, and a small one the 24th. The last one died in the winter. In the spring I had 2 Cyprians and 3 blacks. The Cyprians increased to 11, and made 375 pounds of comb honey; the blacks did not increase any, and made 125 lbs. I will cut a long story short by saying, last fall I had 23 stands. This spring I had 7. Nearly at the foot of the class again, or, more properly speaking, a fit subject for Blasted Hopes. Not much. My old Cyprian queen came through all right, cast a large swarm May 21st. May 31st another, and June 1st another. The old queen's wings were perfect, but she was so large and heavy she could not fly. From that one stand of Cyprians I increased to 16, and from the 7 I increased to 40. Now take especial notice, they were all natural swarms. You would naturally inquire, "How about the honey?" I took 1023 lbs., all comb honey, in one-pound sections. How is that for Iowa? All but 150 lbs. was gathered after Aug. 1st.

We do not get much honey here yet from white clover, but it is getting a good start. I did not get much from hasswood this season. The bees used it in brood-rearing. The most of our honey was gathered from a weed growing in the corn-fields, called by several names, such as smartweed, heart's-ease, and black-heart. The honey is just as white as white-clover honey, and good enough for any one.

ALBERT MCCAY.

East Nodaway, Iowa, Nov. 13, 1885.

THE OTHER SIDE OF BEE-KEEPING.

Or, Rather, a Duplicate of Last Year.

HOW BEE-KEEPING IS LIKE FISHING.

I WENT into winter quarters with 115 colonies. The first of March I had lost two or three colonies, but the most of my colonies were greatly reduced in strength. I thought they would soon build up, but the spring was cold and backward, and brood-rearing was two months later than usual. For the first time, I got a taste of spring dwindling. The first of May my 115 counted 92. The cause of the dwindling was apparent—loss of bees, and backward spring. Old bees died off faster than young ones were hatched. I sold 6 colonies, which left me 86, and transferred 12 on shares, which gave me 92 to commence the season with. I increased artificially to 104.

We had a fair crop of white and alsike clover. The bees got just enough honey from it to cheek robbing. Linn bloom was never better. The bees got enough honey from that to make them reasonably good natured for eight or ten days, but not sufficient to swarm. August came in cold, and it would have paid a good per cent to have fed them all through that month.

I was in Blasted Hopes last year (that is the name that suits me); when spring came I thought I was out, head and shoulders; but I settled back for five months, just my ears sticking out. Spanish needle came in the first of September, and there was an unusual amount of heart's-ease honey, which began coming in the 2d of September. I put on my first sections that day. Bees got in a good humor, and I felt a little better, and they and I worked together just as if we had always been good friends.

BEE BUSINESS LIKE FISHING.

You can talk to me about mussing with beeswax. Any thing but working with robber-bees. I thin mine out in the fall till I don't have many to feed.

They don't sting me much, but they crowd me out, and beat me up in the morning, and can see later at night. There is something in the bee business that reminds me of fishing with a hook. I used to fish half a day without a bite, when I would think of quitting. I would then think, "May be a great whopper is just ready to take hold." When I get a poor crop (which I am sure to do), I think next year I shall "strike oil." Next year some little thing is wrong—perhaps the wind is from the east (as it usually is), but I think the next year will be all right. Next year it is a little too cold, but the next year will certainly be the year. But with all these little things, I like it as well as fishing, and I am spoiled for any thing else. If I don't succeed with bees, I am "gone up," sure.

From my house apiary, 80 spring count, I got an average of 22½ lbs., or 1935 lbs. extracted, 490 comb. Total, 1825 lbs.

From an apiary of 5 on shares, 315 lbs.; my share, 157 lbs.

From my River Apiary, black bees, 12 colonies, average 5½ lbs., 68 lbs. Total, 2050 lbs.

RUFUS ROBINSON.

Laclede, Fayette Co., Ill., Nov., 1885.

Friend R., you say you had quite a fair crop of alsike and white clover, and that linn was never better. Now, if the results per colony you mention are the best you got from all these sources, I should be inclined to call your locality a rather poor one. A good flow from linn alone ought to give at least 100 lbs. per colony, in an apiary of not over fifty colonies.

GIVING A LAYING QUEEN TO A COLONY HAVING JUST CAST A SWARM.

IS THE PLAN ADVISABLE?

ON page 739 of GLEANINGS for Nov. 1, L. W. Gray asks questions for Doolittle to answer, which I will try to do. In the partial answer the editor gives, I see he does not comprehend the question asked, only to a limited extent. The question *mainly* does not refer to the safe introduction of queens, although that is indirectly touched upon, but to the erroneous idea (as I consider it) which has been advanced so many times, that there is a great gain made by giving a colony which has just cast a swarm a laying queen, instead of allowing it to perfect a queen from the queen-cells left after the swarm has issued. As it must of necessity take from 15 to 20 days for the embryo queen which is left in one of these cells to get to laying, we have been told that the bee-keeper who wishes to secure the best results from his bees should have a laying queen ready to give each old colony as soon as they swarm, as the time lost to them, by rearing a queen, is equivalent to a swarm of bees. Being eager to know for myself all the plans which would give the best results, I have experimented largely; and the truth of the statement, that the time lost to the bees by rearing a queen in natural swarming is equivalent to a swarm of bees, is the first reason it has not proven a success. If it were bees I were after, the case would be different. With me, white clover yields enough honey to keep the bees breeding nicely, and prepares them so that they swarm mainly from June 20 to July 5. Our honey harvest is from basswood, which blooms from July 10 to 16. Now, all who are familiar with nat-

ural swarming know that the bees are comparatively few in numbers in the spring, and increase by the rapidly increasing brood produced by the queen, which, in due time, hatch into bees, until a swarm is the result. By giving a laying queen to a colony immediately after it has cast a swarm, we bring about the same result (swarming) as before, for we place the bees in the same condition. The only difference is, that, having plenty of brood, they build up quicker, and are prepared to swarm in a shorter time. As this second swarming, brought about by giving the laying queen, comes right in our basswood honey harvest, it cuts off the surplus honey; for it is well known that bees, having the swarming fever, do little or no work in the section boxes; and if allowed to swarm, the object we have sought after (section honey) is beyond our reach.

REASONS FOR PREFERRING A YOUNG QUEEN.

Now let us look at how the same colony would work had we not given the bees a laying queen. Eight days after the swarm has issued, the first young queen will have emerged from her cell, as a rule, when the apiarist should remove all the other queen-cells from the hive, so that second swarming is entirely prevented. In 8 or 10 days more our young queen is ready to lay, which is about the time the basswood begins to yield honey largely. During this period, between the time the swarm issued and the young queen commences to lay, the bees, not having any young brood to nurse for the last half of the time, consume but little honey; hence, as fast as the young bees emerge from the cells they are filled with honey; for bees not having a laying queen seldom build comb in the sections. Thus, when the young queen is ready to lay she finds every available cell stored with well-ripened honey. At this point the instinct of the bees teaches them that they must have brood, or they will soon cease to exist as a colony, and a general rush is made for the sections; the honey from below is carried above, so as to give the queen room, and in a week we have, as a result, the sections nearly filled with honey. I have often had such colonies complete 60 pounds of section honey in from 8 to 12 days, while those to which I had given the laying queen immediately after swarming, did little else than swarm during the same time. Bear in mind, we are talking about producing comb honey, not extracted. Different locations may give different results; still, I think that nearly all sections give a large flow of honey at a certain period during the season, rather than a steady continuous honey harvest the whole season. To such sections these remarks are especially applicable.

My second reason is, that after basswood we have a honey dearth, hence the bees from the introduced queen are of no value, but, on the contrary, become consumers. On an average it takes 21 days from the time the egg is laid, to the perfect bee ready to emerge from the cell. Then, if the colony is in a normal condition, this bee does not commence labor in the field till 16 days old; hence, the eggs for the honey-gathering bees must be deposited in the cell 37 days before the honey harvest ends, or else they are of no value as honey-producers. As the basswood is all gone before the eggs of the introduced queen become honey-producing bees, and as the larger part of them die of old age before buckwheat and fall flowers yield honey, it will be seen that a great gain is made by letting each old

colony, having cast a swarm, rear their own queen, for thereby we save the expensive feeding of the larvæ, which are to become expensive consumers of the honey of the hive. The chances are, also, that when the colony rears its own queen they will be stocked with younger bees for wintering in November than where a queen was introduced immediately after swarming.

The one point worth knowing above all others in bee-keeping, is a thorough knowledge of the location we are in, as to its honey resources, and then getting the largest amount of bees possible at that or those times to gather honey, having just as few at all other times as is consistent with the accomplishing of this object. If all who read this article will study their location, and then rear the bees in reference to that location, I think they will find their bees will do as well as their more successful neighbors.

Borodino, N. Y., Nov. 16, 1885.

Friend D., under the circumstances, very likely you are right; but some way I do not like the idea of ever, under any circumstances, discouraging the production of brood. I presume this, of course, comes about because we have always been in the habit of selling bees, and we sell them almost every month in the year, and therefore they will never be dead property. I can not remember that I ever saw too much brood in a hive to please me; neither have I seen a hive containing too many bees. There is another peculiarity in our location. Bees, as a rule, never swarm after about the middle of July, and therefore we have nothing to fear from the excessive swarming you speak of during the basswood bloom. Where one is working exclusively for comb honey, in a locality like yours, there may be reasons for preferring to have brood-rearing stop for a week or two; but I would always extract when there is an advantage to be gained by extracting.

THE NORTH AMERICAN BEE-KEEPERS' SOCIETY.

FULL PARTICULARS IN REGARD TO IT.

WE extract the following from the *American Bee Journal*:

This society will hold its 16th annual convention on Dec. 8, 9, and 10, 1885, at Detroit, Mich. The hall in which the meeting will be held is known as the "Red Men's Wigwam," and is located at 63 Michigan Avenue, one block west of the City Hall. Just across the street from the "Red Men's Wigwam" is the Antisdel House, which will be the hotel at which the Society will make its headquarters. The regular rates at this hotel are \$2.00 per day, but they have been reduced to \$1.25 per day to those attending the convention. There will be reduced rates on all Michigan railroads, also as far east as Buffalo, as far west as Chicago, and as far south as Toledo. Efforts are being made to secure reduced rates to still further points, but at present the prospects of success are not very promising. No certificates will be sent out until about Dec. 1; but all who expect to attend should write to the Secretary at once, and certificates will be sent out as soon as they are ready.

W. Z. HUTCHINSON, Sec.,
Rogersville, Mich.

RAILROAD CERTIFICATES FOR THE CONVENTION.

As many do not fully understand the use of the certificates to secure the benefits of reduced rates, I will try to explain their use.

It makes no difference whether you belong to the North American Bee-Keepers' Society, or any other society, or ever expect to, if you wish to go to Detroit, Mich., to attend the annual meeting of the several bee-keepers' societies to be held at that place on Dec. 8, 9, and 10, you will simply write to W. Z. Hutchinson, Rogersville, Mich., asking for as many railroad certificates as you can use. Mr. H. will book your name and the number of certificates you want, and as soon as he obtains the certificates from the railroad companies, which will be about Dec. 1, he will mail them to you. You will fill out the blank, and when you buy your ticket have the railroad agent fill out his part. If you can not buy a through ticket to Detroit, buy one for as far as you can, and when you procure a new ticket have the agent indorse, on the face of the certificate, that he sold you one full-rate ticket from that place to as far as you get your ticket. You may be obliged to get tickets at several places, but always have the agent certify that he sold you a full-fare ticket.

When you arrive at Detroit, present your certificates to Mr. Hutchinson, and he will fill out the blank left for that purpose, certifying that you were in attendance at the above-mentioned meeting. Then, on presentation of your certificate properly filled out, you will be able to procure a return ticket by paying one-third the regular fare, thus saving to you two-thirds of the regular fare one way.

This is a great reduction, and will enable many to attend at Detroit who would feel that it would cost too much to go. Then with the reduced rates at the hotel it will make your expenses very low. Your committee is still at work trying to make it pleasant for you when you arrive in Detroit. We hope you will all come, and make this meeting one long to be remembered by those present. A large sample room at the hotel has been placed at our disposal; where you can have every facility to show any thing new or of interest to the Society.

Let every bee-keeper canvass his neighborhood, and find how many will attend, then send to W. Z. Hutchinson for certificates as soon as possible, so that he will know how many to apply for.

Clinton, Mich. H. D. CUTTING.

PROGRAMME.

FIRST DAY.

TUESDAY FORENOON SESSION.—10 a. m.—Convention called to order.—Address of Welcome, by Edwin Willets, President of the Michigan Agricultural College.—Response by the President, L. C. Root.—Calling the roll of members of last year, payment of annual dues, reception of new members, and distribution of badges.—Reading the minutes of the last meeting.—Reports of the Treasurer and Secretary.—Announcements.—Miscellaneous business.

AFTERNOON SESSION.—2 p. m.—Announcements.—Annual address of the President.—Miscellaneous business.—"Production of Comb Honey," G. M. Doolittle, Borodino, N. Y.—"Production of Extracted Honey," Charles Dadant, Hamilton, Ill.—"Marketing Honey," C. F. Muth, Cincinnati, O.

EVENING SESSION.—7:30 p. m.—Announcements. Miscellaneous business.—Discussion of questions that have accumulated in the question-box during the day.

SECOND DAY.

WEDNESDAY MORNING SESSION.—9 a. m.—Announcements.—Miscellaneous business.—"Bee-Pasturage," Thos. G. Newman, Chicago, Ill.—"Selling and shipping Bees by the Pound," E. M. Hayhurst, Kansas City, Mo.—Selection of place for holding next convention, and election of officers.

AFTERNOON SESSION.—2 p. m.—Announcements.—Miscellaneous business.—"Excellence or Cheapness—Which?" A. J. Root, Medina, O.—"Comb Foundation," John Vandervort, Laceyville, Pa.—"Bee-Keeping as a Business," Dr. C. C. Miller, Marengo, Illinois.

