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VOL. XVII. NO. 16.

AUG. 15, 1889.

PEACE ON EARTH
GOOD WILL TOWARD MEN



CLEANING
IN

BEE CULTURE

S. W. Conrad

DEVOTED
TO
BEEKEEPING

& HOME INTERESTS.

MEDINA, OHIO
BY
A. ROOT



TERMS, ONE DOLLAR PER YEAR.

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

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ITALIAN BEES AND QUEENS.

One untested queen, 75c; three for \$2.00; one tested, \$1.25. Bees by the pound and nucleus. 16d
H. G. FRAME, North Manchester, Ind.
In responding to this advertisement mention GLEANINGS.

ITALIAN QUEENS by return mail; tested, \$1; untested, 75c. LEININGER BROS., 16tfdb Douglas, Putnam Co., Ohio.

THE REVISED LANGSTROTH, and DADANT'S FOUNDATION. See advertisement in another column.

SPECIAL BARGAINS.

In looking over our stock we find the following lot of old-style honey-packages, which we offer at these very low prices simply because they are remnants of stock that we should like to dispose of:



Eleven 50-lb. round tin cans with handles and 1½-inch screw caps. Old price 50c. Will sell for 30c.

Nineteen 100-lb. round tin cans, with handles and 1½-inch screw-caps. Old price \$1.00; will sell for 60c each.

Seven 100-lb. cans as above, with a rim added to bottom; also an extractor honey-gate; very handy for retailing from. Old price \$1.75; will sell for \$1.50. Japanned and lettered "Pure Honey," 50c extra.



"Iron-Jacket" Honey Cans.

These are what we used to sell and recommend before we began to use the square cans. They are strong, and don't need to be boxed to ship when full. We have some of the 3 smaller sizes, which we offer as follows:

15 1-gal. cans, old price, 25c; will sell for 20c
37 2 " " " " " 38 " " " 30
34 3 " " " " " 47 " " " 40

If you take the whole lot of any one size of any of above cans, you may deduct 5 per cent. If you take the whole of 3 or more sizes, 10 per cent may be deducted. A. I. ROOT, MEDINA, O.

A POSITIVE FACT

QUEENS BY RETURN MAIL

From the Old and Reliable Knickerbocker Bee-Farm (Established 1830).

Circular and Price List Free.

13-14tf
BOX 41. G. H. KNICKERBOCKER, Pine Plains, Dutchess Co., N. Y.

In responding to this advertisement mention GLEANINGS.

For Sale Cheap.

4 H. P. Engine and Boiler, Complete, \$180. B. W. Payne & Sons Eureka Safety Power.

Almost new. Now at Higginsville, Mo. Who wants this bargain?

We have also to sell at a bargain a 1 H. P. Shipman coal-oil engine. It was a second-hand which we sent to the factory and had made over new. Is now as good as a new engine. We offer it for \$80. For any one who wants only a small power it is a bargain. Price of a new one I believe is \$125.00.

A. I. ROOT, Medina, Ohio.

KIND WORDS FROM OUR CUSTOMERS.

I received the queens in fine condition, not a dead bee in either cage. G. W. CAMP. Armona, Cal., July 10, 1889.

The honey tumblers you sent me were received with but one cracked in the barrel. I am well pleased with them. A. L. KILDOW. Sheffield, Ill., July 8, 1889.

The bees arrived yesterday in good condition. I am much pleased with them. The queen is a good looker. If she will raise bees like those sent with her she is all right. D. H. ZEPF. Nokomis, Ill., July 26, 1889.

GOOD ADVERTISING.

Please do not insert my advertisement in your issue for Aug. 1, as I directed, for I am getting behind on orders. It will take me until about Aug. 8th to catch up with orders. J. P. MOORE. Morgan, Ky., July 22, 1889.

[No wonder, friend M., when you send out such nice queens.]

The bill of goods, shipping-bill, and remittance, reached us in good order last Monday. The beehat and veil, as well as some other conveniences, went immediately into service, and are just right. Even this "glorious Fourth" is made brighter by the hammock. WM. A. ADAMS. Eaton Rapids, Mich., July 4, 1889.

The extractor I ordered of you, which was shipped July 2, I received in good order. It has been thoroughly tested. I don't see where you can make any improvement in it. We think it a model of perfection. I much prefer your gearing to any upright gearing I ever saw. F. M. PECK. Spring Green, Wis., July 31, 1889.

You requested us to renew if we had found GLEANINGS a good investment. We have found it so, and should not like to be without it, as we are beginners in bee-keeping, and have found many articles which have helped us in our work with the bees. We started this spring with 4 colonies; they have increased to 10. From one frame of brood, ½ lb. of bees, and untested queens received from you July 28, 1888, we have now 3 strong colonies, which are the best workers we have. The season so far has been too wet for much honey; but the weather is drier now, and we may have a good fall flow. We wish GLEANINGS success, as a Journal of its kind should have. BURK BROTHERS. Burrell, Pa., Aug. 6, 1889.

DADANT'S FOUNDATION

Is kept for sale by Messrs. T. G. Newman & Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Nebraska; B. J. Miller & Co., Nappanee, Ind.; E. S. Armstrong, Jerseyville, Ill.; E. Kretschmer, Coburg, Iowa; P. L. Viallon, Bayou Goula, La.; M. J. Dickason, Hiawatha, Kansas; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y.; D. A. Fuller, Cherry Valley, Ill.; J. B. Mason & Sons, Mechanic Falls, Maine; G. L. Tinker, New Philadelphia, O.; Jos. Nysewander, Des Moines, Ia.; C. H. Green, Waukasha, Wis.; G. B. Lewis & Co., Watertown, Wisconsin; J. Mattoon, Atwater, Ohio, Oliver Foster, Mt. Vernon, Iowa; C. Hertel, Freeburg, Illinois; Geo. E. Hilton, Fremont, Mich.; J. M. Clark & Co., 1409 15th St., Denver, Colo.; Goodell & Woodworth Mfg. Co., Rock Falls, Ill.; J. A. Roberts, Edgar, Neb.; E. L. Goodell & Co., Brantford, Ontario, Canada; J. N. Heater, Columbus, Neb.; E. C. Eaglesfield, Berlin, Wis.; C. D. Batten, Peterboro, Mad. Co., N. Y.; G. K. Hubbard, Fort Wayne, Ind., and numerous other dealers.

We guarantee every inch of our foundation equal to sample in every respect. Every one who buys it is pleased with it.

Write for free samples, and price list of bee-supplies and specimen pages of the new

REVISED LANGSTROTH BOOK,

Edition of 1889.

3tfdb

CHAS. DADANT & SON,
Hamilton, Hancock Co., Illinois.

In responding to this advertisement mention GLEANINGS.

COLONIES Italian bees at \$5; tested Italian queens at \$1; untested (young laying) Italian queens at 60c. Address OTTO KLEINOW, 15-16d 150 Military Avenue, Detroit, Mich.

PURE ITALIAN QUEENS.

50 tested queens now ready at \$1.00 each; 100 untested queens, every 3 days, at 70c each; 3 for \$2.00. A few selected breeding queens at \$2.00 each. All bred from imported and best selected home-bred queens. Safe arrival by mail guaranteed.

D. G. EDMISTON,

Adrian, Lenawee Co., Mich

15tfdb In responding to this advertisement mention GLEANINGS.

APIARIAN SUPPLIES CHEAP.

BASSWOOD V-GROOVE SECTIONS, \$2.75 to \$3.75 PER M. SHIPPING-CASES VERY LOW. SEND FOR PRICES.

GOODSELL & WOODWORTH MFG. CO.,
3tfdb ROCK FALLS, ILLINOIS.

In responding to this advertisement mention GLEANINGS.

Italian and Carniolan Queens.

Thirty years a queen dealer. Prices low. Circular free. HENRY ALLEY, Wenham, Mass.

Bees & Poultry

The Canadian Bee Journal and Poultry Weekly is the best paper extant devoted to these specialties. 24 pages, WEEKLY, at \$1.00 per year. Live, practical, interesting. Nothing stale in its columns. Specimen copies free. Subscribers paying in advance are entitled to two insertions of a five-line advt (40 words) in the Exchange and Mart column.

THE D. A. JONES CO., BEETON, ONTARIO, CAN.

In responding to this advertisement mention GLEANINGS.

FOR SALE.—Italian queens, tested, at \$1.00 each, 6 for \$5.00; untested, 75 cents each. No foul brood. 12tfdb L. A. RESSLER, Nappanee, Ind.

THE BEST YELLOW ITALIAN QUEENS AT \$1.50 EACH.

I also wish to sell my newspaper subscription agency on account of the press of other work. Catalogue, and any other information free on receipt of postal request. The highest bidder takes it. Good reference given and expected.

C. M. GOODSPEED, 4-50d THORN HILL, N. Y.

In responding to this advertisement mention GLEANINGS.

No. 1, \$2.00; No. 2, \$1.75; No. 3, \$1.50 Knife
No. 4, 1.25; No. 5, 1.00; No. 6, 65¢ \$1.15

On receipt of the above price



SMOKERS and KNIVES

will be sent postpaid. Descriptive circulars will be sent on receipt of request card.

Bingham & Hetherington Smokers and Knives are staple tools, and have been used ten years without complaint, and are the only stovewood burning clear smoke bee-smokers; no going out, no vexation. Address

BINGHAM & HETHERINGTON, Abronia, Mich.

In responding to this advertisement mention GLEANINGS.

MUTH'S

HONEY-EXTRACTOR,

SQUARE GLASS HONEY-JARS.

TIN BUCKETS, BEE-HIVES,

HONEY-SECTIONS, &c., &c.

PERFECTION COLD-BLAST SMOKERS.

Apply to CHAS. F. MUTH & SON,

CINCINNATI, O.

P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers." (Mention Gleanings.) 11tfdb

STRAWBERRY PLANTS

By mail at 75 cts. per 100. Varieties, Jessie, Jumbo, Captain Jack, and Crescent Seedling.

Address JACOB GUISENGER, Ada, O.

In responding to this advertisement mention GLEANINGS.

A NEW BOOK ON BEES, and DADANT'S FOUNDATION. See advertisement in another column.

JAS. F. WOOD, NORTH PRESCOTT, MASS.,

Will now ship by return mail, his warranted queens to any address, for 75 cts. each, or \$8.00 per dozen. Single queen to Canada, 85 cts. Being isolated from all black bees I am able to warrant every queen purely mated, and safe arrival guaranteed. Every queen is of good shape, and all have filled several combs with eggs before being shipped. I will replace every queen that hatches a black bee with a select tested queen, worth \$2.00.

If you want the best queens promptly, send me your orders. I am bound to suit you. Address as above. 13tfdb

IF YOU ARE IN WANT OF

BEES or BEE-KEEPERS' SUPPLIES,

Send for our New Catalogue.

OLIVER HOOVER & CO.,

4tfdb

Snydertown, Pa.

I AM AWAITING YOUR ORDER FOR 3-FRAME NUCLEI.

Price, with untested queen, \$3.00. Best tested queen, \$4.00; 2 frame nuclei, 50 cts. less. Combs straight and true; all worker comb, and bees finest of Italians. One untested queen, \$1.00; 6 for \$5.00. Best tested, \$2.50 each.

JNO. A. THORNTON,

Exp. Office, Ursa, Ill.

Lima, Ill.

Mention GLEANINGS. 12-17db

HOME EMPLOYMENT. — AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper at \$1 a year. *Big cash premiums.* Sample FREE. **THOS. G. NEWMAN & SON,** 923 & 925 West Madison Street, - CHICAGO, ILLS.
 ☞ In responding to this advertisement mention GLEANINGS.

FOR SALE CHEAP!

75 COLONIES OF BEES,

Mostly Italians, in Root's Simplicity and chaff hives, \$4 per colony, hive included. Special prices for the entire lot upon application. Combs built on wired frames of foundation. I have other business, and the entire lot must be sold.