EVENING SESSION.—7:30 p. m.—Announcements.—Miscellaneous business.—Discussion of questions in the question-box.

THIRD DAY.

THURSDAY MORNING SESSION.—9 a. m.—Announcements.—Miscellaneous business.—"Reversing Combs," James Heddon, Dowagiac, Mich.—"The Pollen Theory," Prof. A. J. Cook, Agricultural College, Mich.

AFTERNOON SESSION.—2 p. m.—Announcements.—Miscellaneous business.—“Wintering Bees,” Ira Barber, DeKalb Junction, N. Y.—“Different Races of Bees,” D. A. Jones, Beeton, Ont.—Adjournment. W. Z. HUTCHINSON, Sec.

FALSE STATEMENTS IN REGARD TO THE HONEY BUSINESS OF OUR COUNTRY.

As a protection to our bee-keeping population, we propose in this department to publish the names of newspapers that persist in publishing false statements in regard to the purity of honey which we as bee-keepers put on the market.

FALSE STATEMENTS IN THE ENGLISH PAPERS, IN REGARD TO THE HONEY BUSINESS.

AFTER reading GLEANINGS for Nov. 1, and seeing the many clippings from papers about bogus honey, I thought I would send you one, especially after reading about your exporting honey to England, and the man saying they would not require more American honey, etc. The inclosed slip is taken from the Newcastle-on-Tyne *Chronicle*, England (my native city). After reading it and your paper, I wondered if the one had any connection with the other. JOHN LILLIE.

Vincennes, Ind., Nov. 14, 1885.

ARTIFICIAL HONEY.

One of the latest American novelties is artificial honey—that is, honey adulterated with syrup manufactured from maize, the method being as yet a secret. Experiments on the subject show, however, that if wheat or maize starch (not potato starch) be treated with oxalic acid, or any other powerful organic acid, a syrup is produced which in a certain concentration, and after standing two or three weeks, exactly resembles in taste and appearance old honey.

Thank you, friend L., but I do not believe our English correspondent had adulterated honey in mind when he wrote what he did. The extract which you send us was probably brought out by what our friends had seen in the American papers. We would suggest to them, that if they want to be fair to the friends over here they will tell what proofs they have, that our corn syrup has ever been brought over from America to be sold as honey. Have the packages analyzed, and find out where they come from. Let us root out the fraud, no matter what it costs.

FEEDING BEES SUGAR SYRUP, AND SELLING IT FOR HONEY.

Below is part of a clipping from the *Toledo Blade*:

Late in the fall, in warm days, feed each swarm until it has ample stores to last till we can commence to feed in spring.

Now, what to feed. In preparing sugar syrup to feed bees, use the best coffee crushed sugar (not granulated, as that will turn back to sugar in the cells), such as is used for cooking purposes. *If some of this is stored in the boxes with honey collected from flowers, it will in no way decrease its value, or impair the flavor of the honey.*

Feeding bees judiciously is a benefit to the consumer as well as the producer. It increases the product, makes honey cheaper, and does not impair the quality. By increasing the quantity produced by a swarm of bees, it increases the profit of that swarm in dollars and cents; by increasing the quantity of honey in the market it reduces prices per pound, and brings it within reach of all.

Nearly every family with a garden might keep a few swarms of bees with good profit. In commencing, get the best bees in the best hives, and manage them on common-sense principles.

MRS. LIZZIE E. COLTON.

The italics in the above extract are ours. There is no question but that the editors of

the *Blade* meant to credit it to Mrs. Cotton. The letter L was probably a typographical mistake, and her teaching accords exactly with what she says in her book. Of course, she does not directly recommend feeding sugar on a large scale to get nice comb honey, but she very plainly suggests that it may be done, and that nobody will be harmed by it. We call upon the editors of the *Toledo Blade* to recognize the fact that they are encouraging a fraud and imposition upon the public; and we hope that when their attention is called to it they will as publicly protest. We would also remind them that they are allowing one who has been for years published as a fraud, to use their pages as an indirect means of advertising her fraud.

From the Aparian department of the *Rural New-Yorker*, of a late date, we clip the following:

THE ONE THING THAT FRAUD CAN NOT COUNTERFEIT.

I am surprised to note the following response to an inquiry in the Farmers' Club of a late *Rural New-Yorker*: "It is probably true, that men, without the aid of bees, now make and sell comb honey in which neither wax nor honey is used; that the comb is made of paraffine, and filled with a substance like honey." Now, Mr. Editor, I wish to say that the above is not only not probably true, but that it is utterly absurd, mischievously false, and entirely impossible. No such thing has ever been done, and it is very certain that no such thing ever can be done. Only Nature's deft and delicate fingers can fashion the beautiful comb honey. Comb honey is one thing that fraud can not counterfeit. Whoever purchases the beautiful, white, incomparable comb honey, may be sure that he has Nature's product, pure and genuine.

A few years ago, Prof. H. W. Wiley, now Chemist of the Agricultural Department at Washington, published an interesting article on sugar, in the *Popular Science Monthly*, in which he made the above statement, apparently in all soberness. Afterward, when Prof. Wiley was called upon for proof of what was palpably absurd to any one who knows of the real nature of comb honey—a substance which is clearly inimitable—he replied: "I only said it as a scientific pleasantry." This statement was apparently as candid and earnest as any part of the article, and so was widely copied by the press of the country, and now, like all untruthful statements, it is, ever and anon, lifting its ungracious head, only to do mischief.

Comb honey owes its excellence to its very delicate structure. The cell walls of the comb are only 1-140 of an inch in thickness, and thus the delicate wax breaks up in the mouth almost without any extraneous force, and just serves to reduce or dilute the exquisite honey, and so becomes one of the most coveted articles of diet. It seems almost like sacrilege to say that such an incomparable article can be made artificially. As before stated, it is utterly impossible; never has been done, and never can be done. I hope, Mr. Editor, you will publish this correction at once, and that the many papers that have spread the error may be equally quick to fling out the correction; even then much wrong will be done; for, as we all know, falsehood will traverse the globe while truth is hitching up her horse.

Agricultural Coll., Mich. PROF. A. J. COOK.

Many, many thanks, friend Cook for having struck so effective a blow, at just the right time and in the right place; but it does really seem to me as if the editors of the *Rural New-Yorker* should have added an editorial note, or made some little apology, for their unwise and inconsiderate statement. I want to emphasize Prof. Cook's words where he says:

No such thing has ever been done, and it is very certain that no such thing ever can be done.

And:

Falsehood will traverse the globe while truth is hitching up her horse.

The trouble is this: When such a wonderful statement comes out in the papers, everybody reads it, holds up the hands in wonder, and every paper copies it. When the falsehood is corrected, however, it is a matter of but little interest to any one, and so nobody cares to read it, and therefore the editors let it drop as quietly as possible; for it is a little humiliating for an editor to admit that he publicly exposed his ignorance. But I tell you, my friends, an editor will make more money in the long run, and get a larger subscription, by being strictly honest, and coming right down to the bed-rock of truth, whenever the cause demands it. The world will stand by a man who, with truthful candor, exposes his mistakes, in a way they will by no means do, if the man is too proud to stoop to undo the mischief he has, may be unconsciously, made. We thank the editors of the *Rural New-Yorker*, however, for what they have done.

AN A B C SCHOLAR'S EXPERIENCE.

FINDING QUEENS; CHAFF PACKING.

NOW that the season is over, and the bees snugly tucked up in their winter blankets of chaff, I feel like summing up results, and reporting to our preceptor. I imagine you holding a kind of inquiry meeting of the A B C class; and having had "sperience," I feel like "speakin' right out in meetin'."

I went into winter quarters last year with ten colonies of blacks and one Italian. All came out in the spring with bees in; but on Easter Sunday one swarmed out and went in with another colony, leaving me ten, two of which were pretty weak; but by dint of feeding and building up I got them all to storing surplus on the white clover. Then came the (to me) most embarrassing work: i. e., raising queens, and Italianizing. I approached the first stand for this purpose, with a good deal of trepidation and misgivings, somewhat as a young man ventures to see his best girl for the first time; for although I have had a passing acquaintance with bees all my life I had only once before had an interview, and that very brief, with her majesty the queen. Still, I have succeeded in increasing my ten colonies to 24, good and strong; raising and introducing, for myself and neighbors, 35 queens, with not one laying queen lost in introducing, although I lost several virgin queens in various ways, besides getting a surplus of 1000 lbs. of comb and extracted honey. So much for one of the A B C's. Can any of the W Y Z's beat it?

FIRST: HOW TO FIND BLACK QUEENS.

I have found a way of finding the queen in ten minutes, without staring your eyes out, and, I almost said, to an absolute certainty—at least, it has not failed in a single instance of half a dozen trials. My neighbor, A. C. Moore, is the inventor of the scheme. We help one another a good deal in beework, and mutually profit by one another's experience. I had three or four hives I had worn myself out on, trying to find the black queens, and get them out. He had had pretty good success with his own, and proffered to help me. After spending the whole of a hot afternoon in August, without

finding a single queen, most of his conceit oozed out along with the sweat of his face. Next day he tried one of his own, with the same result, when he thought of fastening a perforated zinc honey-board into the bottom of a Simplicity story, in such a way as to sit down over the brood-frames, leaving no way of egress around it. Into this he lifted all the frames and bees, and also brushing in all bees from brood-box and bottom-board; then putting bottom-board and brood-box in place, he took up brood-combs one by one, and brushed all bees back into the Simplicity story, with zinc in bottom, and placing frames in brood-box, again. As soon as all were out he put the cover on the box that had the bees in it, and set it on the brood-chamber. Thus he left them 20 minutes or so; and on taking up the cover he found all the bees had gone down through the honey-board into the brood-chamber, except the queen and a few retainers, among which she was easily seen and caught; but when I tried it

THE BEES DIDN'T GO DOWN

of themselves; so instead of the cover I drew over them some mosquito netting and smoked them down. At first I had my doubts, thinking the queen could get through the perforations if she would try seriously; but after watching a not very large queen try for several minutes, I concluded it would be a very small one that did. Of course, the queen might fly up into the air, as many of the bees do, and escape the trap; but so far they never have.

SECOND: A SIMPLICITY BODY FILLED WITH CHAFF.

Instead of chaff cushions I cut a piece of burlap, an inch and a half larger all round than the outside of Simplicity cover. I then take a lath and cut two pieces, one inch shorter than inside length of Simplicity box, and two of them one inch shorter than the inside width of box. To these strips I tack the edges of the burlap—the long edges to long strips, short ones to short strips. Of course, the edges of burlap are much longer than the strips of lath. The excess is equally divided at the ends. I use a frame of lath over the frames similar to Hill's device. After this is put on, and the top box set in place, I put the burlap, with strips to it, down inside of the top box, turn the strips up edgewise against the sides of the box, and with a single lath-nail in each strip, tack them to the lower edge of top box. The ends of the strips come now almost together, leaving just room for the corners of the burlap to gather between the ends of the lath, and leaving the cloth loose enough to drop down over my Hill device, and be pressed down on the frames and cushions at ends and sides. I then fill the upper box with chaff, pressed down. The bees can be gotten at any time by lifting the top box. I think it is cheaper and more convenient than cushions. In the spring, chaff can be thrown out, nails drawn out of lath, and the whole piled up like empty grain-sacks, occupying little space.

IMPORTANCE OF CONSTANT ATTENTION TO THE BEES.

Of course, I have given a good deal of time to the bees—much more than would be necessary to an experienced apiarist. My wife complained that I did not give the bees any time to gather honey last year. In deference to her view I stayed away from them for three weeks, during harvest. At the end of that time, when I brought in a box of moths to burn, her opinion modified somewhat. This year the weaker colonies had my assistance to

fight the moth—at least once a week during their prevalence; and now that six little mouths, and several big mouths, too, are daily filled with sweetness, with big jars and numbers of section boxes set away to sell, the previous remark has ceased to be repeated.

The season has been a good one for honey—the fall, remarkably so. The bees were wild with delight, and kept up a busy hum everywhere in the fields. On the 14th of September I was surprised and chagrined to discover a swarm absconding to the woods, too far gone to be stopped. About the same time, Mr. Moore's wife, when he was gone from home, caught a swarm of black bees. Of course, they were not from his or mine, for ours are all hybrids and Italians. JOHN S. SARGENT. Hutton, Ill., Nov. 13, 1885.

Friend S., we thank you for your interesting account of your experience, even though you are an A B C scholar. Your plan of finding black queens is the same used by Mr. Quinby years ago, and was mentioned in our bee-journals, and I think it is described in his book, although he did not have the perforated zinc for the purpose, as we do. We have sometimes succeeded by shaking the bees on a sheet, a yard or more from the entrance. As they spread out and crawl in, the queen can usually be recognized. Your plan of tacking burlap on the inside of a Simplicity hive is also old; but as we do not often winter bees in Simplicity hives, the idea has been gradually dropped. I think as a rule, friend S., bees will gather more honey where the hives are opened almost every day, than where they are not so much watched and loved.

INTRODUCING.

A MODIFICATION OF THE DOOLITTLE PLAN.

THE following plan of introducing queens I do not claim as entirely new, but rather a new application of the plan given last spring by Mr. Doolittle, of introducing queens in forming nuclei.

DOOLITTLE'S PLAN OF FORMING NUCLEI.

By the way, I made 25 or 30 nuclei on his plan, and should not want to be deprived of the use of it for the next five years, for \$50.00. Nuclei formed on this plan will often repel robbers in a few minutes after being hived on the new stand, and in an hour or so will be bringing in honey and pollen with a vim; in short they behave precisely like a natural swarm when hived on a new location.

INTRODUCING QUEENS.