15-16d

B. T. BLEASDALE,
 983 Woodland Ave., Cleveland, O.

☞ In responding to this advertisement mention GLEANINGS.

California.

FOR SALE.—A well-established trade in the supply business. For particulars apply to
 16-17-18d Box 2, Duarte, Cal.

MIAMI

The BEST Late Strawberry ON EARTH! PRICE REDUCED

New testimonials and a fine lithograph and photo-engraving of the fruit. All leading varieties for sale. Send for price list and pamphlet to the originator. **J. D. KRUSCHKE, Box 824, Piqua, Ohio.**

☞ In responding to this advertisement mention GLEANINGS.

NOTICE. Sections, One - Piece,

4¼x4¼x2, open four sides. We have about 200,000 nice ones in stock at \$3.00 per 1000.

C. B. LEWIS & CO., Watertown, Wis.

☞ In responding to this advertisement mention GLEANINGS.

Black and Hybrid Queens For Sale.

For sale, 4 Carniolan queens mated with Italian drones, 50c each.

J. B. KLINE'S Apiary, Topeka, Kan.

Hybrid queens, 25c each, or 4 for \$1. Blacks, 5 for \$1. Guarantee safe arrival.

FRANK HOWARD, Fairfield, Wayne Co., Ill.

Fine hybrid queens for 25c; from imported mothers, 40c. **W. A. SANDERS, Oak Bower, Hart Co., Ga.**

Ten choice hybrid queens for sale by return mail, at 30c each, or 4 for \$1.

G. H. DENMAN, Pittsford, Mich.

Three very prolific mismatched Italian queens at 35c each.

R. W. TURNER, Medina, Ohio.

To reduce my stock I will sell a few mismatched Italian queens for 25c, and purely mated, 50c.

C. G. FENN, Washington, Conn.

A few young mismatched queens, at 25c each.

GEO. L. JONES, Grand Ridge, Ill.

Hybrid and mismatched Italian queens, for 35 and 50c.

GEO. L. FERRIS, Five Corners, N. Y.

Fine mismatched Italian queens, reared this season from select tested mothers, will sell for 28c each, or 4 for \$1. Stamps taken. Safe arrival guaranteed.

C. F. GRUBB, Jubilee, Davidson Co., N. C.

BEE-HIVES, SECTIONS, ETC.

We are now selling our No. 1 V-groove sections, in lots of 500, at \$3 00 per 1000; No. 2 sections at \$2.00 per 1000. For price of Italian queens, foundation, smokers, etc., send for price list.

J. STAUFFER & SONS,

Successors to B. J. Miller & Co.

16tfdb

Nappanee, Ind.

☞ In responding to this advertisement mention GLEANINGS.

AN OLD BEE-BOOK REVISED, and DADANT'S FOUNDATION.

See advertisement in another column.

Crawford's Folding Paper Boxes

For Inclosing Section Honey.

THE BEST BOX FOR THE LEAST MONEY!

\$5.00 Per 1000

and less, according to quantity. Send for sample and price list. **A. C. CRAWFORD, S. Weymouth, Mass.**

☞ In responding to this advertisement mention GLEANINGS.

Wants or 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. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

WANTED.—To exchange 3 L. frame nucleus, with yellow Italian queen, in one-story Simplicity hives, worth \$2.00, for white paint, or offers. **MRS. OLIVER COLE, Sherburne, Chenango Co., N. Y.**

WANTED.—To exchange pure Italian queens for extracted honey. Please correspond with description of honey and price, f. o. b., cars at your station. **WM. W. CARY, Coleraine, Mass.**
 15tfdb

WANTED.—To sell or exchange, Italian bees and queens, and supplies. Address

OTTO KLEINOW,

4tfdb No. 150 Military Ave., Detroit, Mich.

WANTED.—To exchange bees for extracted honey. **J. F. MICHAEL, German, Darke Co., O.**
 15-16-17d

WANTED.—To exchange fine Damascus double-barrel b. l. gun, for 3 or 4 h.-power engine. Also Model press and type, for power fodder-cutter. **O. BRUMFIELD, Brumfield, Ky.**
 15-16d

WANTED.—To correspond with parties having land for sale, or to exchange for property in this county. For particulars address
 6-17d **L. C. CALVERT, Poplar Flat, Lewis Co., Ky.**

WANTED.—To exchange Bubach, Jessie, and Sharpless strawberry plants, for comb honey, or offers. **F. S. MCCLELLAND, New Brighton, Pa.**

WILL exchange my apiary, 30 colonies, prime condition, all fixtures, 1½ acres, good house, fruit, small barn, for desirable personal property; price \$500; a home at a bargain.

D. E. DARROW, West Eaton, N. Y.

WANTED.—To exchange choice colonies of fine Italian bees, for good extracted honey. Please write, sending sample and price delivered at your station. **W. J. HILLMAN, Green River, Vt.**

WANTED.—To exchange full colonies of bees for a 2 to 4 H. P. engine, Barnes hand-ripper, or foot-lathe. **M. LUTTMAN, Hannibal, Ohio.**

WANTED.—To exchange box of Florida sea shells for tested Italian queen.

J. CROSS, Liverpool, Fla.

HONEY COLUMN.

CITY MARKETS.

NEW YORK.—*Honey.*—Market is rather unsettled yet. We quote extracted, California, at 7½@8c; orange bloom, 7¼@7½; common Southern, 65@75c per gal. White clover and basswood, extracted, 7½@8c. As to prices for comb honey it is too early yet to form an opinion.

Aug. 10.

F. G. STROHMEYER & Co.,
New York.

CHICAGO.—*Honey.*—Receipts of comb honey are quite up to the present demand, which is by no means active. Sales are made at 14@16c for one-pound sections. Extracted is selling quite well at from 7@8c, and the receipts are not accumulating to any extent.—*Beeswax* is scarce and in good demand at 25c.

Aug. 8.

R. A. BURNETT,
161 So. Water St., Chicago, Ill.

BOSTON.—*Honey.*—We have received quite a little new honey since writing you last, and we find it of very good quality. We are selling from 17@18c. Sales a little slow on account of warm weather. Extracted selling from 8@9c.—*Beeswax*, 25.

Aug. 9.

BLAKE & RIPLEY,
Boston, Mass.

KANSAS CITY.—*Honey.*—New crop is coming in slowly; 1-lb. sections, white clover, 16c; 2 lb., white, 14. Extracted, white clover, 9c in 60-lb. cans; dark, 6½@7. Demand light.

Aug. 9.

HAMLIN & BEARSS,
Kansas City, Mo.

CINCINNATI.—*Honey.*—Demand is good for comb honey in 1 and 2 lb. sections, at 12@15c in a jobbing way. Trade is good also in extracted honey in square glass jars for table use, and in barrels for manufacturers; it brings 5@8c on arrival.—*Beeswax* is in good demand at 20@22 on arrival for good to choice yellow.

Aug. 9.

CHAS. F. MUTH & SON,
Cincinnati, Ohio.

COLUMBUS.—*Honey.*—The arrivals of honey are more liberal. Owing to the high prices at which it is held, it is moving slowly. We are trying to get 16@17c for choice goods in pound sections. A number of our best customers claim that they can buy it for less money from outside parties.

Aug. 8.

EARLE CLICKENGER,
Columbus, Ohio.

NEW YORK.—*Honey.*—Extracted in very good demand at the following prices: Orange blossom, per lb., 7¼@7½c; white clover and basswood, 8@8½; off grades, Southern, per gal., 60@70c. We have some new comb honey which we quote as follows: Fancy white, 1-lb. sections, unglassed, 16c; off grades, 1 lb., 14c; fancy white, 2 lbs., glassed, 14c; off grades, 2 lbs., 12c.

Aug. 12.

HILDRETH BROS. & SEGELKEN,
New York.

ALBANY.—*Honey.*—Some inquiry for new honey, no receipts to speak of yet. Light, comb, 15@18c; dark, 12@13. Light, extracted, 8c.

Aug. 8.

H. R. WRIGHT,
Albany, N.Y.

ST. LOUIS.—*Honey.*—Market quite dull. We quote extracted, bright, 5½@6c; dark, 4@4¼.—*Beeswax*, 23½.

Aug. 10.

D. G. TUTT GRO. CO.,
St. Louis, Mo.

PHILADELPHIA.—*Honey.*—Honey as yet not wanted. Market usually starts here about Sept. to Oct. I generally open at 14@16c for prime No. 1 in 1-lb. boxes.—*Beeswax*, bright yellow wax, is wanted here at 23@24c.

Aug. 9.

CHAS. E. SHOEMAKER,
Philadelphia, Pa.

DETROIT.—*Honey.*—New comb coming in slowly, and selling from 13@15c. Extracted, 8@9c.—*Beeswax*, 23@24c.

Aug. 9.

M. H. HUNT,
Bell Branch, Mich.

FOR SALE.—I have a quantity of choice clover honey in scant 1-lb. sections and 12-lb. cases, at 16c (for 100 lbs. or more). Also 60 lb. screw-cap cans of extracted clover honey, at 5c per can. Safe arrival guaranteed by freight.

OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

WANTED.—Choice comb honey in 1 lb. sections.
F. S. MCCLELLAND, New Brighton, Pa.

FOR SALE.—25,000 lbs. choice extracted white-clover honey, in barrels holding about 550 lbs. net, each. I put it up also in packages of any size desired, in either wood or tin. There is no finer honey than this in the market. Write me what you want, and I will give you prices.

EMIL J. BAXTER, Nauvoo, Hancock Co., Ill.

FOR SALE.—Eight tons of white clover and basswood honey, in 25-gallon kegs. Also a few tons of good amber and dark honey.

FRANK MCNAY, Mauston, Wis.

FOR SALE.—In 60-lb. screw-cap cans, boxed singly, 4000 lbs. white-clover extracted honey, of the finest quality, all from supers on the tiering-up plan. Price \$5.00 per can in small lots; 5 cans or more, \$4.75 each.

RUFUS PORTER, Lewistown, Ill.

WANTED.—500 lbs. of nice comb honey.

A. D. ELLINGWOOD, Milan, N. Y.

BEES

SEND for a free sample copy of the BEE JOURNAL — 16-page Weekly at \$1 a year—the oldest, largest and cheapest Weekly bee-paper. Address

BEE JOURNAL, Chicago, Ill.

THE BEE-KEEPERS' REVIEW.

A 50-cent monthly that gives the cream of apicultural literature; points out errors and fallacious ideas; and gives, each month, the views of leading bee-keepers upon some special topic. Three samples free.

W. Z. HUTCHINSON, Flint, Mich.

Please mention GLEANINGS.

13ftdb

THE HIVE AND HONEY-BEE, and DADANT'S FOUNDATION. See advertisement in another column.

ITALIAN

BEES AND QUEENS. Tested queens, \$1.50. Untested, 75c. Bees, per lb., 85 cts. Frame of brood, 50 cts. Nuclei a specialty. Send card for price list.

MISS A. M. TAYLOR,

9 10ftdb Box 77. Mulberry Grove, Bond Co., Ill.

☞ In responding to this advertisement mention GLEANINGS.

DR. TINKER'S

QUEEN-REARING CHAMBER

The only practicable invention for rearing and securing the mating of a number of queens, and getting them all laying at once in full colonies of bees. Patented July 16, 1889. For particulars address with stamp,

DR. G. L. TINKER,

15-16d

NEW PHILADELPHIA, O.

☞ In responding to this advertisement mention GLEANINGS.

The Secrets of Success in the Growing of Small Fruits

Gives you the benefit of several years' experience in growing berries for market, together with my illustrated catalogue and price list of berry-plants; sent free on application. Now is the time to set strawberry-berries for next year's fruiting. Jessie, Cloud, and other new varieties.