First make the swarm queenless, if not already so. I remove the old queen in the middle of the day. If the queen to be introduced is a very valuable one, and the queen to be removed is old, and likely to be superseded, I would wait a day or two to see if cells were started, so as to prove that there were not two queens in the hive. In ordinary cases I would not wait another day, but would proceed just before night to smoke them thoroughly, a little at first, so as to drive them into the combs, and more of it afterward, and at intervals, until they are thoroughly gorged with honey. The bees are then to be shaken off in the hive, and the queen dropped right down among the helpless mass at the

bottom, and the swarm deprived of their combs until morning. If the weather is cool, put the cover on as usual; if hot, put a chip under it to give more air. The combs containing brood may be given to another swarm to care for through the night. If covered up warm, a strong swarm might cover brood for half a dozen others. I return the combs early in the morning, and let them alone for a few days.

Caution.—Before smoking them, see that there is honey in all parts of the hive; if not, it must be given them in some way, as the bees must be made to gorge themselves. This is essential to success.

MY IMPROVEMENT

in the method of introducing queens, as given by Mr. Doolittle, consists in applying the same to full swarms by waiting until night, when all the bees are at home, and also dispensing with the troublesome caging process. I give the following

REASONS WHY I PREFER THIS METHOD

of introducing queens, to any way I have tried:

First, I think it is the surest method extant. I have never tried it with a case of laying workers; but if I had the opportunity I would try it with a good deal of confidence. I introduced queens this fall to over a dozen heavy swarms, mostly vicious hybrids, with perfect success, and that at a time when robbers were bad and bees were cross, which brings us to another reason.

Second, It makes no difference how cross bees are; in fact, during a dearth it seems easier to make bees gorge themselves by the use of smoke, and especially blacks and hybrids, which are the class of bees generally operated on by the A B C class.

Third, This process brings about the same conditions that exist during a flow of honey, but in a greater degree; that is, all the bees are gorged; and having no place to deposit their honey, wax secretion is commenced by all hands; and after the combs are returned, the cells will be lengthened out with new white wax, even if it is during a time when no honey is gathered.

Fourth, It does not require the skill of an expert to introduce queens by this method. Anybody who knows how to make bees gorge themselves by the use of smoke can succeed every time. I return their combs early in the morning, and contract the entrance, if robbers are bad, as, of course, they would be in no condition to repel robbers until they could disgorge some of their honey. Also, there is no danger of their absconding when deprived of their combs in the night time, even if they were in condition to fly.

CHALON FOWLS, 42-90.

Oberlin, O., Nov. 16, 1885.

The plan you mention, friend F., is not new; in fact, it was given through the journals as much as ten years ago. Friend Alley used to recommend tobacco smoke, in place of smoke from rotten wood, because it partly stupefied them, and I frequently used this plan for introducing queens, when I failed to succeed by any other. I have often made nuclei stop balling their queens, by taking their combs away, and letting them cluster on the sides of the empty nucleus hives. The objection to it is, the amount of time it takes, and the troublesome process of shaking and brushing the bees off from every comb. With a two-frame nucleus, of course this does not amount to much; but if

robbers are bad, they pitch into these empty combs with a vim, as you perhaps know. Another thing, it costs quite a little honey to make bees gorge themselves during a dearth. I once had a colony with stores enough for winter—at least, so I thought. They were cross hybrids, and I smoked them several different times to make them gorge themselves with honey. This induced them to lengthen out the cells, and build out combs in some places, as you mention. But before I got the queen introduced they had lost at least a half of their winter stores. It had been converted into wax, instead of being put back into the cells. Notwithstanding these objections, I think your plan an excellent one many times. The idea that they commence working like a new swarm, is doubtless true, although I have never noticed it. The loss of queens in introducing, of late years, is much less than formerly. In our own apiary, we do not lose one in 25, even where we put them in rapidly. In introducing 70 imported queens this fall by use of the Peet cage, not one was lost, and they are considered the most difficult to introduce of any queens we get hold of, after their long sea-voyage.

J. H. MARTIN'S DEVICE FOR SELLING EXTRACTED HONEY.

CAN WE SELL OUR EXTRACTED HONEY FOR ONE CENT PER OUNCE, AT WHOLESALE?

I HAVE fallen into the habit of raising extracted honey, and it seems that I am not letting my bees work to good advantage if I run for box honey. Then the swarming, just as they get settled down to business! away goes your swarm, leaving boxes about half full of honey. There is more or less a check every time a swarm comes off. We have run 160 swarms for extracted honey, and every swarm was doing its level best. We had but six swarms from the 160. A lady, whose husband kept bees, visited our apiary and said she was glad to get where she could see some honey. At their house it was swarm, swarm, swarm, and no honey.

When I get my tons of extracted honey, I am then conscious of the fact that I have an article that is not staple. Buyers don't offer you cash for it; if they handle it at all it is on commission, and this year your share would be about what the commission and freightage would be. The great problem, then, has been with me to get my honey upon the market so as to get some money out of it. It is very evident, that if we could convert all of our honey into confectionery, the entire honey crop would not supply the demand. Now, in the absence of a method to convert it into confectionery, the next best thing is a small honey-package. D. A. Jones, of Canada, has given us his little tin boxes; but their appearance is so much like a pill-box, that they don't seem to take on this side of the line. My experiments for a small novel package have resulted in the invention of what I term the "Canteen honey-package." The novelty consists in the fact that the honey from it can be eaten from the hand, like an apple or orange. It is very attractive; and by turning a little crank upon one side, the honey is forced out of the orifice, where it can be bitten off. Candied honey alone is used in this

package. We have tried to educate people in relation to the purity of candied honey; but there is so much adulteration in every thing we eat, it is of but little use to reason with them. Is not a small package a good method to teach the rising generation the value of pure honey? These are the thoughts that have actuated us in preparing this package. We hope it will be a benefit to bee-keepers at large. Honey put up in these packages realizes the bee-keeper 16 cts. per lb. Will it pay to put up honey in such small packages? This question can be answered only by a trial in each bee-keeper's locality from our own experience. We have so much confidence in it that we hope to have several thousand upon the market during the holidays.

Now, Mr. Editor, if I have ground my ax too much in this article, you may just notice my canteen, and refer the friends to my advertisement in this issue.

JOHN H. MARTIN.

Hartford, N. Y.

Friend M., I should almost have known that the machine was of your get-up, even if I hadn't seen your name at the end of the letter, for it is just like you. I will explain to our readers, that the package looks like a common tin blacking-box. A crank on one side makes it look somewhat like a toy music-box the children have about the holiday time. You just take out the cork and turn the crank, and the nice basswood honey oozes out in a square stick, ready to be bitten off. The quality of the honey is excellent; and the only drawback I see in regard to the enterprise is, that it seems to me the machine will cost too much to be afforded so it can be retailed at a dime. Retailers would want to purchase them at \$7.00 per 100, filled with honey. Four ounces of honey would be worth, say, 4 cents, and there would be 3 cts. each for making the machine and filling it with honey. Perhaps I should add, that a strip of colored paper is attached in the form of a bail, so as to make the packet look like a canteen, such as the soldiers use. If any one objects that this is something like free advertising, I would reply that friend M. will never get rich out of it at the prices he offers it.

UPPER ABSORBENTS.

A COVERING OF LOOSE CHAFF MORE DESIRABLE.

M R. HEDDON utters a sentence on page 696, Oct. 15, that strikes me, and one to which I expected the editor to take strong objections. It is this: "I am becoming of the opinion that our upper absorbents are usually useless, and oftentimes worse." It strikes me, because I have arrived at the opposite conclusion. It seems to me that all natural phenomena involved would argue in their favor. But what has most conduced to convince me is actual experience in wintering. I winter on summer stands, in summer hives. I put chaff division-boards in the sides, and chaff cushions on top. This protection on two sides and on top, though far from perfect, perhaps, works quite well. It confines the bees to a small compass, and furnishes a non-conductor of heat, and absorbent above — the direction in which heat and moisture both tend most to go. Usually the top cushions have been only about 1½ inches thick,

with two or more sheets of burlap between the cushion and frames.

Last year I bought, on trial, a kind of L. Simplicity hive. The surplus arrangement of this hive consists of half-stories, into which a slotted honey-board is fitted. After inserting the division-boards I spread a sheet of burlap over the honey-board, and filled the half-story with chaff, making a layer about 4 inches thick. Every one of the six colonies in this style of hive came through in first-class condition. I have found that bees winter best in the sun, because dampness, from whatever source it comes, evaporates more readily. Those shaded will become positively wet, and I find they are more affected with dysentery, and dwindle worse in the spring. Now, every one of these six stood in the shade, and three of them were the most densely shaded in the apiary; yet all kept dry, and all went into summer booming. Of some 25 other colonies in the shade, two died, and nearly all dwindled. The only extra good one was the only one wintered largely on sugar stores. Except in the features named, the chances of all were so nearly alike that I attributed the difference in results to the difference in treatment. I am about convinced that a covering of loose chaff is more than half the battle, and I have told why. Now will Mr. Heddon kindly give us a reason for the faith that is in him?

HOW MANY FRAMES IN THE BROOD-CHAMBER?

Mr. Hutchinson says, page 657, Oct. 1st, that when given but 5 frames they will build no drone-comb; but it is *possible* that, when hived in a large brood-nest, they will build *some*. My experience is, that they will build a great deal, even when allowed access to the surplus boxes at the start. But, does not Mr. H. use an eight-frame hive? Does he fill the extra space with division-boards? Do the bees work as well over these dummies as over brood-frames? Will Mr. H. please explain? Moreover, are those 5 frames enough to accommodate a thrifty queen? Mine that have not swarmed, or before swarming, will use ten frames, and I have had a great deal of trouble with queens (with 7 or 8) going into the sections, because they become crowded below. This is caused in part by the immense quantity of pollen gathered in the spring. They will store enough to almost pack 3 entire frames. This superabundance of pollen often becomes a nuisance to me. Is this locality peculiar for that? Mr. Doolittle once intimated that queens will lay more heavily a few weeks before swarming, or in the early part of the season, than they will after. Is that so? I am inclined to think it is.

Mechanicsburg, Ill.

GEO. F. ROBBINS.

Friend R., I think I agree with you in regard to absorbents over the bees; but as friend Heddon has absorbents at the sides, his arrangement may be such that it answers every purpose. I do believe in having the bees, when wintered outdoors, have all the sunshine that can possibly be given them, and I am also strongly in favor of loose chaff or tolerably loose leaves; and where the material over them is loose I do not think it matters whether it is a foot thick or two feet thick. If it is *packed down* so as to be heavy, it may become damp and sodden, and this we wish by all means to avoid.—I think your locality must be a little peculiar in regard to the quantity of pollen. We never have too much here. Will friends

Heddon and Hutchinson answer the inquiries above?

AUTOMATIC SWARMING.

EXPERIMENTS OF AN A B C SCHOLAR.

A

AS you request the A B C scholars to experiment with automatic swarming, I will send you the results of my experiments. I can not say that the plan has been a perfect success, but it is simple, and has the elements of success in it. On page 238 of A B C, in speaking of "Odor of Bees," we find it stated, "The odor of a laying queen has a strong attraction for bees," and that they will be attracted by the odor on a person, or a piece of wood, for days after a laying queen has touched it. On page 259 we find it stated, that "swarms are attracted, and are apt to cluster upon the same spot where a swarm has recently been clustered, because of the odor left by the queen of the previous swarm," etc.

Now, putting these two statements together, it is very easy to see that, if we wish a swarm to cluster in any particular place, we have only to manage some way to perfume the spot with the odor of a laying queen, and the chances are strongly in favor of the swarm clustering there; and after the first swarm has clustered there, the probabilities are still more favorable, and increase with each succeeding swarm; and how can we manage to secure the desired odor, more easily and quickly than with queen-cages that have recently contained laying queens? This looks like a very simple problem, and now for the proof:

When I first started out on this plan in the spring, I did not think of trying to get them to enter a hive, but only wished to have them settle in a desirable place; nor did I get them to enter a hive at all, for the simple reason that I had none prepared, when any of the swarms clustered in the place I prepared for them; although, upon placing the hive in position immediately after they had clustered, they readily entered it.

Of all the swarms that issued and settled, some 18 or 20 in all, more than half of them settled on this place, and in no other place did two swarms cluster. Now, by fixing hives on different sides of the apiary, in desirable places, and placing the cages immediately in front of them, in a little bunch of limbs, and placing a shingle, or some such passageway, from the top of where the cluster will be to the entrance, for a bridge, as it were, it is probable, from the success I had, that we can cause nearly all our swarms to enter the decoy hives of their own accord.

Economy, Ind.

GEO. W. WILLIAMS.

If I get your idea, friend W., it is to fix a hive, suppose we call it a decoy hive, on a suitable platform, up in a tree, at about such a height as a swarm would be likely to cluster; give the spot the odor of a laying queen, by putting there a queen-cage, or several queen-cages containing laying queens, or having recently contained laying queens. If a laying queen were there at the time the bees clustered, it would hinder them from going into the hive, perhaps. On this account it might not be best to have any live queens at all; and it strikes me it can be arranged so the bees would cluster on that spot, and go into the hive. When you get home, place the hive where you wish, and substitute another, and so on.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

DOES ERYSIPELAS AGGRAVATE THE EFFECT OF STINGS?

I COMMENCED by purchasing of you a colony of Italians, with which, I am glad to state, I am satisfied. The tested queen produces very handsome workers, and is very prolific. From those Italians I received 25 lbs. of comb honey (15 lbs. white, and 10 of buckwheat); and let me state, I did not get those Italians until the 4th of July; and from this fact, of receiving them on the 4th of July, the anniversary of our glorious freedom, my apiary takes its name. I next purchased 12 colonies of bees from a young man near by, who wanted to sell cheap so as to attend school, and accordingly I purchased what he had, although his father always, since 1870, kept them and was loth to part with his old comrades. He could not care for them, as he was subject to erysipelas, and came near dying by being stung by bees.

I noticed the article in GLEANINGS of Sept. 15th, "Killed by Bee-Stings," and it then came to my mind that that lady must have been subject to erysipelas; in fact, if such be the case, it will not be safe for such people to interfere with bees.

From 3 hives of those 12, I received 144 lbs. of honey, which was very fine. I have increased my bees until I now have 20 swarms to go into winter quarters with. I intend to winter part on summer stands, and part in cellar, as I have one 12x40, and I hope to give a good report next spring.

I purchased an imported queen from Frank Benton, and I am glad to say it met with satisfaction. I intend to import a Cyprian and Italian in the spring. The one I received was a Carniolan, a perfect beauty; and what has been said for the Carniolans, in my opinion, does not half do them justice. Batavia, N. Y., Oct. 23, 1885. F. J. CROWLEY.

We are glad to hear that you think the Carniolans have not had justice done them, friend C.—In regard to erysipelas, we shall be glad of further facts in the matter. Do bee-stings really produce a more aggravated effect where one is thus affected?

REMOVING BEES IN COLD WEATHER, IN CHAFF HIVES.

Can bees be moved in cold weather, in a chaff hive, a distance of about 17 miles, without removing the cushion? F. FOX, JR.

Cherry Valley, N. Y., Oct. 23, 1885.

Friend F., it might be done without any trouble; but if the bees should get stirred up, and become demoralized, so as to crowd the entrance and the other crevices that furnish air, they would smother. The only safe way is to remove the cushion and fasten the cap down so it can not get out of place, putting a piece of wire cloth over the entrance. They should then be left until they settle down quiet—say an hour or two; then they may be carefully taken up and moved by sled, wagon, or on the cars. If the latter, however, I would, for safety, remove the cover entirely, substituting a sheet of wire cloth in its place, then they can not possibly smother. When they reach their destination, let them stand until they get off the wire cloth and get on the combs; that is, if

they have left their combs. After they recover so as to be in their normal condition, put in the burlap sheet and cushion as usual.

WHERE DID THE EGG COME FROM? ANOTHER POSSIBLE CASE OF A STOLEN EGG.

I read friend Knox's article, headed, "Where did the Egg come from?" and also friend Williams', "Do Bees steal Eggs?" I accordingly concluded to give you a very singular occurrence in my own experience. I got through the winter with four colonies, or all I started with. Two were weak, and I took one about 4 miles away to my father-in-law's, during apple-bloom, as there were but few bees near to build up, and they did very well at first. One day I went to look at them, and I saw they were very strong, and would swarm soon; but as my father-in-law was old, to give him no trouble I told him I would come and divide them, as he wanted a colony any way. So I went over again in 22 days, and, alas! no queen nor eggs, and not a worker-bee in a cell, and only 6 or 8 drones, and they dead. But there were several queen-cells, all empty but one, and that was sealed. So I waited a day or two, and put in a queen-cell, and examined again in four or five days, and found the first one had hatched, and the one I put in cut down and destroyed. Why would all the workers be hatched, and remaining drone-larvæ all dead, if the same queen laid the eggs?

HOW LATE CAN QUEENS BE FERTILIZED?

I tried raising queens from nuclei, and hatched several. Some would be deformed, having but one wing, or some other deficiency, and in a few days disappear. I then tried dividing strong colonies, and made a success of it. One queen hatched about the very last of September or first of October, after everybody said there were no drones. She began laying the first week of October, and everybody said she would be a drone-layer; but her bees are now hatched, and all are workers too. She is two-banded. She is still laying; and of five other colonies, none are laying now, and three quit in September. I fed all of the time, to get into good wintering condition.

It was a very bad honey season here. Several did not get a taste this season. I took only 2 lbs., and I fed, to five colonies and one nucleus, 140 lbs. of sugar. I am going to test the chaff hive for wintering, for the first time. I borrowed two of a neighbor who lost all of his bees last winter, but from having too much cider, I think. E. B. HAUGHEY.

Pearson, O., Nov. 7, 1885.

Friend H., you have been raising queens with nuclei that were too weak in bees. With from a pint to a quart of bees, and all other requisites, we have no trouble with deformed queens, or those deficient in legs or wings.

A REPORT FROM ONE OF OUR QUEEN-BREEDERS; MORE ABOUT YELLOW-JESSAMINE HONEY.

The bees are having a good time of it, and I have lost many a good queen from the nuclei starving, as I have been sick lately. All my full colonies are overrun with honey, top and bottom story alike, not being able to extract any honey since June. The bees had nearly every crack filled when I saw them last. There is no chance now to take it away, and they will have it to winter on. If I am spared to see next spring, won't I have some tall colonies for early queens? I have some splendid stock now.

I should be very much troubled if we had to look after and prepare bees for winter. The only preparation they get is lots of stores, and they can remain on their summer stand safely. The day before I took sick I placed a nursery with, I think, 13 queen-cells, just ready to hatch, in a queenless colony, and I have not seen any of them since. I knew the queens could not get out, and if something was not done I should lose the colony; and when I am sick there is not any one around I can get to go near the hives, to work among them. So one day three nuclei swarmed out, and all clustered together. I got the hired man to put a veil and gloves on, then he got them in a box, all making a considerable colony. He shook them right in front of the same queenless colony, where he said he saw two of the queens go in safe, and all the bees, thereby making a good strong colony of the one that was for nearly two months without a queen.

YELLOW JESSAMINE.

I have watched carefully all the pros and cons about the honey-poisoning, and have to think, with many writers on the subject, that the poison is not from the honey, or, at least, that from the yellow jessamine, as our woods for miles around abound in it, and it is delightful to walk through them when the flowers are out. I have used and sold lots of early honey, with no evil results. I know of some cases where any honey will give pain to the parties partaking of it. I have a case in our own family, with Mrs. E. She never takes honey that has not candied or granulated, but that she suffers with violent pain after. When it has granulated she warms it and dissolves it, then it is perfectly harmless to her. I believe that the yellow jessamine is very poisonous, and I have seen bees many times in a sort of semi-conscious state, hanging on to the flowers. Not only honey-bees, but carpenter and bumble bees. We have a vine in our flower-garden, trained to a rack, and it is about five feet in diameter, almost a perfect ball; and when it is in bloom it is the talk of all around, a perfect covering of bright orange, with here and there a sprig of green leaves projecting, a perfect nosegay, sending its fragrance for rods around. W. J. ELLISON.

Stateburg, Sumter Co., S. C., Oct. 9, 1885.

Friend E., your testimony corroborates what Prof. Cook said; and I feel pretty certain that an old bee-keeper, accustomed to the use of honey, would have eaten the honey that produced the deaths, in moderate quantities, with impunity.

A REPORT FROM AN A B C SCHOLAR, AND HOW HE SUCCEEDED; A KIND WORD FOR GLEANINGS.

I commenced this season with five swarms, one queenless one. This did nothing but build up during summer. The remaining four gave me six new swarms and 200 lbs. of beautiful extracted honey. I use the Simplicity hive. I had nine swarms in double hives. I took extra bodies away, and put them in condition for winter. October 15th I had 150 lbs. of honey in brood-combs, after leaving them plenty for winter. R. L. James gave me four colonies after taking the honey from them, which I stocked up with my extra combs, so now I have 15 good colonies.

A GOOD YIELD FROM BASSWOOD AND HORSEMINT.

We have had no "bug juice" here this year. White clover is not much to boast of. Basswood gave me a large yield for about 8 days. The season

was short on account of wet weather. The rest was mint as spoken of in A B C, page 152. It commenced blooming about the first of August, and lasted about six weeks. Our sand prairie, along the Wisconsin River, was completely covered with it. Bees worked on it early and late. The honey was very light colored, and of fine flavor. My wife likes it much better than basswood honey.

I had two acres of buckwheat within thirty rods of the apiary, and saw bees working on it but one day, and find no trace of buckwheat honey in the combs. Goldenrod and autumn bloom amounted to but little, on account of cold and rainy weather. My bees are mostly blacks, with a few hybrids mixed in. I handled my bees during a honey yield without a veil, simply using smoke. I like hives well filled with bees, and such I have wintered without trouble in a bee-pit, where the thermometer stood at 35°. I have no luck with small swarms.

I have five acres of alsike, sown last spring. It looks well up to date. I have been in the bee business three years, but never had over 12 swarms until now.

GLEANINGS A WELCOME VISITOR.

A word for GLEANINGS before I close. It is a welcome visitor in our home. I hardly think I could do without it. We enjoy your farm, garden, and poultry sketches as much as the rest, and your home department ought to reach many more.

Wyoming, Wis., Oct. 20, 1885.

J. M. PECK.

Friend P., I presume you refer to the horsemint; and it is interesting to know that it yields honey from Texas to Wisconsin.—I presume the reason why the bees would not notice the buckwheat, was on account of the horsemint honey, which was more to their notion. It is a frequent thing for *Italian* bees to refuse to work on buckwheat while they can obtain white honey from red clover; but at the same time, the blacks will be storing dark buckwheat in considerable quantities.

\$800 A YEAR "AT THE VERY LOWEST ESTIMATE."

We have just received a communication from a Mr. W. Baird, of Pittsburgh, Pa., making a broad and positive statement like this, in regard to carp culture:

It requires no capital, and brings in a large revenue, and there is a market everywhere for the fish. There is no doubt but that more money can be made raising fish, than by raising sheep, cattle, or hogs. One-eighth of an acre devoted to German carp will make a profit of \$800, at the very lowest estimate.

W. BAIRD.

Pittsburgh, Pa.

The same article, word for word, as nearly as I can remember, has been published in some of our agricultural papers; but it seems to me that such assertions are very unwise, to say the least. I should not want to assure anybody that he could make \$800, at the lowest estimate, on bee culture or any other industry, for there are risks to run in launching out into almost any industrial pursuit, and every one must take his own chances. While I am about it, I want to speak of another thing. Of late it is getting to be quite common for a writer to send some communication, word for word, or almost word for word, to different papers. This is surely unwise, and he lays himself

open to the charge of copying as original what has already appeared in print. There is certainly enough to write about, without ever telling the same story over again.

A FAVORABLE REPORT OF THE HEDDON SYSTEM.

We have been trying Heddon's system this year, and it has proved a success. We increased our bees from 16 to 31, and took 1000 lbs. of honey. It has been the worst season we have ever known here—cold and rainy, so the bees could not get out to find the honey, of which there seemed to be plenty. However, we shall not be discouraged as long as they do as well as that, and we have a home market for our honey at 20 cents per lb. We shall try the Heddon system another year; but I can tell you, we have to use the 15-lb. stone to keep the covers on here, and the apiary looks like—a rockery.

G. L. HUBBARD.

Fairview, Lincoln Co., Dakota, Oct. 24, 1885.

SALT AROUND THE ENTRANCES; WILL IT KILL THE GRAPEVINES?

Will not the salt you use and recommend for destroying weeds and grass about bee-hives, in time injure your grapevines as well as other valuable things growing in the bee-yard? I have often thought of salt, but feared the results, so I never used it.

S. T. PETTIT.

Belmont, Ont., Can., Nov. 4, 1885.

Friend P., we have used salt, more or less, in the manner mentioned, for the past three or four years, and I have never discovered that our grapevines were injured in any way. Salt is frequently used as a fertilizer; and though an overdose will kill the crop for the time being, the land soon recovers, and seems to be benefited for a number of years by the application.

A SAD DEATH OF A TWO-YEAR-OLD BOY FROM BEE-STINGS.

The death of that lady in Pennsylvania, from bee-stings, reported in your issue for Oct. 15, page 704, makes me feel like telling you of another similar case that happened not far from here last month. One of my cousins, Mr. Siméon Létourneau, a rich farmer of St. Constant, three miles from here, was keeping bees in box hives. Last spring I sold him 25 Simplicity hives, in which he put all his new swarms, which he put on the ground in his garden. Last September one of his children, a little boy two years old, took a stick and ran after a pig that happened to run in front of the house, and drove it through the garden gate that happened to be open at the time. The pig ran against a hive and shoved it off the platform. The bees flew at the child, and stung him in the face and in the mouth. Mr. Létourneau, hearing the cries of the child, ran to him, took him in his arms, and carried him to the house. In a few minutes the child's face swelled up so that his father became alarmed, and hurried one of his men for the doctor; but as soon as he arrived, the child died in his arms, 25 minutes after he got stung.

J. O. BELLEFLEUR.

Laprairie, P. Q., Canada, Oct. 17, 1885.

Friend B., the story you tell us seems terrible. This little boy was just about the age of Huber, and the poor little fellow was doing the best he knew how, to take care of his father's premises, garden, and bees. I do not know whether any thing could have saved the child's life, under such circumstances. Our readers of the medical profes-

sion have already given us considerable information on the subject, and it is highly important that we should all know all that can be known in regard to the best way of treating such cases. I presume the child was more than usually sensitive to bee-poison, for I have known children when quite small to be stung severely, and yet suffer but comparatively little.

HOW LATE IN THE FALL WILL A QUEEN BE FOUND LAYING, IF NOT STIMULATED BY FEEDING, WITH AN ORDINARY AMOUNT OF PASTURAGE?

I noticed a pretty good colony of blacks, Sept. 21, and there was only one or two combs with brood, and they were nearly all hatched out. No eggs could be seen. I have an Italian *nucleus* I have been building up, and to-day 25 combs are full of brood and eggs. Can I start the black queen to laying this late, by feeding as per directions in your A B C? I will try.

L. H. ROBEY.

Worthington, W. Va., Sept. 25, 1885.

Friend R., old queens, as a rule, stop laying when the honey-flow ceases in the fall, or as soon as the weather is so cold that the bees stop flying. Queens reared late in the fall, however, will usually keep on with brood quite a little later, and the Cyprians and Syrians will often continue breeding so late as to use up the stores they were allowed to have for winter. You could start any queen to laying at any time of year by judicious feeding, and keeping the colony warm.