16-19db

I. A. WOOLL, Elsie, Mich.

☞ In responding to this advertisement mention GLEANINGS.

CHOICE ITALIAN QUEENS.

Tested, \$1.25 each; untested, June to Oct., 75 cts.; 3 for \$2.00. Annual price list of nuclei, bees by the pound, and bee-keepers' supplies, free.

11ftdb

JNO. NEBEL & SON, High Hill, Mo.



Eaton's Improved SECTION CASE. BEES AND QUEENS. Send for free catalogue. Address

FRANK A. EATON,

5-16db Bluffton, Ohio.

☞ In responding to this advertisement mention GLEANINGS.



TERMS: \$1.00 PER ANNUM IN ADVANCE; 2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.
 PUBLISHED SEMI-MONTHLY BY
A. I. ROOT, MEDINA, OHIO.

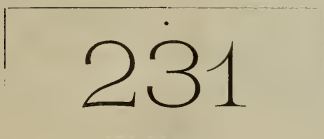
Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18 cts. per year extra. To all countries not of the U. P. U., 42 cts. per year extra.

OUT-APIARIES, NO XII.

NUMBERING HIVES—RECORD BOOKS.

IN the main, the management of an out-apiary does not differ from that of any other; and after years of experience you have had in the home apiary you are pretty well settled in your plans. I will, however, offer some suggestions to any whose experience is yet very limited, as to some of the things that may be especially appropriate for out work, and you can judge whether any of them are worth adopting, for you. Some things, too, may come up that would never be needed in home work.

In numbering hives it will probably be found convenient to adopt some system by which the numbers can be easily changed. A satisfactory way is to have tin tags painted white, with black figures on them, fastened on the hives with half-inch wire nails.



TAG FOR NUMBERING HIVES.

About 4 x 2½ inches is a good size, with figures two inches long, so that they can be plainly seen at a distance. These tags can be easily changed from one hive to another, and with out-apiaries you may find it very convenient, if not necessary, to change them quite frequently.

It is well to adopt some system of numbering by which you can tell, from the number, to which apiary a colony belongs. A good way is to let the first numbers belong to the home apiary, then the next series to another, and so on. This will be very satisfactory if you never run higher than 100 in

each apiary, for then you can tell at a glance that 87 belongs in the home apiary, 187 in the Wilson apiary, etc. If you expect that, before fall, some of your apiaries may contain as many as 125 colonies, then it may be well to let the numbers 1 to 125 belong to the home apiary, 126 to 250 to Wilson's, 251 to 375 to Hastings, and so on; but in that case you may not think so quickly whether 380 belongs to the third or fourth apiary. An easier way to distinguish would be to let the first apiary run from 1 to 200, and the second from 201 to 400. An objection to this whole plan is, that you may feel unpleasant some day to have some one, on seeing a tag marked 240, ask you, "Why! have you 240 colonies?" when in fact you have only half that number. A way to avoid this is to commence at the number 1 at each apiary, preceding it by an initial letter. Then two hives, marked "H 87" and "B 87," would be recognized as belonging respectively to the home and the Belden apiary. On the whole I think I prefer the simple figures. If you bring all your bees home to winter, you need pay no attention to numbers, but place them next spring indiscriminately. Thus you may find the first row in the home apiary commencing with the numbers 42, 17, 183, 260, and so on. Their new numbers are to be 1, 2, 3, 4, but the old numbers should be left on till you have entered them on your record book for this year, and transferred any item you may wish to keep about them, which will usually be only the age of the queen, noting in the new record the number they had the preceding year, so that you can at any time trace back their history. After your record is all straight, then take off all tags and number the hives in order. I am well aware that many of our best bee-keepers do not keep any record book, but have little slates on hives, or a system of stones, etc. I suspect, however, that at least some of them, after establishing out-apiaries, would find advantages in the record system that did not exist so

long as only one apiary was kept. If you have only a single colony, you will probably remember all about it without book, slate, or stone.

As the number of colonies increases, the demand becomes more imperative for some aid to the memory. Still, with even a hundred colonies I knew my colonies somewhat as I would know a herd of cows, and a glance over the apiary would bring to mind pretty well the condition of the different colonies, and what was to be done. But when it comes to having more than one apiary, especially if there are several, you can't run out and in five minutes see what shape you left any hive in at last visit. With the record-book you can sit at home and look over the condition of all your apiaries, and on a rainy day you can do this just as well, when you would not like to be out looking over your slates. It is sometimes pleasant and profitable to look over the records of past years, and a comparison of them in long winter evenings may be of some value.

A 20 cent blank book makes a good record-book, and it will be found convenient to have a pencil tied to it with a string. A pencil is better than ink, for it may sometimes get wet. C. C. MILLER.

Marengo, Ill.

There are some things in favor of the book plan. The fact that the condition of the apiary may be noted on a rainy day, and preparations and plans be made for work when the weather clears up, is quite an item in its favor. As you know, we use slates on each hive, and do not make use of numbers. Since we have had the apiary located at the basswood orchard, we have been filling orders for bees and queens from this place. Sometimes we have gone down with the horse and wagon, and taken with us an order-book. Not knowing the condition of the apiary, any more definitely than memory would indicate, we found that, on several occasions, we were unable to fill the orders which we expected to, at that apiary; and even after having arrived there, in order to find out where a two-frame nucleus or a select tested queen could be obtained, we might have to glance over the slates of perhaps two dozen hives before we found what we wanted. This entailed the necessity of carrying with us a smoker, shipping-box, etc. With the record-book we could have determined beforehand just where the order could be filled; and instead of running all over the apiary, have made a bee-line for the spot. On several occasions I have gone into our home apiary and made some alterations in one or two hives, in the absence of our apiarist, Mr. Spafford. As we have no numberings to our hives, I could not tell him in the office when I saw him next which hives I had changed, other than by a certain bungling circumlocution which might be something after this fashion:

Mr. Spafford comes in in the morning, and inquires after the work, when this conversation takes place:

"Oh! by the way, before you came this morning I filled an order for an untested queen, in the north apiary—let me see—in the third row from the north side, fourth hive from the end, counting from the west."

Mr. Spafford looks at me a little puzzled.

"In the north apiary, you say?" he repeats; "in the fourth row, and—"

He has gotten it wrong, and I interrupt him by saying the *third* row. Several times, as I could not tell directly, I have had to go out and point out the hive. Now, then, if the hive had been numbered I could have said, "From No. 123 I have sold a select tested queen. From No. 206 I took out a best imported." Knowing the location of the various hives, or about where the various numbers should be, he can make a bee-line for it. To the former he can give a cell or hatched queen, and the latter he can start to raising cells. If we should adopt the book plan, I should not care to dispense with the very convenient slates. If the two could be combined in some way, I should like it better. As to the numbering of hives, I am sure it is a convenience many times. ERNEST.

HONEY STATISTICS

FROM ALL PARTS OF THE UNITED STATES.

In order to read understandingly the reports given below, it will be necessary to observe the following points: First, the State is given; then next in their order are the names of the reporters, with their respective postoffices. To indicate locality, the usual abbreviations are used—N., S., E., and W., for north, south, east, and west; N. E. for north-east, etc. The letter C indicates the word "central;" E. C., east central, etc. In the following list, the first figure represents the month, and the second figure the date at which the report was rendered. The small letters, a, b, c, d, etc., indicate the answers to the questions propounded in questions a, b, c, etc., just below

WE decided to send out the same set of questions that we did a year ago last July, in order that we might the better get the comparative results of the two seasons. Although the entire honey crop has not been taken off the hives in all localities, yet a report is rendered which shows quite decidedly which way the wind blows, as affecting the price of honey and the average production throughout the United States. The questions which we submitted are as follows:

- (a.) What is new comb honey selling at in your vicinity?
- (b.) What is new extracted honey selling at?
- (c.) What per cent of an average crop of honey do you estimate has been secured in your vicinity this season? Please answer this question simply by per cent; for instance, 50, 75, 175, or 200 per cent.
- (d.) How many pounds of honey, both comb and extracted, have you taken from your bees, and from how many colonies so far?
- (e.) Was the season with you this year good, average, poor, or bad?

ARKANSAS.

W. H. Laws, Lavaca. W. C. 8-10.
a. 15; b. 15; c. 75; d. 1000 from 80 colonies.

ALABAMA.

W. P. W. Duke, Nettleborough. S. W. 8-6.
a. 15; b. 10; c. 200, or a full crop of white honey; d. 3000 lbs. comb from 40 colonies; e. good.

J. M. Jenkins, Wetumpka. C. 8-1.
a. 10 to 15; b. 7 to 10; c. 100; d. 100 comb. 650 extracted, 16 colonies; e. average.

ARIZONA.

Jno. L. Gregg, Tempe. C. 8-5.
a. 10 to 12; b. retail 6, wholesale 5; c. 40; d. 193 colonies have produced 20,280 lbs.; e. rather poor.

CALIFORNIA.

W. W. Bliss, Duarte. S. E. 8-7.
a. 12½ wholesale, 15 retail; b. 7 to 8; c. 40; d. about 7500 lbs., 150; e. poor.

G. W. Cover, Downieville. N. 8-7.
a. 20; b. 20; c. 100; d. 1000 lbs. comb from 33 colonies; e. good.

CONNECTICUT.

Daniel H. Johnson, Danielsonville. E. 8-2.
a. 20 to 25; b. 18 to 20; c. 20 or less; d. 50 lbs. from 4 colonies.
Nothing from most of them; e. poor.

FLORIDA.

J. L. Clark, Appalachicola. W. 8-6.
a. 10; b. 9; c. 200; d. nearly 5000; 68, spring count; e. excellent.
John Y. Detwiler, New Smyrna. E. C. 8-5.
a. None produced; b. retail 10; c. 25; d. 1st extracted Island
apiary, 36 colonies, 1000, amber honey; extracted home apiary,
75 colonies, 20 hives, extracted 500. Balance allowed to fill up
in expectation of poor season. Colonies deficient in strength
from continual depredations of mosquito hawks during three
weeks of drouth. c. Poor.

GEORGIA.

T. E. Hanbury, Atlanta. N. 8-1.
a. From gums 18. No section honey. b. 15; c. 200; d. 20 col-
onies, 100 each; e. good.
J. P. H. Brown, Augusta. E. C. 8-9.
a. 15; b. 10; c. 50; d. about 500 lbs. from 10 colonies that were
kept especially for this purpose. The balance of colonies
were run for queens. e. The first part of the season was very
good, while the latter part is very poor.

Walter McWilliams, Griffin. W. C. 8-3.
a. 15; b. none offered; c. 175; d. 40 per colony on an average;
run for queens; e. good; fine prospects for fall crop.

ILLINOIS.

Reuben Havens, Onarga. E. 8-12.
a. 15; b. 12; c. 10; d. none; 40 colonies; e. bad.
Frank Howard, Fairfield. S. 8-7.
a. 12½; b. 10; c. 25; d. 100 comb; spring 15, now 25; e. bad.
C. C. Miller, Marengo. N. 8-2.
a. 15; b. none; c. 75; d. 5000 from 245; not all off yet; e. nearly
average. On the road to Belden's, on the trot. Em burned her
dress again; anti-spark snoker anxiously awaited.

Mrs. L. Harrison, Peoria. W. C. 8-3.
a. Wholesale, 10 to 12; retail, 12½ to 15; b. about the same,
for a choice article; c. 100; d. about 2000; 76 colonies, spring
count; e. average.

C. Dadant, Hamilton. N. W. 8-3.
a. 15; b. 10; c. 150; d. 35,000 from 400 colonies; e. very good.

INDIANA.

T. H. Kloer, Terre Haute. W. C. 8-12.
a. 15 to 16; b. none in market; c. 25; d. 1800 lbs. from 60 col-
onies; e. poor.

Mrs. A. F. Proper, Portland. E. C. 8-2.
a. 20; b. no extract on market; c. 10; d. 200 from 55 colonies;
e. very bad.