APICULTURAL STATION AT AURORA, ILLS.

We are glad to note that the above institution has already got at least partially under way, as our friends will notice by the following:—

In June the Department determined to establish an apicultural station; and although this was very late in the season, the Entomologist thought best to make a beginning this year. The location having been selected, all the preliminary work had to be done, and I did not get settled down to work until in July. I have, however, been able to make progress, as will be shown by my report to the Entomologist.

N. W. McLain.

Aurora, Ill., Oct. 28, 1885.

REPORT FROM ALSIKE; HOW A BEGINNER REDEEMED HIMSELF FROM BLASTED HOPES.

I received of you last spring some alsike clover seed, Simpson, spider, and seven-top turnip. The alsike did well. I sowed about three-fourths of an acre, and it is all started nicely. I think by next spring I must get a few pounds more. I did actually raise one spider plant, but it secreted no honey, that I could see, and the Simpson hasn't a vestige. There was not a seed that grew. I tried it in a hotbed and in boxes, in the house, and in the open ground, but not a sign of a plant did I get. The soil may not be right here for those two plants, or else the seed was not good.

I am just starting in bee culture. Last winter I lost all of my bees, and so of course I had to start anew again this spring. I will tell you how I got started. My neighbor, who pulled eleven colonies through, asked me whether I would furnish a hive for every other swarm. As he is a "swarmer" and I am a "hive-maker" (at least I make my own hives and a great many for my neighbors), I told

him I would. I put a lot of hives down for him, and a lot for myself; and as the swarms came off he put one in his hive and one in my hive, and so on, until I got 8 swarms, and I traded him hives for two old ones, and so I have 10 all told. They are all on worker fdn., on the Gallup frame and Simplicity hive, and I think in good condition for winter.

A HOME-MADE EXTRACTOR.

I made an extractor, and just as good as one I could buy for \$10.00 or \$12.00; and all together I received about 150 lbs. of comb and extracted honey, and they are filled for winter since the last extracting. I use 12 frames in the hive, and some of the swarms would scarcely cover two frames. I used a division-board, and built them up on foundation as fast as they could use it. The bees did well on white clover until about harvest; during that time they scarcely did any thing. Then buckwheat soon came in bloom, and they did first rate for about three weeks, and since then they have done very little.

S. B. MILLER.

Amish, Iowa, Oct. 2, 1885.

Friend M., the Simpson and spider plants seem to give a good deal of trouble in the way you mention. With the directions given in the A B C, however, we do not fail to get any amount of plants. But the cheapest way we have found is to take up the seedlings that come up themselves every spring in the open air. In fact, we have never been able to get either of the plants to germinate and grow as well as they do where they come up themselves, out in the lots.

DYSENTERY RESULTING FROM CLOVER HONEY WITH NO POLLEN.

I placed a crate of sections, that had about a handful of bees in it, on a hive; and in doing so I closed the hole in the bottom of the crate, and the bees could not get out. When I took the crate off, the bees were all dead, and the sections wet, and daubed as badly as any that had the dysentery last winter. The honey was new clover honey, and contained no pollen. They were confined about a month.

WM. WITHROW.

Paint Valley, Ohio, Oct. 19, 1885.

Friend W., I hardly think your experiment a fair one. The bees were in an unnatural state, on account of confinement. A handful of bees could hardly maintain the proper temperature to stand confinement safely, as a colony does in winter. I believe, however, we have had several reports of bees that did show something very much like dysentery, where very little pollen was in their stores.

MEXICAN BEES.

Rev. F. B. Ticknor, editor of the *Church Record*, informs me that while on a missionary tour in Western Texas, last summer, in company with another gentleman, they found a colony of what are known here as Mexican bees. They build their comb from the end of a limb, somewhat like a hornet. The men climbed the tree and scoured a piece of the honey, and found it excellent. Have you ever heard of them, and what do you know of them? This is the first time I ever heard of them; and from Mr. Ticknor's description they are more like the Italian than the common black bee.

A CAVE WITH LARGE QUANTITIES OF HONEY.

Some years ago I saw, in Missouri, the crotch of

a tree where the bees had built comb sufficient to hold perhaps 20 pounds of honey the previous year, but the bees had all died during the winter. Mr. Ticknor also says they visited a cave where untold quantities of honey were stored. People living in the neighborhood, by means of an Indian ladder climbed up and secured all they needed for their own use; but it would require considerable labor to get to the part of the cave containing the bulk of the honey.

T. F. MCCAMANT.

San Antonio, Texas, Nov. 5, 1885.

Friend M., we have had some notice of the Mexican bees you speak of, but we know comparatively little about them. If any of our readers have it in their power to give us further particulars in regard to them, we shall be very glad indeed. It would seem funny, would it not, should it happen that we have bees equal to the Italians, in the southern parts of our country?

BASSWOOD PROPAGATION; QUERIES CONCERNING.

Will you please ask some of your subscribers who have tried planting linden-trees, how they succeeded? I put mine out in the spring of 1884, and last winter the rabbits ate them off very close to the ground. Most of them came up again this spring, but they are all very weakly looking. The tallest is only 15 inches high. I hoed and mulched them, but they do not seem to grow fast at all. I think I shall put tarred paper around them this fall, to protect them from the rabbits.

I sowed the alsike clover you sent me, with barley, and I have a pretty fair stand of it on 6 acres. It is the only field of the kind, so far as I know, in this section of the State. My bees have produced, from 6 hives, 250 lbs. in section boxes.

Garrison, Neb., Oct. 22, 1885. C. H. SARGENT.

No wonder your trees look weakly, friend S., if the rabbits ate them off. Perhaps your hoeing hindered their growth, for we have pretty clearly proven that basswoods make a more exuberant growth in a dense thicket, or in the midst of a clump of briars and brush, than when cultivated in the field, in the glare of the sun.

A CARP SWINDLE.

An apparently extensive and mean carp swindle is just being unearthed at Columbus, Ohio, through the exertions of our association. I will forward the particulars as soon as possible. In the mean time, I will say that developments thus far show that parties at Pittsburgh, Pa., and Zanesville, O., are mixed up in the matter. A large number of newspapers have been inveigled into the publication of a very plausible communication, ostensibly in behalf of the U. S. Fish Commission, but directing readers to address the "U. S. Fish Co." (not Commission, observe), Columbus, O. The postmaster at Columbus writes us that there is no such "Co." as the "U. S. Fish Co." at Columbus, and that some swindle is contemplated, as a great many letters have been accumulating there for the bogus "Co." A second letter, dated yesterday, says a woman has finally called for the letters, claiming to represent some man at Zanesville. The postmaster is holding them.

MILTON P. PEIRCE.

Philadelphia, Pa., Nov. 5, 1885.

Thanks, friend P. Our friends will please take notice, so as not to be humbugged by the "U. S. Fish Co."

REMOVING BEES; IS IT NECESSARY TO KEEP THE HIVES IN ABSOLUTE DARKNESS, IF THE CELLAR CAN BE KEPT BETWEEN 40 AND 50°?

Would it be a good idea to keep bees at about 40 or 50°, from the time we have to put them into winter quarters, and in total darkness, without the aid of artificial heat, until time to set them out on summer stands? or would it be better to pack and leave them on summer stands? I thought, by keeping at the degrees above, they would not be subject to the changeableness of the weather we have in this section, and would come out more bright and strong in the spring, but I did not know about the darkness. If kept at 40 or 50° they would not move if they were in the light, would they? or would the idea be any better than the ways we have? J. F. REDD.

Loudonville, O., Nov. 17, 1885.

Friend R., I presume there would be no need of darkening the cellar, providing it could be kept so the temperature would not run above, say, 50 degrees; but I think you will find this is impossible, unless you use ice. Remember, the temperature of the earth itself is 55°, and your cellar will very likely run from 58 to 60° in spite of any thing you can do, unless you get away down into the earth, and cut off communication from overhead. All things considered, I think that, in our locality, I should prefer the chaff hives on their summer stands.

HOW AN A B C SCHOLAR SUCCEEDS BY STARTING WITH ONE SWARM.

Last spring I took a notion to go into the bee business, and thought I would get 20 or 25 colonies to start on; and as I am a poor man I had engaged \$75.00 to buy my bees with. Being anxious to know something about it, I sent for your A B C book, and in it I saw that I was on the wrong road to success; and instead of buying so many I bought one colony, and now I have three good ones, and I am not in debt \$75.00 with interest. I got 80 lbs. of comb honey. I shall Italianize in the spring, if I can afford it. B. B. MESSNER.

Nimisila, Ohio, Oct. 13, 1885.

Friend M., I am very glad indeed to know that our A B C book was the means of saving you some money. I had had some experience in the very matter you speak of, and I knew pretty well whereof I wrote, and I think we are safe in saying that it is, as a rule, very unwise for one to go into any business on a large scale, to start with. If he has been for years a grocer's clerk, it may be well for him to purchase a grocery store in good running order to start with; but even then I believe the chances would be in favor of commencing with a small business and building it up gradually.

WIDE FRAMES STICKING TO BROOD-FRAMES; FEEDING UNDER THE FRAMES.

Having been a good deal troubled the past season by the sticking of the wide frames in the upper stories to the brood-frames in the lower, I have determined to resort to an expedient, recommended for the difficulty by a correspondent of GLEANINGS; viz., laying strips of glazed cloth over the tops of the brood-frames. Will you or some of your correspondents tell me how wide the strips should be, and which side of the cloth to turn down? I have also thought it might be a good plan to use, instead of strips, a single piece occupying the central part, and leaving a margin of one or two inches all round for

the free passage of the bees. Would such a plan be objectionable for any cause?

After trying various plans for feeding I have fallen upon one which is exceedingly simple, and, so far as I have tried it, it is very satisfactory. It is, to have tin pans so shallow that they can be slipped under the frames at the entrance. To facilitate the work of the bees in getting to the syrup in these pans, I fit a small piece of wood to each side of a pan, on the inside. The pans are so shallow there is no danger of a bee drowning, and the strips of wood—beveled on the inner edge—make it easy for the bees to get at the syrup. In feeding, have the syrup in some vessel with a spout—a pitcher does well—and push the pan three parts under the frames; then fill with the syrup, and push the pan entirely into the hive. A few gentle taps apprise them of the presence of their food. J. A. GILL.

Tuscaloosa, Ala., Nov. 10, 1885.

Friend G., your strips of enamel cloth, or sheet of enamel cloth (the latter being the simpler form), should have openings between every pair of brood-frames, to allow the bees free access to the upper story. You will notice, by our back numbers, that the perforated zinc is much used for this purpose, and the slatted honey-boards. The only objection to the enamel cloth is, that, when perforated as closely as it ought to be, it curls up, and the bees in time gnaw the edges, making it liable to tear.—Your idea of shallow tin pans is quite an old one. The objections are, their liability to incite robbing, and the difficulty of pushing the pans under the frames without crushing bees, and making the colony furious. If you allow more space under the frames than $\frac{3}{8}$ inch, the bees will build little pillars of wax to climb up on, so they can readily grasp hold of the bottom-bars of the frames, and these little pillars of wax are right in the way of pushing the shallow feeders in. The plan seems to have been pretty much all abandoned.

FROM 5 TO 31, AND 945 LBS. OF HONEY; HOW THE INCREASE WAS MADE.

I can now give my report for the year 1885, and will say that I am satisfied with the season. I had the blues "awful bad" last spring. I lost 33 colonies out of 38. Of the remaining 5, one was good, one tolerably good, and the other 3 would have made one good colony, and *no more*. This is what I have done since May 18th.

I increased to 31 good colonies, and have taken 945 lbs. of extracted honey. I raised all my queens too. If I had had queens already laying when I needed them, I could have done one-third better. I sold one colony and one frame of brood in June. I see in the bee-papers, that Iowa has failed in her honey crop this year. It has been the best season I ever saw, taking it all through, when I have increased from 5 to 31, and have taken almost 200 lbs. per colony, spring count. Ought I not to be satisfied? My queens were all raised from the Syrian queen I got from you, and they are mated with Cyprio-Italian drones. Others can do as they like, but I shall try the Syrians another year. This is the method I practiced in making my increase this year:

The 10th of May I marked my best colony No. 1, and moved it to a new stand and put a hive just like it in its place, and marked it No. 2. In 10 days I

moved No. 1 again, and the one in its place I numbered 3, and so on till I had moved the old colony 4 times, and made 5 swarms by July 1st. Sometimes I would have to move the old colony every 9 days, to prevent swarming. I would always leave a frame of bees and brood on the old location, unless I wanted to raise queen-cells. After the 1st of July No. 1 got ready to swarm, so I made 4 nuclei from this, and afterward built them up from the 4 previous new swarms, so I made 9 from the one, and got 295 lbs. from the increase.

This way I did with all the old queens as fast as they got strong. I always left 6 frames of hatching brood in the old hive, and always moved the old queen. I got my honey from young swarms after they got to work in the upper story. I had all the empty combs I could use.

Now, friend Root, the Syrian queen I got of you from Neighbor H.'s apiary, her bees are all 3-banded; but about a half of her bees have white rings, and are very distinct from those that have the yellow rings.

6—WILLIAM MALONE, 5—31.

Oakley, Iowa, Oct. 26, 1885.

ANOTHER WHO HAS REDEEMED HIMSELF FROM BLASTED HOPES, AND ALSO FROM TOBACCO.

I have 36 Italian and 10 brown colonies, in your portico and Simplicity hives. I commenced my apiary in 1883. I went into Blasted Hopes and stayed there. I then made a pledge with you for a smoker, on tobacco, and stayed there also. From 24 and no honey in 1883, I went to 36 and 1200 lbs. extracted honey in 1884. I commenced in 1885 with 46 colonies. I had two swarming seasons—in April and in September. I had three seasons of honey-flow.

HORSEMINT HONEY.

In May and June I took from horsemint (sample sent), 900 lbs. extracted, and 350 lbs. comb, in 1-lb. sections. July 1st I cleaned up the extractor and put every thing away. Aug. 3d I found the hives full, either of corn, cotton, or sorghum blooms (sample sent). I took 150 lbs. in 1-lb. sections, and 800 lbs. extracted.

MORNING-GLORY HONEY.

Sept. 6th I cleared away, by taking 700 lbs. extracted and 200 1-lb. sections from morning-glories, or tie-vines (sample sent). Total, 2400 lbs. extracted, 700 lbs. in sections. To-day every frame and section is full, and ready to take off—not an empty section to put in, and nothing to put extracted honey in.

TWO QUEENS, NOT RELATED, IN THE SAME HIVE.

I have a red queen, from Viallon, three years old, and her daughter, three months old, in the same hive, laying right along, and I frequently find them on the same frame; also an Italian queen from Tadlock, two years old, with her daughter, doing the same way.

I noticed one of my best and brightest stocks changing to browns. I went in twice to find the cause, but failed. The third time, on the first frame lifted, there was a black queen, laying right along. I pinched her head off. On examination further, there was my old queen, all right, and is doing service yet. I have sold 2200 lbs. of my honey; comb, 12½c; extracted, 10c.

Oakland, Tex.

JOHN H. MULLIN.

I am very glad, friend M., to find that you are ahead, or, at least, on the right side of both of these departments—Blasted Hopes

and Tobacco.—The honey you call morning-glory is beautiful in body and color, but not first class in flavor, although it is very fair. It is the first report we have ever had, I think, from this plant.—Your sample of horsemint honey is hardly equal to some we have had; but if you get 10 cts. per lb. for it, extracted, I think you are doing well. The other lot I should call a mixture of horsemint and cotton, but there may be some other plant that gives it the horsemint flavor.—The fact you furnish in regard to a black and an Italian queen laying side by side in the same hive, is a valuable one. Of course, they could not be related, and it goes to show that the matter is certainly within our reach, of having queens that will work together without the deadly hostility that has been so long characteristic of queens. Who will be the first one to advertise a race of queens that will not quarrel with each other? It seems to me there is surely an opening for some one, to both fame and fortune.

TAXING BEES; AND ARE BEES TAXABLE PROPERTY?

I should like your opinion on the subject of taxing bees. Last winter I purchased fifty swarms, and the city assessor assessed them at full value, to which I objected, and at the meeting of the Board of Supervisors I laid the case before our city attorney, and he decided them taxable property. I know of no other bees in this State which are taxed, and think they should not be. Will you please enlighten me on the subject?

C. W. RANDALL.

Baraboo, Wis., Nov. 20, 1885.

Friend R., I have several times before expressed my views on this question, and there has been some discussion in the matter; but I hope, if the brethren will excuse me, even where they think differently, for saying that we consider our bees taxable property, and should feel a little hurt and neglected, if the assessor should pass us by. Hives of bees used to be classed with dogs and cats and brush-heaps, and other uncertain property; but it seems to me that, with the present state of progress in bee culture, they should be considered property with other taxable stock. It is true, they are uncertain property, and I should say your assessor had no right to put them in at full value—that is, at the price you offer to sell them. Thus, a hive of bees is worth, say, \$8.00 in the spring of the year; after the honey season is over, may be \$4.00; and perhaps, during the month of December, \$2.50 might be all you could sell them for. Therefore I would suggest that he rate good strong stocks, hive and all, at about \$3.00 to \$3.50. Weak colonies, or those with hybrid queens, etc., rate at about \$2.00 to \$2.50. In localities where bees sell for less prices, \$1.00 per colony might be a fair valuation. We want to do in this matter what is right in the eyes of the law; or, if you choose, what is right before God; and I confess I should feel better about asking God's blessing on the duties of the day, after having paid taxes on my bees, than if I had succeeded by so representing the matter that I got clear of paying taxes. If you don't think as I do about this, I am quite willing you should act according to the dictations of your own conscience. I only wish to have you know how I feel about it.

A GOOD REPORT OF THE BATCHELDOR DRONE-TRAP,
FEEDING BEES IN WINTER.

In looking over GLEANINGS for Nov. 1, page 756, I saw a report of friend Batcheldor's drone-trap. My experience with two the past season has been very satisfactory. We have caged queens four times, one of them being a clipped queen. It has never failed to cage a queen, that I know of, when it was properly adjusted, and I now exclaim, "No more trouble in swarming; no more hurrying, for fear that the colony will go to the woods; no sawing of a neighbor's trees, or treading down grass." But when I am told that the bees are swarming, and as soon as they begin to cluster (which will be on the trap), I place them at the entrance of the new hive, release the queen, and when the bees are nearly all in I give the hive a new location, and place the trap on the same, which will prevent them from leaving the hive, which they might do if it were not for the trap.

A TYPOGRAPHICAL ERROR.

Page 755, GLEANINGS, in speaking of feeding bees in cold weather, you say there is a danger of the queen taking wing. Why is she more liable to leave the combs in cold weather than warm, as we have rarely known them to leave them in warm weather? With the feeder that we use there is no danger of the queens leaving the comb, or of the bees being drowned. I also notice, on page 748, an item in regard to a bad odor about the hives in the fall of the year. If it were here in New Hampshire, I should call it the goldenrod.

A. H. HARVEY.

Keene, N. H., Nov. 19, 1885.

Friend H., you have got hold of a very bad typographical error. I had no thought of saying that the *queen* took wing in cold weather, or under any other circumstances. It should have read that the *bees* take wing. The blunder escaped my eye, and also the eye of two proof-readers.

UNTESTED QUEENS FROM THE SOUTH IN THE
WINTER TIME.

I should like to take advantage of your very clever offer in GLEANINGS, of a free advertisement for Southern queen-raisers. If you will, you may announce that I will furnish Italian queens by the half-dozen at 80 cents each; or single queens, at 90 cents. What about guaranteeing safe arrival? I will leave it to you to insert or not. To the Southern States it would be safe to guarantee safe arrival; but to the colder States it seems to me that, in case a queen died, another one at half-price would be fair, or charge \$1.00 in the first place. I will simply state what I wish to accomplish, and let you insert what, in your judgment, you think best. I shall be more anxious to get my name before the bee-keepers than to make money; still, I do not want to lose any. I have no bees but Italians. The young queens will be raised from a choice, select, tested queen. I have over 20 colonies and nuclei, but only a dozen are run for queen-rearing. Please announce *only* what you think best.

L. W. GRAY.
Orlando, Fla., Nov. 21, 1885.

Friend G., I think it would be better for you to make the arrangement directly with your customers, although I will suggest, if you wish. I think you had better keep the price at \$1.00 in the winter time, and replace where the queens are evidently dead from want of care in putting them up. This, of

course, will call for a little charity on your part, as well as on the part of the friends who receive them, in deciding where the fault is. We received some queens a few days ago, when it was quite cold. They were put in wooden cages, without any metal except the wire cloth, and were packed in several folds of soft flannel. Not a queen nor bee was dead.

Friend G., the important matter is, Have you some untested queens all ready to mail now? You do not say you have or have not; but we want somebody who has the queens all ready to ship, and we want them to advertise in this way; like this, for instance:

Ready to Mail.—I have 17 young queens that have just commenced to lay, which I will ship promptly at \$1.00 each. Safe arrival guaranteed, if they are uncaged and handled according to the printed instructions accompanying the package.

JOHN JONES.

The printed instructions accompanying the package should be something like this:

Keep this package out of the frost as much as possible. Unroll it in a moderately warm room; and if the bees and queen seem chilled, leave them several hours where the thermometer stands at 70 degrees, before you decide they are dead. When they begin to move, a little warm honey might be given them on the point of a pin; but don't daub the poor little fellows, whatever you do. When they are lively, introduce them according to the usual method.

Halloo! here is one name already, and it is not from away down south either:

Please insert my name in GLEANINGS, for sending queens during the winter months as you offer to do free of charge. I have a number of untested queens on hand, and can fill orders by return mail.

Mechanistown, Md.

SIMON P. RODDY.

And still another:

I have 18 untested queens which any one can have at \$1.00 each, by return mail.

Stateburg, Sumter Co., S. C.

W. J. ELLISON.

SOME KIND WORDS FROM FRIEND PARSHALL, AFTER HE GOT OVER HIS HURT (SEE P. 347).

I have been wanting to write for a long time, mostly to thank several of the bee-brethren, and some of the sisters, who have written to me, sympathizing with me in my loss and bad luck. There is one, Sarah J. Axtell, Roseville, Ill.; H. J. Hancock, of Siloam Springs, Ark.; Mr. Hughes, of Illinois, and a brother at New Orleans. I thank some for sending queens and others offering me bees. Some of their addresses I have lost. God is the only one who knows how my heart swelled with gratitude, and how I say, "God bless them." I want them all to feel that I appreciate their offers to me, just the same as though I had accepted them. I was so badly crippled that I could not do a lick of work till in July, and this is my first writing. It was my "write" arm and hand that got terribly mangled. I can not shut my hand yet.

MY REPORT.

I commenced the season with seven colonies—six good, one very weak. I increased to 35 by natural swarming; have taken 1500 lbs. of extracted and 600 lbs. comb honey. I am selling my honey at home for 10 cts. for extracted and 15 cts. for comb. I have sold the most of it. My bees all have lots of winter stores. God has wonderfully blessed me,

and my prayer is that he may bless you all, when I think of the many kind letters I received. I know I had many prayers. It leads me to say, "O Lord, bless all of those good people." JAMES PARSHALL.

Skidmore, Mo., Oct. 25, 1885.

Friend P., we can unite with you in saying, "Let God be praised that he has enabled you to regain your strength so you can write at all." We are very glad to know that you have been prospered in bee-keeping once more. We as bee-keepers are always glad to extend a helping hand to those who have a disposition to help themselves, and you have shown this pretty well.

KIND WORDS IN REGARD TO THE POTATO-BOOK.

After reading your account of your visit to Terry, I felt that I could not refrain from urging you to give us a full account of his system of farming and his buildings; and could you not also induce D. E. Fenn to tell us how he manages to get an average of 37 bushels of wheat per acre, as mentioned in the potato-book? Give us another book on Terry's farming, I say.

EDGAR HUSBAND.

Cairngorm, Ont., Can., Sept. 29, 1884.

Friend H., Mr. Terry is now at work on another book for me, to be a sort of supplement or sequel to the potato-book. It is to be in regard to the humane treatment of farm stock during winter, considered from a pecuniary as well as moral standpoint. Mr. D. E. Fenn gets his large yields of wheat by the use of phosphate. Mr. Terry does not have any success with phosphate, as you know; but Mr. Fenn is an enthusiast in the matter, and yet both are good farmers. The difference in the soil may have something to do with the different results they get.

TIERING UP.

What is your opinion of tiering up the hives in the cellar in this wise? Place the strongest colonies at the bottom, one in each tier, with only a bottom-board, then a cover of wire gauze, over which two thickness of burlap or other porous material, then another hive in like manner, until four or five high, placing the weaker ones at the top, with good ventilation at the top, and leaving the entrance open; and for a "playground," put wedges between the hives, to project out to hold up said burlap. The object of said tiering up is to produce an upward draft and consequent good ventilation.

Glenn, Kan., Sept. 14, 1885.

W. B. THORNE.

Friend T., there is no objection to the plan you mention, that I know of, except that of jarring the hives in handling. When we wintered in a bee-house we preferred to have shelves, so that taking down one hive did not disturb another. I think your burlap had better be drawn back so as to expose the back end of frames containing very strong colonies, or they might be too warm. A strong colony fastened in its hive with wire cloth is very apt to cover the ventilators, and smother, unless the ventilating spaces are very large.

STRANGE FREAK OF A QUEEN-BEE.

Yesterday, after I had finished extracting some combs taken from hives contracted for winter, I accidentally left the extractor so the bees could get

at it, which they soon did. About 3 P. M. I went to remove it to the honey-house, when, among the numbers of bees, I found a queen-bee, black. Can you explain what she was doing there? I thought that the queen never left the hive, except when mating, or else when she issued forth with a swarm. I put her in a cage, and hung her in a hive after showing her to several present, who were as much astonished as myself. If you can enlighten me on the subject, I should be pleased to hear from you.

Parkersville, Pa., Oct. 24, 1885. J. P. TAYLOR.

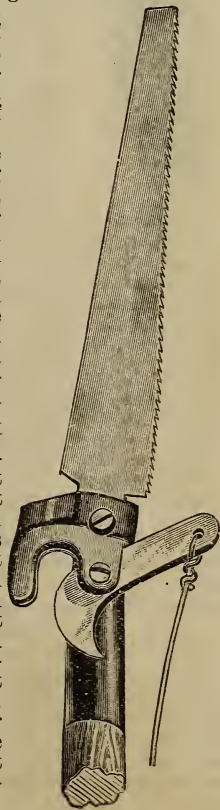
Friend T., what you state is a very unusual thing indeed. You are sure, I presume, you did not get hold of a shiny black robber-bee, with an elongated body, and call it a queen. If the bees had been very long at work at that extractor, the effect might have been to break up a weak colony; and the bees, queen and all, might have been attracted to the extractor by the roar of the robbers.

A SAW AND PRUNING-SHEARS COMBINED.

SOMETHING TO CUT OFF LIMBS, AND DO IT EASILY.

A FEW days ago Mr. Gray had some kind of a machine on the end of a pole; and as some of our basswood-trees along the sidewalk near the store were getting to be rather luxu-

riant in foliage, he reached up and cut off some of the limbs which were not wanted, and as easily as you would cut off a piece of cheese with a knife. The picture alongside of what I am writing explains how he did it, only you are to imagine the implement on the end of a pole from six to twelve feet long, as may be desired; and the wire which you see is attached to a hand lever to it in such a way as to give it a powerful purchase. I told him the machine would be ahead of a buzz-saw for cutting up stove-wood, as you can not carry a buzz-saw out into the woods, but you can easily take this along, for it is not much heavier than an ordinary ax. You will find his advertisement in another place, and he will send you a circular, telling all about it, if you write him. The price of the pruner is \$2.00, and it can be sent by mail, without the pole, for 40 cts. extra for postage.