Joe. A. Burton, Mitchell. S. C. 8-1.
a. 15; b. 8½; c. ½; d. 500 from 13; e. poor.

I. R. Good, Nappanee. N. W. 8-3.
We have not secured one particle of honey; and there is
none in the market. This is the poorest season we ever had
since I kept bees.

IOWA.

A. Christie, Smithland. W. 8-5.
a. 15 retail; b. 9 retail; c. 100; d. Have scarcely yet com-
menced taking off honey; e. very early, good. In fruit bloom,
cold and bad, necessitating feeding; later, average.

Oliver Foster, Mt. Vernon. E. 8-2.
a. 15 retail; b. 9 retail; c. 100; d. 2000 extracted, 500 comb;
from 350 colonies. Most of the crop is still on the hives. e.
average. My locality overstocked.

J. M. Shuck, Des Moines. C. 8-3.
a. 15; b. none selling; c. 100; d. I don't know; e. good.

Engene Secor, Forest City. N. 8-1.
a. 15 and 16; b. 10; c. 90; d. have taken off but little. Have
"in sight" 1500 from 40 colonies in spring; e. average, nearly.

Z. T. Hawk, Audubon. W. C. 8-7.
a. 20; b. none on the market; c. 10; d. 50 from 20 colonies.
All comb; e. basswood and clover season bad. Fall season
just opening. Ask us later.

KANSAS.

B. F. Uhl, Boling. 8-4.
a. 16; c. 100; d. 50; e. good.

G. L. Hall, Burlington. 8-1.
Honey crop. My own, none. Pasture poor.

KENTUCKY.

D. F. Savage, Hopkinsville. S. W. 8-2.
a. 20; b. 10; c. 50. Fall honey will probably be very abundant.
d. 50 comb, 300 extracted; from 30 colonies. e. Bad, very bad.

Jno. S. Reese, Winchester. C. 8-1.
a. 15; b. 15; c. 150; d. 1500 from 12 colonies; e. extra good.

J. P. Moore, Morgan. N. 8-2.
a. 15; b. 10 to 11; c. 175; d. My whole apiary was devoted to
queen-rearing, except 2 colonies. They filled about 25 L. combs
each, making about 125 per colony. E. Good.

LOUISIANA.

J. W. K. Shaw, Loreauville. S. C. 8-7.
a. None sold in quantity; b. 75c per gal. at retail; c. 100 per
cent spring; d. little; 105 lbs. per colony to July 1st; e. good.

H. L. Lewis, Osyka. Miss. E. 8-6.
a. 15; b. 80c per gal.; c. 175 per cent; e. extra good.

MAINE.

J. Reynolds, Clinton. S. E. 8-7.
a. 20; b. 17; c. 30; d. 500 comb from 40 colonies; e. very poor;
too much wet.

C. W. Costellow, Waterboro. S. W. 8-5.
a. 30; b. 20; c. 50; d. run for increase entirely. e. Poor.

S. H. Hutchinson, Mechanic Falls. 8-1.
a. 20; b. none in market; c. 50; e. poor; too wet.

MARYLAND.

S. Valentine, Hagerstown. N. W. 8-6.
a. 15 to 20; b. none in market; c. about 35; d. one yard 2663
from 90 stands. e. Poor; too much rain.
Simon P. Roddy, Mechanicstown. 8-5.
a. 20; b. 15; c. 75; d. 400; 20 colonies; e. poor.

MASSACHUSETTS.

J. E. Pond, No. Attleboro. S. E. 8-6.
a. 25 to 30; 18 to 20 in 10 to 15 lb. lots; b. at same prices at re-
tail; c. 50 to 75; d. none, as I have only experimented; e. good,
early; wet and poor through June till present time.

E. W. Lund, Baldwinville. N. C. 8-5.
a. 22; b. none in market; c. 30; d. 150 comb; 20 colonies; e. bad.

Wm. W. Cary, Colerain. N. W. 8-3.
In almost starving condition. Poorest season since 1866. d. None, and am feed-
ing now to prevent starving; e. very poor.

MICHIGAN.

A. J. Cook, Lansing. C. 8-1.
a. 15 to 20; b. 10 to 12½; c. less than 25; d. we have not taken
our honey off yet; e. poor.

George E. Hilton, Fremont. W. 8-1.
a. 15; b. 10; c. 25; d. 1500; 200 colonies; e. poor.

James Heddon, Dowagiac. S. W. 8-1.
a. 16 to 20 retail; b. 10 to 12; c. 25; d. from 200 colonies here,
about 2000; e. the worst season on record; very bad.

R. L. Taylor, Lapeer. 8-5.
a. b. No price established; c. 25; d. 4000 comb honey from 400
colonies; e. very poor.

H. D. Cutting, Clinton. S. E. 8-3.
a. 18; b. 10; c. 75; d. 28 comb from 65 colonies. But honey is
not quite ready to come off; will take off in about 10 days; e.
poor.

W. J. Carroll, Otsego. S. W. 8-10.
a. 16; b. 10; c. not more than 50; d. extracted 450, comb 100;
about 40 colonies; e. poor; prospects for fall honey good.

MISSISSIPPI.

W. A. & E. E. Montgomery, Pickens. 8-6.
a. 10; b. 7; c. about 50; d. haven't kept a record of how many
pounds; e. poor.

MISSOURI.

Jno. Nebel & Son, High Hill. E. C. 8-5.
a. 10 to 13; b. 5 to 8; c. 65; d. 2500 extracted, 700 comb, from 52
colonies; e. average season so far. The fall flow is often as
good as from white clover.

E. M. Hayhurst, Kansas City. W. 8-3.
a. 15 wholesale, 20 retail; b. 10 wholesale, 15 retail, c. 150; e.
good.

James Parshall, Skidmore. N. W. 8-3.
a. Retailing at 12½ to 15; b. 10. I sold one barrel at 9; c. 200;
for we never yet got any surplus before August until this sea-
son; d. 1500; 34 spring count have 72 now; e. extra good.

Chas. L. Gough, Rock Spring. E. C. 8-8.
a. 15; b. 10; c. 25; d. about 40 lbs. extracted; e. bad.

S. E. Miller, Bluffton. E. C. 8-5.
a. 15 to 16; b. 10; c. 45 to 50; d. 1250 extracted, 125 comb from
37 colonies, spring count; e. very good. Expect a good flow
of fall honey.

MINNESOTA.

A. F. Bright, Mazeppa. E. 8-5.
a. 15; b. 10; c. 100; d. 3000 from about 80 colonies; e. about
average.

D. P. Lister, Lac Qui Parle. W. C. 8-2.
a. 20; b. 12½; c. 75; d. 750; basswood 27; e. good, if bees were in
proper condition.

J. H. Johnson, Fairmont. 8-9.
a. 20c at retail; b. don't know of any in market; c. 100; d. 40
lbs. each from 13 colonies; e. average so far.

Wm. W. Hamilton, Jackson. 8-1.
d. Eight pounds from 3 colonies; e. good for swarming, poor
for surplus in basswood bloom.

N. P. Aspinwall, Harrison. C. 8-3.
a. 15 to 20 wholesale, 20 to 25 retail; b. none on the market; c. 2.
100; d. 650 comb; 20 colonies. Season not over; e. good. In-
crease 100 per cent.

NEBRASKA.

Jerome Wiltse, Falls City. 8-5.
a. 16 to 20; b. 16; c. 100; d. 800; 52; e. good.

A. E. Maley, Auburn. 8-10.
a. 20 to 25; b. 15; c. 85; e. very good.

J. W. Porter, Ponca. N. E. 8-2.
a. 20 and 25; b. 12½ and 15; c. 10; d. 400; 130 colonies; e. very
bad for surplus honey.

NEVADA.

E. A. Moore, Reno. W. C. 8-6.
a. 15 to 25; b. 16; none here only what I have; c. 175 per cent;
d. about 800 lbs. comb, 1200 extracted. e. Very good; I shall prob-
ably get 1500 lbs. more if it is not too dry.

NEW HAMPSHIRE.

S. F. Reed, No. Dorchester. C. 8-5.
a. 20; b. 15; c. 50; d. 100, from 5 run exclusively for honey; e.
very bad so far.

C. E. Watts, Rumney. C. 8-3.
a. 25; b. 25; c. 10; d. have taken only one finished section from
8 colonies yet; e. poor.

L. A. Freeman, Lancaster. N. W. 8-7.
a. 20; b. there is none in the market; c. 100; d. perhaps 100
from 4 colonies; e. good.

NEW JERSEY.

J. D. Coles, Woodstown. S. W. 8-3.
a. 20; b. none; c. 75; d. 25 per colony; e. average.

Watson Allen, Bernardsville. N. C. 8-8.
a. 16; b. 12; c. 10; e. 200 lbs. from 50 colonies; e. very bad.

NEW YORK.

G. M. Doolittle, Borodino. C. 8-3.
a. b. No market here for honey; c. 25; d. the little I have is mainly on the hives yet; e. poor.

H. P. Langdon, East Constable. N. E. 8-8.
a. 20 to 25; b. 12 to 15; c. 75; d. 3000 extracted from 60 colonies with 100 per cent increase; e. poor.

Frank Boomhower, Gallupville. E. C. 8-1.
a. No price, no honey. Have not seen a pound of comb honey so far this season; floods of rain; bees have done nothing so far; c. d. 0; e. bad.

M. G. Young, Highland. 8-7.
a. b. Have sold none; c. 30; d. about 800 comb from 40 colonies. e. Poor.

NORTH CAROLINA.

Abbott L. Swinson, Goldsboro. E. 8-5.
a. 10 to 12½; b. none here; c. 90; d. 50 comb from one hive. Others run for queens; e. average.

OHIO.

Chas. F. Muth, Cincinnati. S. W. 8-5.
a. 12 to 14 for best in a jobbing way; 20 retail; b. 9 to 10 for best by the lb.; 15 retail; c. perhaps 75; d. about 800 from 28 colonies, spring count; e. poor.

S. A. Dyke, Pomeroy. O. 8-1.
a. 12½; b. none; c. 100; d. 75 from 2 hives; e. good.

Dr. H. Besse, Delaware. C. 8-2.
a. 20; b. 18; c. 100; d. about 600; 40 colonies; e. good.

Dr. G. L. Tinker, New Philadelphia. N. E. 8-1.
a. 18; b. 15; c. 100; d. 1000 of comb, 500 ready to extract; from 25 colonies; e. average.

PENNSYLVANIA.

Geo. A. Wright, Glenwood. N. E. 8-8.
a. 12½; b. 10; c. 75; d. my honey is still in the cases; e. fair.

S. W. Morrison, Oxford. S. E. 8-2.
a. 25; b. 12; c. 50; d. apiary engaged in queen-rearing; e. honey very abundant, but too wet; e. bad.

Thos. C. Davis, Idlewood. C. 8-2.
a. 20; b. 20; d. 500 comb from 12 colonies. Will extract 600 from 13 colonies. Increase, 50 per cent.

RHODE ISLAND.

A. C. Miller, Providence. E. 8-3.
a. b. None on the market, either old or new; c. 100 to 125; d. 225 from 3; others not heard from; e. good.

SOUTH CAROLINA.

W. J. Ellison, Stateburg. C. 8-6.
a. 12½; b. 8 and 10; apiary 1, 50; apiary 2, 100. Only kept a record of 9 in apiary 2-744; e. apiary 1, bad; apiary 2, good; five miles apart.

J. D. Fooshe, Coronaca. 8-5.
a. 10; b. 8 to 10; c. about 50; d. 350 extracted from 12 colonies; e. average.

H. T. Cook, Greenville. 8-3.
a. 10; b. 20; c. 150; e. good, till in July.

TENNESSEE.