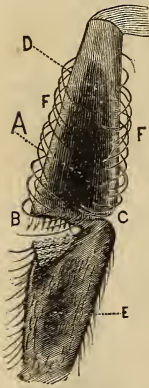


THE PÖLLEN-BASKET.

WHERE IS IT, AND WHAT IS IT LIKE?

I VENTURE to take up this subject, because I think it is so generally misapprehended. While many have an indefinite idea of what a pollen-basket should be, and much less know where it is situated, *very* few can form a perfectly correct idea of what it is like. I have been for some time trying to get a good drawing of the pollen-basket — one that is correct. While I do not claim to have made an accurate representation, yet in some particulars I think it is ahead of any thing else.

After our engraver had submitted several drawings to me without success, I made several myself before I could get any thing that at all suited me. It is a difficult matter to get the engravers to understand exactly what features we want made prominent, at the same time preserving all the proportions. I therefore have had to tax my ingenuity with the pencil several times. Below is a portion of the hind leg, with the foot (not shown) toward the base. The letters F, B, C, and



THE PÖLLEN-BASKET.

F, inclose what is known as the pollen-basket. In the central portion, marked by D and A, is a depression that is dishd out, somewhat like a spoon. Around this cavity is a rim of hairs which form a kind of inclosure. This rim of hairs, together with the depression, makes what is termed the pollen-basket, though it is a little strange why it should have been called a basket. I presume, however, the name was given to it because it conveyed the idea much better than any thing else. It is in this that the bee packs the pollen which he collects. As far as I have been able to ascertain by observation, the bee always puts the pollen in this part of the leg, and never anywhere else. It would be presumption for me to differ with Prof. Cook on this point; so I will say that, in all probability, I misapprehend his meaning (see his Manual, page 88). He says, "On the outside of the posterior tibia and basal tarsus is a cavity made more deep by its rim of hairs, known as the pollen-basket." I understand this to mean, that the pollen-basket is situated on both sides of the joint C; that is, that the pollen may be parted both in the upper and lower segments, as at A and E. Since my attention has been called to this matter I have watched the bees gathering pollen repeatedly at several different times, and I have never yet seen them deposit pollen anywhere else than in the portion marked by F, B, C, F.

HOW THE BEES PACK THE POLLEN ON THE HIND LEGS.

If I am correct, no one has yet told us just how the bee deposits pollen on this hind leg, further than that it is by a sort of sleight of hand with the fore and middle leg, in conjunction with the tongue. We know, or we think we know, how the bee separates the pollen from the tongue and the front legs by means of the little flute mentioned in the text-books. The question now remains, How does the bee get the pollen from the front leg to the

hind leg, and exactly how does the middle leg transfer the pollen to the baskets? I have often watched the movement, but it is so instantaneous that my eye was unable to catch the exact process. If the bee only *would* do it slowly, so we curious mortals might see! but, no; he does it as though he had acquired this wonderful feat by long practice — or, rather, by instinct.

There is another obstacle in the way; namely, that the bee won't remain still long enough — as though modesty or bashfulness forbade him the privilege of "showing off." I have watched one tugging at a pellet of wax, and, after placing it under his chin, as if by magic deposit it in the basket; and when, again, I thought he would try it again, lo and behold! he would soar away, leaving me lamenting that the precious little secret had not been revealed.

To one who has a love for studying God's wondrous works of creation, it will be found eminently interesting. I know, dear friends, that the settlement of this and questions of a similar nature is not of vital importance; but, does it not in itself, as we observe the wonderful symmetry and plan in a thing so very small, bring us near the Maker?

Perhaps I should state, that only a small magnifying-glass is necessary to look at this pollen-basket — such a glass as I speak of just below, in answer to Mrs. Chaddock. ERNEST R. ROOT.

MRS. CHADDOCK ASKS SOME QUESTIONS FOR ERNEST TO ANSWER; MAGNIFYING-GLASSES, ETC.

I am very much interested in Ernest's microscopic work, and I wish he would examine the eye of the bee, and make a drawing of it; tell where it is situated, etc. I have only a small magnifier (bought of A. J. Root, for 35 cts.), and with it I have not been able to find any thing that looks like eyes. I turned the bee over, and looked at it up and down, around and about, but not a single eye could I see, unless those two little round knobs on top of the head are eyes. They look like immature shoe-buttons, and seem to be in an unhandy place for eyes. Then there are some more little knobs where the feelers start out. They are fast on the feelers, and move with them, and so I suppose they could not be the eyes. It would be a very safe place for them, as the feelers could always keep them from getting knocked out or off; and after he has made the eye plain, I wish he would give us the ear, if they have any ears. MAHALA B. CHADDOCK.

Vermont, Ill.

Here is Ernest's reply:

Thanks, Mrs. C., for your kind interest in the work that I have begun. I shall be most happy to give you drawings of the bee's eyes, and other microscopic organs of the bee in our future issues. As I have all the needed facilities for this work in the way of a good microscope and lenses, as well as dissecting-tools, I can verify old discoveries, and possibly add something new in this department of science. The 35-cent magnifying-glasses give very satisfactory results, though not quite equal to a Coddington of same power, in quality of work. You must not imagine that a high-priced microscope or lens is essential to gain a correct idea of the various functions of the bee. In my work I use a small magnifying-glass much more than my high-priced instrument, though the latter in some cases is indispensable. The apparatus necessary for dissecting a bee may be simple and inexpensive. You need,

first, a glass of about 10 diameters magnifying power (like one you have), a pair of fine-pointed tweezers, scissors suitable for clipping queens' wings, a needle mounted in the end of an old pen-holder, and a little ether or chloroform with which to stupefy a bee while "cuttin' 'im up." You now have a very fair outfit with which to begin. No doubt you will find pleasure and profit in this work; that is, providing you do have such a thing as spare time during long winter evenings.

There is one essential that I almost forgot, which is, that you must have a good stock of patience. If your eyes or back aches, don't complain.

ERNEST R. ROOT.

NOTES AND QUERIES.

REPORT OF AN A B C SCHOLAR.

I PURCHASED my first stand of bees in the spring of 1884. I increased to three stands, and took 60 lbs. of honey the first year. Last winter I sent for the A B C book and GLEANINGS.

I began last spring with two stands; transferred them to Langstroth frames, and took 190 lbs. of honey—140 lbs. in sections, and 50 lbs. in brood-frames. I increased to 10 stands, and all in good condition for winter. It has been called a poor season by the old-style box-hive bee-keepers, not one of whom has obtained half as many new swarms, or half as much honey from the same number in the spring. I attribute my success the past season to a thorough, earnest study of GLEANINGS and the A B C.

A. C. BUGBEE.

Loehiel, Benton Co., Ind.

My two hives yielded \$36.00 worth of honey, and have plenty to winter on. They cost \$17.00—a good investment on that amount of money in 7 months.

Harlan, Iowa, Oct. 9, 1885. W. M. BOMBERGER.

Bees are a failure this year. Only a few colonies made any surplus. I have about 80 colonies, and perhaps half of them will not winter without feed.

Washington, Pa. L. W. VANKIRK.

SOUR SMELL—WHAT CAUSES IT.

I have investigated into the cause of that sour smell about the hives, mentioned by friend Seofield, and find it comes from the blue aster.

Ridgeway, N. Y. D. C. SULLIVAN.

A QUEEN THAT MEASURES FIVE CELLS.

I raised one queen this year that measured five cells long; that is, she would reach or cover five cells. Who can beat it? She was a Syrian.

Oakley, Iowa, Oct. 26, 1885. WM. MALONE.

ALFALFA AS A HONEY-PLANT.

Almost all the honey made out in Tulare Co. is made from alfalfa. That seems to be the main crop for honey this season. I like California pretty well, but it is terribly hot in the summer.

Hanford, Cal., Sept. 8, 1885. M. J. TWINING.

This has been the poorest year ever known in this section for bees. But few colonies will winter without feeding. My spring count was three; increased to 7; fed 40 lbs. of granulated sugar. At present I have but two colonies and two nuclei, which I intend to take to Florida this fall, as described in GLEANINGS of Feb. 1, 1885, page 97.

Harrisonville, N. J., Oct. 19, 1885. J. D. COLES.

REPORT FROM OREGON.

I will give you our report from Oregon, or I should say, perhaps, the northern part of the Willamette Valley. Bees, we think, have done tolerably well. Reports of 50, 75, and 100 lbs. of surplus are made, and bees are booming now. The fir-trees in many places are dripping with honey-dew. We have warm days, and have had for some time.

Newberg, Or., Oct. 23, 1885. CYRUS E. HARKINS.

FROM 4 TO 11, AND 277 LBS. OF HONEY.

Bees generally did well. They did but little on buckwheat or fall flowers, except on boneset. I started in last fall with 5 colonies on summer stand, in chaff, and came through with four—one very weak. I have 11 now. I took 277 lbs. of comb honey. Thanks for your good words in GLEANINGS. If it were not for the assistance we beginners get through the pages of bee-journals, bee-keeping would be up-hill work.

GEO. SPITLER, 4—11.

Mosiertown, Crawford Co., Pa.

THE SIMPLICITY VS. THE GOLDEN HIVE; 175 LBS. OF HONEY FROM ONE SWARM.

I had four stands of common bees in Simplicity hives last spring; sold \$20.00 of bees and honey, and have 100 lbs. of honey and five stands in good condition for winter. My first swarm, on June 3d, made about 175 lbs. in 1-lb. sections. About 50 lbs. of it was the nicest linn I ever saw. But bees do not fill out sections with it as with some honey I have seen from Michigan. Is it the bees, or does the honey come in too slowly? The "Golden" hive had quite a run last year, but it makes them sick to mention "Golden" now. Several will discard them, and use your Simplicity.

G. F. AYRES.

Atherton, Ind., Nov. 11, 1885.

MRS. COTTON, AGAIN.

MORE \$20.00 COLONIES CONTAINING NO QUEENS.

I HAVE been humbugged by Mrs. Cotton, of West Gorham, Maine. I sent her \$20.00, and she sent me a Controllable hive and a few bees, but no queen. I wrote her about it, and she has agreed to send me another colony, in the spring. I made a few of her hives, and have five swarms in those hives now, but I don't like the hives, and don't think I shall make any more of them. I bought five colonies of Prof. A. J. Cook, of Lansing, pure Italians, *very fine*, but they were Gallup chaff hives, and I don't like this hive. I think I shall adopt the Heddon or the Simplicity hive.

HIRAM ADAMS.

Port Austin, Huron Co., Mich., Nov. 23, 1885.

Our friends will notice that this is still another complaint of no queen in the colony of bees, even after the purchaser paid the enormous price of \$20.00 for it. The price would not be so very bad if the colony were sent very early in the spring; but Mrs. Cotton, I believe, does not fill orders until along in the summer, when bees are comparatively cheap everywhere else. The number of complaints that come in regard to these high-priced colonies being queenless, precludes the possibility of its being a mistake; and her singular directions, not to open the hive for a certain number of days, also seem to indicate it to be her regular way of doing business.

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, DEC. 1, 1885.

He that hath the Son hath life; and he that hath not the Son of God hath not life.—I. JOHN 5: 12.

STANLEY'S AUTOMATIC REVERSING EXTRACTOR.

FRIEND STANLEY informs us that one of these for taking four L. frames will be on exhibition at the convention in Detroit.

DISCOUNT ON GOODS FOR NEXT SEASON'S USE.

As trade is still comparatively dull, we extend our offer until Dec. 15, or an extra 5 per cent on every thing you order now, on goods to be used next season.

THE CONVENTION AT DETROIT.

I EXPECT to be on hand to assist all I can, on the morning of Dec. 9, the very day I am 46 years old, Providence permitting; and may the Lord be praised for the 46 years of life he has given me already!

THE MAN WHO NEVER LOSES BEES IN WINTER.

We are glad to know that friend Boardman will be at the Detroit convention, and we expect to have a good time in making him tell all about how he fixes his bees for winter. See card below, received just as we go to press:

The bees are all safely stored for winter. I finished setting them in day before yesterday—550 colonies in four repositories, two bee-houses, and two cellars. Now I am all ready to go to Detroit to meet and exchange notes with my brother bee-keepers.
H. R. BOARDMAN.

East Townsend, O., Nov. 27, 1885.

A WHEELBARROW TO MOVE CHAFF HIVES.

J. A. ALTHOUSE, New Harmony, Ind., sends us a model of a wheelbarrow, made to catch up chaff hives so they can be conveniently lifted and carried anywhere, no matter how much honey they contain. I should think the arrangement might prove a convenience to those who practice moving hives after a swarm is cast. The same wheelbarrow has a box that can be quickly put in place, so it will answer all ordinary purposes of a wheelbarrow. Friend A. will doubtless furnish particulars on application.

REDUCTION IN THE PRICE OF THE MUTH HONEY-JARS.

We are pleased to note that friend Muth has come down a peg on his prices as well as everybody else, and we can now furnish any of his honey-jars at 5 per cent discount on single-gross lots. For two or more gross, 10 per cent. These very close prices can be given only with cash with order, or from some man whose name is good for the cash promptly whenever we see it. We have such men on our books, quite a few of them, and we thank God for them when we look at their names. The jars are all to be shipped from Cincinnati. If you want them shipped with other goods, we shall have to add freight from Cincinnati, which, however, is but a trifle.

DON'T LEAVE YOUR BASSWOOD LUMBER TOO LONG IN THE LOG.

If you want to make nice white sections, cut your logs, draw them at once to the mill and have them sawed into plank, and then have the plank stacked up as described in the A B C book; but have the lumber lie lower at one end than at the other, so the rain will run down and off at one end. This is especially important in the winter time. A covering of boards over your pile of plank will pay the expense. Now, in spite of all we can say about this matter, a good many of our farming friends will persist in letting the logs lie, say a month or two, and during that time the white basswood becomes dark, or of a sort of yellowish or smoky color. We have just now been working up such a lot of lumber, making about 50,000 sections. The basswood, when cut, was first quality; but owing to this one little item of neglect, we offer the whole lot at a discount of one-fourth. They are too nice for culls, and hardly fit for first quality. If any one wants a bargain on such sections, now is his chance.

THE OUTLOOK FOR 1886.

No one knows just what the honey business will be next year, any more than we know what the coming winter will be; but, of course, it behooves every man who wants to be considered progressive and straight, to be prepared for the worst. Now, instead of presuming that this winter will be a mild one, let us make preparations for just such a winter as the last, or even a worse one. In regard to business for another year, let us be prudent, and use economy. I do not believe it is well to get into debt very much. A little money ahead, ready for such an emergency, or for any change that may offer for a good investment, is always wise. A man's powers, both of mind and body, are crippled when he is all the time crowded, and short of means. Make expenses come a little below the income, even if it takes almost a leg to fetch it. When you once get into the habit of saving a little every week or every month, you can do it just as easily, and with a good deal more satisfaction, than where you get a little more in debt every week or every month; and one who is hopelessly in debt is hopelessly a cripple, and a cripple all his days.

CALIFORNIA HONEY.

We have just received a carload of honey from friend S. G. Miller, of Capistrano, Cal., which I believe is the finest honey, in every respect, that I have ever before come across. Of course, this is my taste; and tastes, you know differ. Well, with all its other good qualities this honey does not candy, even when exposed to the most severe freezing. You can fill large bottles and jars, and they will be just as limpid and transparent after standing a month in the window as when first put into the bottles. The honey is very thick and heavy. It comes in cans holding 58 lbs. each, and the price will be, can included, 9 cts. per lb. Two cans are crated in a strong box; and if you take one of these whole original packages you can have it for 8½ cents, or an even \$9.75. We also put it up in 5-lb. screw-top cans at 10 cts. per lb., can included. We also have it put in Muth's dime honey-jars, for sample package, to let people taste. It seems to me it should have an immense sale at these figures. We will send a very small quantity—enough to give you a taste—by mail, free of charge,

to any who may care for it. Dime jars, packed 10 in a case, put up expressly to be retailed on ten-cent counters, will be furnished, box and all, for 75 cts. We paid for the freight alone on this carload, \$581.64.

NUMBER OF SUBSCRIBERS AT THE CLOSE OF THE YEAR.

It is, this first day of December, just 6098. May be some of the friends would like to know what we did with the five or six hundred reported a month ago. Well, to tell the truth, a subscription clerk had by some means got it wrong. The girls in the bindery first declared it was too high. When the pressman verified it, we had the names all counted up one by one, with the above showing. To save this laborious counting, it has been our custom to add new subscriptions and subtract expirations from month to month. The above looks as if we ought to count up a little oftener.

REPORT OF OUR QUEEN BUSINESS FOR 1885.

The following figures are given because they furnish some useful facts in regard to the demand and supply of queens, and not because we want to parade the magnitude of our business. It will be noted, that the demand for untested queens far exceeds all other kinds together. We have purchased, during the past season, queens as follows:

Untested, 2347; tested, 70; hybrids, 138; blacks, 21; imported from Italy, 130; Carniolans from Frank Benton, 2. We have sent by mail the past season, untested queens, 1950; tested, 165; select tested, 118; hybrids, 113; blacks, 28; imported, 61. We have sent by express, untested queens, 643; tested, 98; select tested, 48; hybrids, 29; imported, 22; pounds of bees, 526 lbs. 5 oz.; full colonies, 11; frames of brood, 83; two-frame nuclei, 78; three-frame nuclei, 10. We started in the beginning of the season with 186 colonies. We have now in winter quarters, 188 colonies. We have paid in cash for bees and queens, just \$2505.07, and have received, all together, about \$6252.00. Services paid to apiarist, about \$500.00. During the past year one man has managed the apiary, with but little assistance; so little, in fact, that we have not thought it worth mentioning; but, of course, he had every thing in the shape of implements right at hand. One or more girls in the factory were kept busy preparing queen-cages, boxes for pounds of bees, and nucleus hives; and every thing he needed was always ready at hand. An express clerk also took charge of packages just as soon as the bees were inclosed. One or more clerks in the office attended to all correspondence, and mailed all queens as fast as he brought them in from the apiary. With very few exceptions, queens of every grade went off, the season through, within a few hours after the letter containing the order was opened. This one fact alone has had very much to do in giving us the largest business in queens ever given to any one establishment in the world.

CONVENTION NOTICES.

The Tuscarawas County Bee-Keepers' Association will meet at Port Washington, O., Thursday, Dec. 10, 1885. GEO. F. WILLIAMS, Sec.
New Philadelphia, O., Nov. 24, 1885.

The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., Jan. 21, 1886. R. H. HOLMES, Sec.
Shoreham, Vt., Nov. 20, 1885.

KIND WORDS FROM OUR CUSTOMERS.

The *ten* grapevines are very nice ones, and cheap at \$1.27 by mail. May our Lord bless you for your kindness, and repay you a thousand fold!

Mrs. M. BREWSTER.
Pequannock, N. J., Nov. 3, 1885.

GLEANINGS AND ITS EDITOR.

I never intend to be without GLEANINGS again as long as A. I. Root controls it, because he is "tried and true," and I believe does right for the sake of doing right, which spirit always wins.

L. M. HOWARD.
Coushatta, La., Oct. 21, 1885.

A NO 1 SMOKER.

The smoker came to hand in fine order, and it is A No. 1. Accept thanks for the same; also the 22 cts. postage, which find inclosed, as per my agreement. When I wrote you, I expected only a small affair; but I must say I am very agreeably surprised.

R. T. BARBER.
Carroll, Ind., Aug. 29, 1885.

THE POTATO-BOOK TIPTOP.

I want you to send me that farm-book—I can't remember the name or price. It is by Peter Henderson. I think the name is, "How a Farm can Pay." As the fellow says, "Send it along, anyhow." The Potato-Book is tiptop.

CHAS. S. LARKIN.
Raceland, La., Oct. 30, 1885.

OUR CARPET-SWEEPER.

I received the goods in due time, and all right. The carpet-sweeper works to a charm, and I think it cheap at the price you billed it. The bushel box is well made, and I think I shall invest in perhaps 100 or more before next season. The counter goods give full value for the money.

C. M. TRUNKY.
Vernon, O., Nov. 27, 1885.

BETTER THAN EXPECTED.

I shall send for an extractor soon, and perhaps other goods, and then the 12-cent balance will come in all right. I commend your systematic care in small matters. All the goods you have sent have been better than I expected, in view of the low prices; they have arrived promptly, and in perfect order.

G. A. FARRAND.
Rockport, O., Nov. 9, 1885.

A GOOD REPORT OF A QUEEN AND ½-LB. OF BEES.

My queen and ½-lb. of bees came all right, probably not half a dozen bees dead. I can hardly tell how they came so quick. The order left here at 12 on Monday, and the bees came at 4 on Wednesday. I turned them in on three combs of brood, in all stages, from eggs to hatching, and I think the queen commenced laying the next day. I have given them another frame of brood, and they have grown to be quite a colony, and are working finely. I put some of her eggs in a queenless colony, and have queen-cells started. I want to raise three queens yet this fall, which I can do easily enough, but they may do no good, on account of the scarcity of drones. There are about 18 drones in the hive where the cells are building, and I think that is all the drones I have in 44 hives.

T. BROWN.
Cloverdale, Ind., Sept. 3, 1885.

EATING HONEY; GOOD THINGS IN GLEANINGS.

I have been eating honey all summer. The question is, Where do I get it? I answer that I have been gleaning it from GLEANINGS. I have often thought that I ought to return a word of thanks for the many good things you have published in your journal, but knowing my inability to do so in a proper manner I have deferred it until this time, and I will conclude by saying that, without flattering, I do think I never had any thing in the house, in the way of a paper, that has given me the same amount of pleasure as GLEANINGS has. It is not only pleasant to read the many nice and good things it contains, but also profitable, if we will only adopt them—not so much in a temporal, but in a spiritual sense. I heartily indorse your ideas of religion, that you do not believe in a mere profession, but in practicing it out in our lives; or, as James says, to show our faith by our works. Do not weary in your good work, for you shall have your reward.

PETER BELTZ.
Greensburg, Pa., Oct. 14, 1885.

Bee-Hives, Sections, FOUNDATION, ETC.

WITH a capacity of 7000 square feet of floor, we claim the best facilities for furnishing Supplies, in the southeast. **OUR NEW FACTORY IS EQUIPPED** with the best and latest improved Machinery, which enables us to furnish our goods "up to the times," and will furnish all kinds at very reasonable prices. Parties needing Supplies would do well to see our Price List before buying.

S. VALENTINE & SON,
21tfd HAGERSTOWN, MD.

FOR SALE.

400 COLONIES OF BEES.

Will exchange for good horses and mules.

ANTHONY OPP,
22tfdb Helena, Phillips Co., Ark.

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." 1tfd

LOOK HERE!

To introduce my strain of pure bright Italians, equal to any in the United States, I will offer 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.

22tfdb **THOMAS HORN,**
Box 691, Sherburne, Chen. Co., N. Y.

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

Wanted. Situation with some bee-keeper. Have had three years' experience.
22tfdb **W. C. WRIGHT, Reagan, Falls Co., Tex.**

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.—To exchange one-half bushel of extra fine white clover seed for alsike clover seed. 19tfd **M. A. GILL, Viola, Rich'd Co., Wis.**

WANTED.—In exchange for Italian bees, 40 acres of good hammock land on Manatee River, Florida, suitable for all tropical fruits, sugarcane, vegetables, etc.; good bee country, no apiary within miles. Address **F. SCHINDEL,** 22tfd Fort Ogdan, Man. Co., Fla.

WANTED.—To exchange supplies at low rates, for Partridge Cochin fowls.
23 **W. K. LEWIS, Dry Ridge, Ky.**

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 Twichell, 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.

Xmas, 50 SCROLL-SAW DESIGNS, full size, for working easels, brackets, etc. 10c.
19tfd **J. L. HYDE, POMFRET LANDING, CONN.**

Recent Additions to the Counter Store.

FIVE-CENT COUNTER.

Postage. [Pr. of 10, of 100
13 | SOAP, GERMAN LAUNDEY in ¼-lb. bars... | 45 | 4 40
This soap, for general purposes, is probably the best for the money of any thing in the market. A box of 100 bars, at \$4.40, will be found a saving investment in almost any family.
9 | DOOR-LATCH. | 45 | 4 00
This is a neat japanned thumb-latch, with stop to fasten the door when you wish to, and yet the whole arrangement complete is sold for only 5 cents.
8 | BLACKING for boots and shoes | 45 | 4 00

An extra nice article, put up as shown. This suits me exactly, for I can black my boots after I get my Sunday trousers on; and I can do it, also, without the necessity of washing my hands afterward. Good-sized boxes, and all for only a nickel.



TEN-CENT COUNTER.

2 | PANEL CEROMOS | 85 | 8 00
We have been unable for a year or two to get these beautiful pictures, but now have in stock some very fine ones, 3½ wide by 21 inches long. They are mostly flowers, printed on a dark background; and as a work of art I should call them wonderful for so small a sum of money.
6 | PITCHERS, CHINA; 3¼ inches high..... | 85 | 8 00
Wonderfully pretty, for only a dime. Three different patterns.
26 | SIEVES, GARDEN. Made of strong wire | 85 | 8 00
Three mesh to the inch. For gardeners' use, for sifting dirt, coal, or coal ashes, etc.

FIFTEEN-CENT COUNTER.

3 | PAPER-WEIGHT, GLASS | 1 35 | 12 00
Beautifully ground in faces containing, inside of the glass, an animal, alive and kicking every time you take it in your hands. We should have considered this quite reasonable at three times 15 cents.

FIFTY-CENT COUNTER.

10 | MUSIC-BOX | 4 50 | 43 00
I have long wanted to put these on our counters, but never have been able to get them so they could be retailed at an even half-dollar. At this price I think them about as pretty a Christmas present as you can well get for any child who loves music. They are to be turned by a crank, and play but one tune.

TWO-DOLLAR COUNTER.

FABLES AND ALLEGORIES. The most beautiful piece of work in the way of a book that I have ever sold, and I do not know but it is the handsomest book I ever saw. It is a large-sized book of 512 pages, full of engravings of surpassing beauty. The paper and printing are probably equal to any thing in the way of a book now in the market. Our readers may ask, "What are the fables and allegories about?" Well, they are about you and me. As an illustration, in the center of the book you will find the fable of the Lantern people, which I gave on p. 345, May 15, 1885. I copied the story, but I did not have the wonderful pictures that the author has in this book. The book is written by the author of the Story of the Bible. There is but one fault to find with it; that is, it costs \$2.00. However, if any of you want a book worth \$2.00, every cent of it, you will find it in this book of fables and allegories. It will make you cry, if you don't look out; and the best of it is, that the chances are very great that you will be better after you have cried. I never saw any thing in my life, nicer for a Christmas present; or if you want a beautiful book to put on the center-table of your best room, you can not find a handsomer one for the money. Perhaps I am saying a good deal; but if you do not agree with me after you have seen the book, you can send it back and have your money returned. They are so large and heavy that the postage on them is 32 c. extra. We can sell two books for \$1.75 each; three for \$1.65 each; five or more, \$1.60 each.

A. I. ROOT, Medina, Ohio.