C. C. Vaughn, Columbia. C. 8-5.
a. 15; b. 8; c. 75; e. poor.

Gaston B. Cartmell, Jackson. W. 8-7.
a. 10 to 15; b. none in market; c. 25 or less; d. not 5 to the colony; 50 colonies; e. bad.

TEXAS.

J. E. Lay, Hallettsville. S. W. 8-5.
a. 15; b. 10; c. 25; d. unfinished; e. poor.

L. Stachelhansen, Selma. S. C. 8-10.
a. 10; b. 8; c. 50. d. 10,000 extracted; 2000 comb from 200 colonies; e. less than average.

J. P. Caldwell, San Marcos. S. W. 8-6.
a. 10; b. 8; c. 25; d. 200 from 20 colonies; e. the worst within my knowledge.

VERMONT.

Howard J. Smith, Richford. N. C. 8-2.
a. 20; b. 12; c. 100; d. 50 comb honey per colony; e. good; the best ever known.

A. E. Mamun, Bristol. W. 8-5.
a. b. No price yet; c. 30; d. about 15,000 comb from 500 colonies; e. poor.

F. M. Wright, Enosburgh. E. 8-5.
a. 18 and 20; b. 13 retail; c. 50; d. 2500; 50 colonies; e. average.

J. W. Porter, Charlottesville. C. 8-5.
a. 12½; b. 10; c. 120; d. 1500 from 30; e. bad for me; my bees have foul brood.

Will Thatcher, Martinsburg. W. C. 8-2.
a. 10 and 12½; b. none in market; c. 40; d. 1500 or 1600 tiered on 40 colonies; e. not average.

J. E. Crane, Middlebury. W. 8-10.
a. 16 to 18; b. 10; c. 50. d. 6900 lbs. comb and 200 extracted from 300 hives, one-half of my bees; e. season poor.

VIRGINIA.

H. W. Bass, Front Royal. N. 8-8.
a. 12½; b. same; c. 65; d. has been so wet that our honey is not finished, and we have taken but 1000 lbs. off as yet. Never knew bees to seal up honey so slowly, it is so thin and watery, on account of so much rain.

WEST VIRGINIA.

J. A. Buchanan, Holliday's Cove. N. 8-1.
a. 15 to 18; b. 15; c. 50; d. 6000 extracted from 100 colonies; e. below average.

Jno. C. Capehart, St. Albans. S. W. 8-1.
a. Nice 20; b. 10; c. 25; d. 10, average of 20 colonies; e. poor and bad.

M. A. Kelley, Milton. S. W. 8-6.
a. 15; b. none; c. entire failure; 2 per cent; d. 25 from 62 colonies; e. bad, badder, baddest.

WISCONSIN.

J. C. Sayles, Hartford. S. E. 8-10.
a. 14; b. 7; c. 150; 1 worked for increase; e. good.

S. I. Freeborn, Ithaca. S. W. 8-2.
a. 12½; b. 8; c. 100; d. 300 colonies; 32,000 extracted, 200 comb; e. good.

Frank McNay, Mauston. C. 8-3.
a. 12 to 15; b. 8; c. 100; d. 20,000 from 350; e. average.

E. France, Platteville. S. W. 8-3.
a. 16; b. 8 to 10 retail; 7 to 8 wholesale; c. 75; d. 26,000; 530; e. good but short.

Joshua Bull, Seymour. E. 8-2.
a. 15 wholesale, 18 retail; b. 8 wholesale, 10 retail; c. 100; d. 2500 nearly all comb from 40; e. average.

TOO LATE FOR GENERAL CLASSIFICATION.

A. A. Sanborn, Westfield, Mass. S. W. 8-7.
a. b. None in market; c. 4 to 5; 6 to 8 lbs. from one colony; e. very bad.

J. P. Israel, Olivenhain, Cal. S. 8-8.
a. 7 in San Diego; b. 5 to 5½; c. 20—honey season is ended; d. 2500 lbs. from 80 colonies; e. bad, very bad.

On account of the cool wet weather in the early part of the season, which, according to the reports, seems to have pervaded almost all of the United States, the honey-crop is considerably less than it might have been. First, because this weather continued clear up, in a good many of the places, into the time of year when the main nectar-bearing flora was in bloom. Second, the bees were unable to breed up properly on account of the cool and rainy weather, and hence the actual working force of the bees was considerably lower than it should have been. But in spite of all this, the season has been decidedly better than last year, in most localities, although there are some exceptions.

Twenty States report a good season: namely, Alabama, Arkansas, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Missouri, Nebraska, Nevada, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Wisconsin, Arizona.

The following States report a poor season generally: California, Connecticut, Florida, Indiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New York, Tennessee, Texas, Vermont, Virginia, West Virginia.

Michigan, though usually among the foremost, gives as unfavorable a report as any of the States enumerated.

It is interesting to note that a number of States report 200 per cent as the average crop of honey received. W. P. W. Duke, of Alabama, and J. L. Clark, of Florida, report 200 per cent, while a large number of others give 175 per cent as the average crop. Taking it all in all, we find that the average per cent of question C, as to what has been the average crop of honey secured in the respective localities, stands 75 per cent. The same average a year ago was only 50 per cent; so that, according to the reports, 50 per cent more honey has been secured this year than last, although the general average is still down.

Perhaps we should remark, that the report has probably been underestimated rather than the reverse. The tendency of human nature, and especially when its hopes are set high, is to look down instead of up. Farmers, as well as bee-keepers, are much inclined to complain about the poor season, too much drouth, or too much wet, or something else that is not just exactly right.

MARKETING HONEY AT COMMISSION HOUSES.

SOME FACTS NOT TO THEIR CREDIT.

HERETOFORE I have marketed my honey in barrels, 50 gallons each. From year to year I shipped two or three barrels and managed to retail the remainder at the small towns within 25 or 30 miles of my apiary. Last year everybody who kept bees had honey for sale at about 5 cents per pound. It has been my observation, that box-hive bee-keepers cut out their comb honey, carry it to town, and sell it for what they can get, and pay 25 cents per gallon for black sorghum for their family to eat, that is hardly fit for hogs, and do without during half of the year, unless they raised the sorghum. In that case they have sorghum all the year, provided they can not sell it. I can not hope to have a home market under such circumstances. Last year I extracted 10,000 lbs. of honey, and for the want of a market I left all the supers full of comb honey, which would have amounted to about 4000 lbs. if I had extracted it.

I made a mistake somehow, and realized less for my honey than some previous years with a much less crop. I have a barrel of my last year's honey on hand yet. I shipped two barrels of honey to D. G. Tutt & Co., of St. Louis, about two or three months ago. It was horsemint honey, and had granulated. It was capped over before I extracted it. I never raised better or sweeter horsemint honey. Tutt & Co. wrote to me, in a few days after shipping it, that it had soured, and that one of the barrels had been burst in transit, and that they sold the remainder at 5½ cts. per lb. I got \$30.00 for the two barrels of honey. If such transactions as that would not burst a bee-keeper from shipping honey, I should like to know what it would take to break him from sucking eggs.

When I commenced writing I did not think of writing more than an order; but since I have mentioned carrying over comb honey in supers I will tell you how I lost a good customer a year ago last winter. I carried over 1000 lbs. in supers to the following spring. The winter was very cold, the thermometer going down to zero one day and night, and my honey granulated in the hive. I always carry over some comb honey in supers to the following spring for weak colonies and swarms. I did not use it all for that purpose, and the first two or three barrels of extracted was mixed with granulated honey. I thought it the best honey I ever extracted. I liked it better than all-liquid honey. I got an order from Colorado City for a barrel of honey, and it so happened that I shipped one of the barrels mixed with granulated honey. The parties wrote immediately to know what was the matter with it. They said it had granulated. They never saw granulated honey at that season of the year before. I honestly explained, but could not satisfy them, and have not had an order from them since.

I sent a sample of granulated honey to a friend in Mills County, Texas, last winter. I am not sure that I know what the bees gather it from; but when first extracted it is almost as clear as pure water. The dry granulated is as white as the whitest sugar (I extract from one to three barrels of that kind every year). He wrote me that the merchants said they did not want it; that it was not honey; that they never saw honey as white as that;

that it was artificial honey, or that I fed my bees on something to produce it.

In the fall of 1881 I had five weak colonies that I fed. I have not fed since, except one frame of honey stored by bees. When spring opened in 1882 I had two weak colonies, about one pint of bees each. I have at this writing more than 200 colonies. I have extracted over 500 gallons this year. I don't know anything about bad years for bees and honey in Texas. Since my failure in 1881, every year has been good, some better. Texas is a land of honey. God has in a special way blessed it with honey and bees—and with men, too, who love black thick sorghum better than honey, and who have been educated to hate the bee.

E. Y. TYRRAL,
Co. Judge of Milam Co.

Cameron, Tex., July 29, 1889.

Friend T., I am afraid you are a little too severe on our friends Tutt & Co. Perhaps they made a mistake in calling the honey sour, instead of having a disposition to cheat. I know there is quite a disposition to suspect bee-men of adulteration and fraud, or of feeding bees something to produce honey; and when we think of the tirade of falsehoods that are constantly being published in this direction, can we really blame them? I do not know what more we can do than to keep on fighting these mischievous falsehoods. We want to get stanch men in every community to stand up squarely and steadfastly—men who will not be weary in contradicting and explaining. Personal interviews with the editors, I do believe, is going to be the next work before us. Who will enlist in the work?

MANUM IN THE APIARY WITH HIS MEN.

VISITING NEW HAVEN APIARY, LET OUT ON SHARES TO H. B. ISHAM.

GOOD-MORNING, Henry, and good-morning, Mrs. Isham."

"Why, good-morning, Mr. Manum. I had nearly made up my mind that you had forsaken us entirely. Just think of it! You have not been here since the first of May. I was telling Henry only yesterday that I believed the loss of your good wife, and the past three poor seasons, had so discouraged you that I feared you were neglecting your business. Well, I am very glad to see you once more."

"Thank you, Mrs. Isham. But I have been here once since May, though I did not see you. I only called at the apiary a few moments to see Henry and the bees; and as to neglecting business, I never looked after the bees any more closely than I have this season. Why! the three past poor seasons have nerved me up to the highest point of ambition; and I am toiling on with all my might, in the endeavor to regain what I have lost in the past three years in dollars and cents. The loss of my good wife, it is true, has cast a gloom over my home, which loss I can never regain while I remain in the body. But when I reach the other shore I expect to regain what I have lost. Although I am not a professing Christian, yet I believe—yea, I know—my wife still lives, and I believe it is well with her; and when my work here is done, I too

shall be 'born again' from this to a higher life. Hence I try to take a philosophical view of the matter, and to do the very best I can while I am permitted to remain here. You know, Mrs. Isham, our views differ somewhat in regard to religion; and as I am in something of a hurry, we will not discuss the matter now.

"Well, Henry, how are you getting along with the bees?"

"Very well, except in one thing. I want you to come to the apiary with me, and I will show you a pitiful sight. There, just look on the ground and see the bees crawling around. They are all over the apiary in this way. They seem to have lost the use of their wings. They come out of the hives in the morning, apparently to go out to work, and try to start; but they seem to be unable to rise, and then they walk off on the ground and in the grass,

Cook all about it, and sent him some of the affected bees, and I hope he will be able to give us some light on the matter. You wrote me that you could spare a few combs, and I guess I will take, some as we need them in some of the yards. Well, Henry, I must say that you have taken good care of them, so far as keeping the worms out of them; how did you do it?"

"Simply by looking them over often and picking out what worms I could find, and then hanging the combs on these racks, and placing each comb one or 1½ inches from the others, when, if I had placed them close together, it would have been impossible to keep the worms out."

"Well, there! I have all I can carry this time. Now I want a few combs of brood, if you have any hives that can spare it. I have drawn on my home bees all I dare to at present; and as your bees have



MR. MANUM AND HIS HELPERS.

and are lost. They are dying by the thousand every day; in fact, so many die that there is a very offensive smell in the apiary, caused by the dead bees. Can you tell me the cause of all this?"

"No, Henry, I can not. I have observed it in my home yard and in three others. I notice only the young bees are affected—that is, those that seem to have just commenced to work. I have picked them up and tossed them into the air to see them fall to the ground like so many peas. I also notice that their wings are perfect; none of them have ragged wings as old bees have, nor do they appear to be sick. I have caged some of them, and kept them caged four days without their showing any signs of being sick; but upon liberating them again they could not then fly. I fear this will cut our honey crop short from what it would have been were it not for this trouble, because the colonies are becoming very light in bees. I have written to Prof.

not swarmed very much, there must be some that would be benefited by taking away a card or two. I want the brood with what young bees will adhere to the comb for making more nuclei. By carrying the bees so far from their home, I find they stay much better than where they are used in the same apiary. There, I think I have now about all the load I can carry. How does the solar wax-extractor work?"

"Nicely. See what a nice cake of wax I have taken from it. Why, it will pay for itself several times over this year."

"Here, Mr. Manum, here is a bouquet for you that I have just made."

"Thank you, Mrs. Isham. How pretty it is! I noticed your flower-garden when I first came. I see you love flowers as well as ever. I shall place this bouquet on my wife's grave as I pass by the cemetery on my way home."

"Yes, do. I thought of her when I was making it. Good-by."

"Good-afternoon, Whittier. Here are a few young queens I have brought you to introduce here where you have killed off old ones. They are daughters of that choice queen I have talked so much about. They are very promising young queens."

"Sure enough, Mr. M., they are beauties in form, though I have seen much brighter-colored queens."

"It is not the *color* I am after; it is the *quality*; though the old queen's workers show the three bands yet, instead of being a bright yellow they are nearly brown; but they do get the honey, and that is what I want."

"There, I promised you a picture of that group of my bee-help, taken three years ago, and here it is.

tons of comb honey in one-pound sections. The next season (1886) the apiary contained 117 colonies, and she got only 250 lbs. of not very nice honey. She has since passed to the other shore.

"The next is Charles McGee, who commenced to work for me when I first started the supply-business. One day I got him to go to my then only out apiary to help slingle the new edition to the honey-house, it being a slack time in the shop, and at the height of the swarming season he became wild with excitement in seeing swarm after swarm come out; 15 swarms issued that day. Finally, while we were eating our lunch at noon he offered me \$5.00 for the next swarm that came out, which offer I accepted. In a few moments out came a very large swarm of pure Italians. I put them in a box, and



MANUM'S SIDE-HILL APIARY.

The first one on the right, standing near the row of Chapman honey-plants, is E. O. Tuttle. He is a young man from Massachusetts, who worked for me six seasons. He is somewhere in New York running a photograph gallery. The next is Duane Weatherbee, of Moriah Center, N. Y. He was with me two seasons, and is now at home on his farm. The next is Leslie Bissonette. He commenced to work for me when a mere boy, packing sections in boxes for shipment. He worked his way along up until I sold my supply business to Drake & Smith. He was my foreman. Since then he has worked for me at the bee-business.

"The next is Mrs. Eugene D. Sturdivant, a widow lady who had charge of one of my apiaries two seasons. The yard that she ran for me in 1885 contained 96 colonies, and she took from that apiary five

at night he carried them home. He now has about 175 colonies in two apiaries, and is a very successful apiarist.

"The next is Henry Isham, who has been with me off and on for over 25 years. For the past six years he has run my New Haven apiary on shares. He has half of the honey, without any increase of the bees. He does all of the work there, such as keeping the hives painted and repaired, etc. I furnish all supplies at cost, and he pays for half; he also pays for half the sugar fed to the bees.

"The next two are your humble servant and his son Fred—at the extreme left. Fred has taken but very little interest in bees until the past two or three years, since which he has run one of my apiaries during the honey season, and he is doing very well indeed; but even now he prefers to handle

horses, and work on the farm, rather than to work among the bees.

"Now I have explained this picture, I will present you this one, which is a view of this apiary you are running, as I make a practice of giving each new man a view of the apiary which he runs for me. This view was taken eight years ago, while Mr. Will Hinds was taking care of it. You will observe that the yard looks very much different now from what it did then, as there were no fruit-trees on the plat at that time, while now the hives are nearly all shaded by pear and cherry trees that I set out here the second year after I located the apiary, and nearly all are in bearing. I located this apiary here by request of Mr. H. B. Williams, who owns the land. He was anxious for me to do so, as he said he believed the bees would be a benefit to his crops. I chose this spot because the ground is descending, as I prefer to locate an apiary on a side-hill when I can, to secure good drainage; and I believe the bees can locate their respective hives much better than on a level plot, especially the young queens when they go out to mate; and as the honey-house is at the lower side of the apiary, I find it much easier to carry the honey down hill than on a level. Again, as each and every hive can be seen from the honey house, the attendant can be watching for swarms while at work inside; and if a swarm issues he can locate the hive at once. This picture somewhat misrepresents the apiary, as one would imagine by looking at it that the ground is quite descending; but, as you know, it is not any too much so. The picture also represents the hives as being set on the amphitheater plan, when they are not, but instead are set in straight rows. I have three apiaries located on level ground; and I find in the spring, when the snow is melting, that snow-water often settles around the hives, making it too damp for the welfare of the bees. Here I stand in front with a brood-comb in my hands, and Mr. Hinds is a little way further up, with a swarm-catcher in his hands; and a little further up stands Mr. Williams; and a little to the right, standing on the edge of the ledge, is a neighbor's boy; while back of the boy, in the distance, is a mountain two miles and a half away. I am sorry this apiary does not face east or south-east, as nearly all my other apiaries do; but instead it faces south-west; however, perhaps the bees do as well as though they faced some other direction, as four years ago Mr. McFarland took from 117 colonies, spring count, in this apiary five tons of comb honey and 500 lbs. of extracted honey, and increased to 176 colonies." A. E. MANUM.

Bristol, Vt.

Friend M., you are exceedingly obliged, not only for your excellent pictures, which we think our engravers have succeeded wonderfully in copying, but as well for your pen-pictures. The group of helpers is wonderfully lifelike and suggestive. No wonder you enjoy your work. Your boy Fred looks as if he might do a pile of work, and possibly a pile of mischief, if it were the order of the day. We are very glad indeed to see one lady among your number; and it will doubtless be encouraging to her sex to know that she succeeded in getting a crop of honey that would be a credit to almost any of the men-folks. Very likely your helpers have different plans and ways of working; and may be they are as unlike in their disposition as in their looks; but the very

thought of having such a lot of friends, not only willing but capable, round about you, to lend a helping hand, when many duties press, is in itself inspiring. We can not all very well set others at work, for God has given us different talents and abilities; but we can, each and every one of us, be helpful to those round about us; and in my opinion it is right in this line where the greatest happiness and enjoyment come to every human being. "Not to be ministered unto, but to minister." Your apiary on the hillside was a very attractive and suggestive picture to me when I first set eyes on it. In our first apiary, as you may remember, we had a honey-house in the center, and the hives all around it; but although the honey-house had a door at each end, there was always something going on behind the house, which we could not see. For this reason I decided that our apiary at the Home of the Honey-bees should have no building, tree, or other obstruction, in the center. But your arrangement of hives placed on the hillside, facing the honey-house, fills the bill exactly. Providence permitting, I hope to see it some time, friend M.; and may be you or Fred, and perhaps some of the other helpers, if they are not too busy, will go with me to the top of the mountain, away off in the background. Hills and mountains, with running springs at their bases, will probably be hobbies of mine so long as I live; and when I come to visit you, I want you to point out to me all the springs and all the running water that is to be found round about your home.

COST OF MOVING BEES.

FRIEND DOOLITTLE RECONSIDERS SOME OF THE ANSWERS.

WITH your permission, Mr. Editor, I wish to say a few words regarding some of the answers to question 134, relative to moving bees to and from out-apiaries. Dr. Mason's answer to that question was simply astounding to me. Is not the bee-keeper to have any pay for the labor which he or she performs? He says it does not cost him any thing, generally, to move bees, for he has his own horse, etc. Has he got such a kind of horse that it does not cost him any thing to keep him? If so, I wish he would purchase one of the same kind for me and ship it out here. If he will do this for me, using that same kind of time which he uses in moving bees, that kind which costs nothing, I will say "thanks" to him for his pay, and mean it from the bottom of my heart. The whole thing reminds me of a little incident which happened several years ago, when I was obliged to economize as closely as possible the money which came in from the bees, to make it meet the outgoes which I had to furnish by way of hives, etc.; for I resolved, after the first outlay on the bees in the beginning, that I would not pay out a cent further on them unless they brought it in to me to use for them. Having this in view, I went to see a neighbor who had some nice whitewood lumber, thinking that I could buy it cheaper than I could hire a team and go to the city and buy pine. When I asked the price of the lumber, he said it would be \$30 per thousand feet. When I demurred

a little, and replied that said price was all he could get for his lumber drawn to the city, many miles away, he replied that "he had to go to the city occasionally, and when going he could draw a load of lumber just as well as not, so that the drawing cost him nothing." Seeing my opportunity, I said: "I have been hesitating about buying this whitewood lumber for some time, because I prefer pine at the same price; and as you are going to the city occasionally, I should be pleased to have you put on a load of pine the next time you are there, and draw it back to me on the same terms you draw this whitewood lumber there."

Did he draw it for me? Oh, no! but he said he would do so for \$5.00 a load. Now, Dr. A. B. Mason, it costs you just as much to move those bees as it would to hire it done; hence I say that the cost in moving bees *does* figure in the matter of honey-production at out-apiaries. I believe that it costs the doctor much more to move those bees himself than it would to hire it done; and if he will stop to think a little I believe he will agree with me. Suppose he had put the same energy that he has put into the bees into some other calling in life, say dentistry, would he not have received as good pay for his time as he now receives from the bees? Undoubtedly; for I know of dentists that average their \$10 a day, or at least it is reported that they do. Now, if a dentist (as I believe Dr. Mason is), and having your time fully occupied with that specialty without "dabbling" with bees, how much would it take, doctor, to hire you to move bees for me, were you a near neighbor of mine? The point I wish to get at, is, that every man deserves pay according to the skill and energy which he puts into his profession, and that the bee-keeper is worthy of just as much pay for the skill, energy, and labor performed as he would be were he in any other profession in life.

In answering the same question, the Rambler says that the cost should be about 25 cts. per hour for labor performed by a man skillful enough to do such work as it should be done. I would ask him if he would work for that price during the hurrying part of the season of some four to six months, when many who have put no more thought into their profession than he has in the bee-business, get three times that pay for their labor. I would not. Look at what he expects to do in a little more than four minutes; prepare a colony of bees for shipment or hauling, carry it to the wagon and see that it is properly loaded, go with it five miles, then unload it, carry it to the stand it is to occupy, see that it is properly placed thereon, then take off the fixings that were used in shipping, getting it in proper shape to work during the season; doing all this for less than two cents! Surely bee-keeping must be light and pleasant work, for "the bees work for nothing and board themselves," while it costs only about two cents to do all of the above, where a skillful apiarist is permitted to furnish the muscle. Brethren, let us hear less of this nonsense, else the consumer will ere long think we should give them what honey they want to eat, and bring it around to their doors in the bargain.

QUEEN-CELLS OVER A QUEEN-EXCLUDING HONEY-BOARD.

On page 590 of GLEANINGS for July 15th I see Bro. Stachelhausen says that in his locality, during the horsemint honey-flow, queen-cells will be destroyed over a queen-excluding honey-board. I am very much surprised at this, unless by mistake he has

let a queen hatch above, in which case the cells are always torn down which are already built, and those in process of building are deserted; but so long as there is no queen at liberty in the apartment where the cells are, I have never had a single cell destroyed, out of *thousands* so reared, at all times of the year, when bees could fly, and covering a period of over six years. I also have had reports from many who have tried the plan, and Bro. S. is the first one who has ever reported such a thing as a failure in getting queen-cells built and matured over a queen-excluder. I am now having, after our honey season is over, and bees trying to rob, queen-cells built and completed, virgin queens from one to ten days old kept in nurseries, virgin queens hatched and mated, and laying queens doing good work above queen-excluding honey-boards, with the old queen doing duty below, just as I gave in my book, and have been having the same success ever since the basswood opened. By the addition of a little wire cloth, I believe I have perfected the plan of having queens fertilized, as I give in the book, so it will work at any time and in all localities.

G. M. DOOLITTLE.

Borodino, N. Y., Aug. 2, 1889.

Very good, old friend. I am glad you have taken up this side of the question. The only plea that can be made in favor of charging nothing for your work with bees, that I know of, is that it is recreation outside of office hours. I think if Dr. Mason had as many out-apiaries, however, as some of the Wisconsin brethren, he would begin to think that the bees were the *business*, and recreation of some other kind would in time be needed. In summing up the expense of any such work, I think the operator should charge the time, or mention the amount of time consumed. Even if it were done nights and mornings, or outside of regular business hours, statements for print should figure in the cost. Our agricultural papers give glowing accounts of what may be done with many of our rural industries, omitting entirely to mention the time occupied, and brain and muscle consumed, for it does take time, brain, and muscle to make a success of any of these enticing industries.

AMONG THE BEE-KEEPERS OF VERMONT.

A VISIT TO J. E. CRANE AND J. H. LARRABEE.

MR. CRANE has an attractive home toward the outskirts of Middlebury. In the rear of the modern house, with its lawn-bordered porches, are connected buildings of similar style containing the stable, work-shop, and honey-room. Here he and one of his men were busily engaged weighing and crating comb honey for market. Crates taking 20 sections were placed upon the scales, and filled, the last few sections being changed until the weight came out even pounds. Piled near by were a lot of filled crates ready to be shipped. Part of the sections were glassed; the rest were in paper cartons, neatly printed with his address.

Mr. Crane, who has long been known as a producer and dealer in comb honey, has probably marketed all together more than any one else in the State, if not in New England, and is, therefore, not

unfamiliar with what the trade demands. He began with a few colonies in 1866, and has followed the changes and improvements up to the present time. As an advanced and experienced bee-master he has few equals. His location, one of the best for white clover, has been favorable to success. At one time, when canal-boats were the means of travel, he took his crop to New York and sold it at a price that would bring a fortune to the extensive producer of to-day.

Although we came rather unexpectedly, he obligingly left his work and showed us about. In an inner room, another hand was sorting and cleaning sections. Here we saw a section crate made to hold the ordinary closed-side section with separators, and which met our ideas nearer than any thing we had ever seen or heard of. It was simple, easily and cheaply made, protected the sections both top and bottom; and by a follower and simple wedge, sections were crowded tightly together. It was a simple box, with solid sides and ends, with slat bottom firmly nailed. Slat were as wide as the narrow piece of section. Movable wood separators were used, and the ends projected into slots sawed in the sides of the case. These were wide enough to give some play. There was no bee-space at either top or bottom of the crate. When on the hive, the space above the frames gives one bee-space beneath the first crate, and none is allowed between the others.

Sections come out cleaner than from any arrangement we had ever seen; and what cleaning is necessary is done with less labor. The tops of a crateful are all cleaned and scraped before removing; and when emptied, and the crates cleaned, they may be loosely filled with the cleaned comb honey, and tiered up in the honey-house to ripen. Blocks may be put under the corners of each case to raise each a little from the other, to give a free circulation of air. It was made to cover the brood-chamber of the large hive he uses. We should be inclined to make it in two parts, so that the outside could be brought to the center when desired. He uses the large Quinby hanging frame, and in the home apiary were many of these hives. Here we were shown some very fine Italian queens. He manufactures a smoker of heavy tin, with double valve to protect the bellows from fire, and which differs from others in many respects.

We were driven to the out-yards, in which we were much interested. They are from three to six miles apart. All colonies were in chaff hives, with movable outer case, although different from what we saw at Manum's. Entrances were level with bottom-board instead of being underneath. Hives were numbered, and arranged in groups of four or five, facing outward instead of in rows. At each yard is a small work-shop. To get the bees out of sections, cases of honey are taken from the hives, placed in a dry-goods box, and covered with a cloth which is occasionally turned. One apiary is located in the edge of a wood where they are protected from winds. The underbrush is cleared away, and we think the apiarist in charge must appreciate the situation in the heat of summer. Queens are kept clipped, and at the beginning of the honey season they are removed to prevent the issue of natural swarms. This plan has been described in GLEANINGS. Mr. Crane, with Captain Hetherington and P. H. Elwood, who have been studying this problem, have adopted it in preference to any other.

Sweet clover is very plentiful throughout this region, the roadsides being covered with it, and it furnishes some honey. In 1868 Mr. Crane commenced to plant alsike clover; and since, many in that vicinity have grown it.

The season of 1869 was one of the best, and he secured 3000 lbs. of comb honey from about 120 colonies. In 1883, 26,000 lbs. from 300 colonies. In 1885 his crop was 23,000 lbs. In 1887, 18,500 lbs.; and last season, from 550 colonies in the spring he secured about 11,000 lbs. of comb honey. During the season, this number in five yards of about 150 colonies each are cared for by himself and three men.

Although long an "advocate of wintering on summer stands," he has lately come out in favor of cellar wintering.

Mr. Crane is of middle age, of good height, spare, rather nervous, and of light complexion. He has a wife and one boy, a bright child of six or seven years, of which he is very proud. He is a prominent Prohibitionist in his town, and is interested in church work. He has followed bee-keeping because his health was not of the best, and he was obliged to give up other aims. For the same reason he does not further extend his operations nor write more for bee-journals. He informs me that the first bee-book published in America was printed in Middlebury, just fifty-two years ago.

Our time being limited, we reluctantly took leave of Mr. Crane and family, and boarded the train for Larrabee's Point, where we hoped to find Mr. J. H. Larrabee at home.

The station is on the Addison branch, between Leicester Junction, on the Central Vermont Railroad, and Ticonderoga. After passing the stations of Whiting, Shoreham, and Orwell, and just before the train crossed the trestle and drawbridge over Lake Champlain, which is here quite narrow, we were dropped at a crossing near which was friend Larrabee's home.

After making inquiries we started off across the fields; and after a half-mile walk reached our destination. Here the bee-keeper's eye at once noted a good number of neatly painted chaff hives, arranged on ground which slopes to the south, from the pleasant and comfortable-looking farmhouse, with its wide front porch and guard of trees and shrubs.

We were heartily welcomed by both Mrs. Larrabee and son, the only ones of the family at home during our stay, which they made very pleasant.

John Larrabee is a bright young man of about 25 years, and is social and very friendly. He has had bees five years, and now keeps 98 colonies, mostly blacks, with a few colonies of hybrids and pure Italians. All are in chaff hives with movable outer cases.

The soil here is a heavy clay, and white clover is very plentiful. There is some basswood on the ridges, and sweet clover abounds on all the roadsides, although the latter, he informs us, gives no surplus. His bees have paid their way from the start. In 1885 he increased from 8 to 18 colonies, and obtained, 500 lbs. of comb honey besides. That season the bees gathered clover honey from the middle of June till the middle of September. In 1887 he obtained from 30 colonies, 2000 lbs. of comb honey. Last season he secured, from 98 colonies, 2300 lbs. His comb honey was put up in cases holding twelve 1-lb. sections, and the quality and flavor were fine.

His home being within half a mile of Lake Champlain, and about opposite Ticonderoga, there is a fine view of the lake, with its passing boats, the old fort on the further shore, and the Adirondack Mountains in the background.
Pawtucket, R. I. SAMUEL CUSHMAN.

In your opening paragraph you hint at an idea I have often longed for, but did not know that it had ever been made practical; namely, having crates holding an exact number of pounds. Just think of telling your grocery or commission man that your load contains 50 cases of honey, with 20 lbs. in a case, just 1000 lbs. and you might add that, as the agreed price was 15 cts., he could just hand over his check for \$150, and that would be all of it. Now think of the other plan of having every one of the 50 cases have odd pounds and ounces, to be figured and added and blundered over! It seems to me, however, that it would need quite a little assorting to make them come out right. With an expert hand, however, I do not know but that it might be done. I think that Dr. Miller might do it without very much trouble, especially if he had his wife and sister to handle the sections, without bumping them or making any of them leak.—We remember friends Crane and Larabee as progressive bee-keepers for many years past. We are glad indeed that you dropped down on them and let us know what they are up to. We are glad to know that they have not been letting the grass grow under their feet, even though they have not given us very much for the journals of late.

WIRE TOP-BARS.

QUEEN-TRAPS, ETC.

NOTICING your foot-notes following A. L. Kildo's letter on page 632, I wish to say that I began making the Langstroth hive from directions given in father Langstroth's old edition of "The Hive and Honey-bee." In that book you will find that the top-bars are to be made $1\frac{1}{2}$ inches wide; and you will see that, by putting them in a $1\frac{1}{4}$ space, they will be pretty close together. I was very glad to change to one inch, and from that to $\frac{3}{4}$, and found each change beneficial. While it may be true that a few less brace-combs may be built between the top surface of the top-bars, and any honey-board or surplus receptacle above, it is a fact that it by no means prevents a good many brace-combs being built there; but then the worst of it is, they plug in hard combs, or more properly wax plugs, between the edges of the top-bars when put so close together, which makes the frames well nigh immovable. I am very sure that whoever makes any top-bars to frames more than $\frac{3}{4}$ wide will regret it. Some 12 years ago I experimented quite largely with making top-bars so thick that the right-angled sides ran down toward the bottom of the hive $\frac{3}{4}$ or $\frac{1}{2}$ of an inch before the V began. I liked these bars very much because they were stiff, and bees were less inclined to build brace-combs either between or above them. Still, they would build more or less. I should use such bars now were I not using frames wired with full sheets of foundation which I consider preferable to

every thing else, and $\frac{3}{4}$ is the right width for the Langstroth frames, and $\frac{1}{2}$ less for the Heddon frames.

QUEEN AND DRONE TRAP.

This subject has interested bee-keepers to no small extent. On page 22 of my book is illustrated and described the best trap of the kind which, to my notion, has yet been devised, and yet I have abandoned it. On page 637, last GLEANINGS, in your foot-notes to Query No. 137, you pen the following: "With the Dovetailed hive we have lately been using an ordinary queen-excluding honey-board between the bottom-board and the brood-chamber. Unlike the ordinary drone-excluders and queen-traps attached to the entrance itself, it causes no obstruction to the bees passing in and out." And you should have added, "To the ventilation of the hive or the air passing in and out." But to show you that I have experimented largely with this principle, and, I believe, ante-dated all others in writing about it, let me refer you to page 104 of my book, written in 1884, and from it I quote the following regarding the "New" hive:

I believe that, by virtue of the style and method of adjustment of the bottom-board, cases, and honey-board, by using the latter, made queen-excluding, we can place them in such a way as to control swarming and flight of drones, without the serious objections realized by the use of entrance attachments, which we have enumerated on pages 22 and 23.

If you place one of the queen-excluding honey-boards on the bottom-board, and the brood-cases upon it, you will preserve proper bee-spaces throughout, and force all bees to pass through the honey-board, in leaving or entering the hive. The drones and queen can not leave or enter the cases. By experiment we found that this arrangement did not retard ventilation, nor in any way disturb the normal tranquility of the colony; but further than this we have not experimented. What shall we do with our imprisoned drones? How can we catch our queens, when they attempt to go out with the swarms?

I have faith in a simple arrangement for catching and holding them imprisoned, in a movable box, adjusted to the side of the brood-chamber, near the front end, but not in front of the entrance; thus in no way retarding ventilation, or egress and ingress of the workers. As soon as perfected and tested, it will be publicly described, and attached to the New hive, if proven a practical success.

I will add, that further experiments with the queen-excluding honey-board below the brood-chamber prove very satisfactory in some cases; yet there is some trouble with it which I will not take space to detail here. However, it is far ahead of any entrance arrangement, in my estimation. I will further add, that it is better to have the honey-board which is used in this position *all metal*, such as I wrote you about when father Langstroth was visiting me a year ago last spring.

Now, as to the "simple arrangement" for catching and holding drones and queens at the side of the hive near the front, mentioned in my book as above quoted, it is a perfect success; and although any one skilled in the art could go on and successfully make it after simply giving the above hint, I will, if you desire, describe it in a future article. That this arrangement is far ahead of any entrance arrangement for the purpose, there is no doubt. Still, I do doubt whether or not, in rapid and cheap honey-production, any of it is of much value; and, further, I wish to add that, in the production of comb honey, queen-excluding is of very little value—perhaps not enough to pay bee-keepers at large for using queen-excluding metal, provided they use the bee-space break-joint honey-board, which

will as surely come into general use among practical honey-producers as did the Langstroth hive.

JAMES HEDDON.

Dowagiac, Mich., Aug. 5, 1889.

Your experience with wide top-bars has been ours almost exactly. I first commenced with a hive made after Langstroth's book, as you did; and I kept making the top-bars narrower until I got down to $\frac{3}{4}$ of an inch. Then I increased their width until we had them $\frac{1}{2}$, and settled down upon the latter dimension as the best for the purpose. Our metal corners were then made just right for the $\frac{1}{2}$ lumber. I know that top-bars very thick up and down do a great deal to discourage brace-combs; but by the use of wired frames, we, like yourself, greatly prefer to have brood in place of the useless wood, as much as we can.

BEE-HATS FOR WOMEN.

BY AN AMATEUR LADY BEE-KEEPER.

AS an amateur bee-keeper I was much interested in Mrs. Harrison's article on "Attire for the Apiary," in GLEANINGS of April 1st. She seems to have found some difficulty in making a suitable hat; and as I have nowhere seen or heard of a hat which so perfectly meets the demand of lady apiculturists as that arranged by Mrs. R. H. Holmes, of Shoreham, Vt., I should like to give the readers of GLEANINGS the benefit of her idea.



MRS. HOLMES' BEE-HAT.

The first thing needed is a wide-rimmed straw hat—mine measures five inches. For the veil, take a strip of mosquito-bar, wide enough to reach from the base of the crown on the outside of the hat to the arm-pits, and long enough to fit loosely around the shoulders, with the exception of about twelve inches, which is of the finest black bobinet lace. Join the ends. Turn in one edge and gather on to the base of the crown. Face the other edge with a strip of cotton cloth, fitting the shoulders tightly. At the back of the arm, attach a strap which passes under the arm and buttons on to the band in front. If necessary, run into the band a cord to tighten, as the occasion may require. The black bobinet is less trying to the eyes than any thing else, and is almost no obstruction to the sight. If properly made

there is no falling in on the neck, and no rubbing of the nose and chin, yet perfect freedom of movement to the head. I wore one last summer, and found it perfectly comfortable, as Mrs. Holmes assured me I would.

MISS G. M. WOLCOTT.

Shoreham, Vt., June 5, 1889.

Miss W., we are exceedingly obliged to you for the description you have given, and also for the excellent photograph you send along with it. Our engravers have succeeded excellently, we think, in reproducing it. We think, however, you would find the silk brussels net, which we use for our bee-veils, still better for the eyes than the bobinet, which you mention.

CUBA AGAIN.

O. O. POPPLETON GIVES US SOME ADDITIONAL FACTS CONCERNING THE ISLAND; BEE-KEEPING AND PROTECTION.

FRIEND ROOT:—On page 585 you ask me some questions which I will try to answer as briefly as possible. Our 50,000 lbs. of honey was sold to a firm in New York at 55 cents per gallon, all round, in bond; that is, Mr. Dussaq pays all expenses on it until delivered in a bonded warehouse in New York, purchaser paying all after expenses, including the import duty of 20 cents per gallon. This last item amounted to over \$800, so you and your readers can have some idea how the American idea of protection benefits our own beekeepers. Were that duty taken off by our Government, a few score of our experienced American apiarists could and probably would supply the markets of the States with cheap Cuban honey in a very short space of time. Our former year's crop was sold in bulk to friend Muth, in Cincinnati, he paying prices according to the different qualities.

A large part of the honey produced in Cuba goes to Antwerp, Belgium, where, I am told, it is used in making a certain grade of wine, and where the demand is able to absorb all honey raised in Cuba, but at a price less than is obtained by our beekeepers at home. I do not know any thing about the correctness of this information. A great deal of honey is shipped from here to New York, and re-shipped direct from there to Antwerp, if the market in New York will not warrant paying duty and selling there.

In the third paragraph of the second column, on page 584, you will find your question as to quality already answered. The hive on the scales was only an average colony; that is, it gave about 125 lbs. of honey, which is what the entire apiary, weak and strong, averaged, while some of the best colonies in the apiary gave about $2\frac{1}{2}$ times as much, and, of course, their record, if on scales, would have been about 16 or 17 lbs. on the best days. Mr. Manum's record was probably from one of his very best hives. In studying conditions, etc., I prefer to use the record of an average colony instead of either an extra weak or an extra strong one. I think we are then more apt to reach just conclusions. This is the mistake that has been made here in Cuba, taking into account the work of only the strong colonies in an apiary, instead of estimating from the entire apiary.

Excuse me, friend Root, for smiling at your question about irrigating; but I presume you had California in your mind when asking it. So far as

rains are concerned, Cuba is almost the direct opposite of California. There, not a drop falls for several months during the summer, and no large quantity during the winter. Here, rains come and floods descend, I might almost say daily, during the six hottest months in the year, and the wish is for less irrigation instead of more.

Yes, friend Root, GLEANINGS comes to a spot right here where bees gather honey every month in the year. Last summer, during the short period, notwithstanding our 400 colonies in one locality, nearly 20 of our colonies gathered their own supplies, sufficient to keep brood-rearing going in at least 8 or 10 frames each, and gave from 3 to 5 lbs. of surplus honey each month to their weaker neighbors. With a small apiary of, say, 50 to 100 colonies, I have no doubt but that a small amount of honey could be extracted every month in the year. Bees fairly roar on blossoms of the "royal palm" for half an hour each morning during this the shortest season for honey during the year.

Cuba contains nearly 46,000 square miles—some 6000 more than does the State of Ohio; and from all I can learn, I judge that nearly or quite all of the island will average as good for honey as does this locality, some places better. As we can calculate on a steady annual yield here of from 40,000 to 60,000 lbs., a few moments' calculation will show any one what an immense factor in the world's markets Cuban honey would become were all trade restrictions removed. It will be well for our people to ponder these facts whenever the question comes up of removing our protective duties.

Havana, Cuba, July 31, 1889. O. O. POPPLETON.

MORE ABOUT THAT BEE-DISEASE IN CALIFORNIA.

SOME GOOD HINTS FROM ONE OF LARGE EXPERIENCE.

IN the issue of July 15th, page 583, Mr. W. A. Webster warns the Ventura Co. bee-keepers of the new bee-disease. I am sorry to say that we have had it here for several years, but it has caused no serious apprehensions until recently. There are but three apiaries in the county that have suffered much loss from it as yet. I know of no colonies dying out entirely from it, except in those three apiaries; but they have lost several hundred colonies.

This disease appears every spring and summer, in a very few hives in nearly every apiary in the county; but it has caused no serious alarm until recently. The bees usually get over it themselves; but we do not get much honey from the hives that are so affected. A friend on the Ojai has been experimenting a little with the swarms that were thus diseased. He took the queen out and replaced her with another from a healthy hive. The disease entirely disappeared; and by putting the queen from the diseased hive into a hive that was perfectly healthy, it also became diseased in a very short time. This experiment was tried on only one or two hives in the same apiary. I will try to have others try the same experiment, and report. I have none so affected, or I would try the plan myself.

THE HONEY CROP A FAILURE.

The honey crop has been almost a failure here—only about 150 tons of honey in the county. That much, 150 tons, or 15 carloads, is a good deal of

honey, but we often have in this county 600 tons. Our crop is 32,000 lbs. Honey is selling here in Ventura to-day at 6¼ cts., in 60 lb. tins.

OUT-APIARIES, AND MOVING BEES IN CALIFORNIA.

I have just read C. C. Miller's "Out-Apiaries No. XI." with interest. In California we do a great deal of moving bees. In the spring of 1888 I moved two carloads of bees to the Costac (near Newhall). One load was the apiary that I bought of R. Wilkin, on the Sespe—the one that you have shown in the A B C. The other was one of my own that I moved from Ventura. The entire lot was moved without accident, but I do not always get off so well, for I have had many pretty narrow escapes for myself and team.

SUGGESTIONS ON MOVING BEES.

If friend Miller will pardon me, I should like to make a few suggestions. First, always have the bolt or wrench that holds the doubletrees to the tongue loose, so that it can be jerked out instantly. Second, be sure that the neck-yoke is so arranged that it will slip off the tongue without catching, so that, in case of an accident, you can jerk out the bolt with one hand, hold the doubletree with the other, and get the horses away from the wagon right speedily. Third, if you drive four or six horses, as we do here, always have the leaders attached to the tongue with hooks, so that you can unhook the leaders and drive them out of the way without having to stop to unhitch all of the tugs. Fourth, use snaps on the lines, and everywhere possible, especially on the holdback straps on the thills, if you use a one-horse wagon.

Two years ago I was moving an apiary. We used six horses, and had about 85 hives on the front wagon, and about 60 on the trail wagon. One of the hives on the front wagon burst with the weight of so many hives on top of it. They were piled up six high. The hive burst so that nearly all of the bees got out; but we got the six horses unhitched and out of the way without any of them getting stung, and had no assistance but a boy 24 years old. What a scrape we should have had if we had not taken the above-mentioned precautions. Since I have been in California I have moved over 2000 hives of bees, and have had no serious accident. But I used to get into all kinds of scrapes when I first commenced to move bees. When Dr. Miller comes to California to move bees he will have to put the combs lengthwise instead of crosswise of the wagon, to get over our roads without having a general smashup.

L. E. MERCER.

San Buena Ventura, Cal., July 24, 1889.

Thanks for your additional information, friend M. The more I think it over, and compare symptoms, the more I am inclined to the opinion that this California bee-disease is something similar to the nameless bee-disease described in the A B C book. The latter is always cured by the removal of the queen, so far as we have ever known; and you say that, in one or two instances already tried, the peculiar disease which has visited you in California yields to a similar treatment. I have written to friend Webster, asking him to send a few of the affected bees to Prof. Cook, who will doubtless give us further information in regard to it; also whether he considers it the same as the ordinary nameless bee-disease. Your suggestions on moving bees are good; and

friend Miller would, no doubt, indorse all of them, even to the last clause, were he in California.

are the common bee. I intend to change them to Italians in the spring, if I can keep them over winter.

L. F. BINGAMAN.

Wilkesburg, Pa., July 29, 1889.

There is only one thing we can think of, in view of the state of affairs you describe. We once left some combs where the moths could get at them. I think they were taken from the hives and left out a week or more in the month of June. Finally they were taken to the bees; but the moths had laid so many eggs in the combs that the miniature worms went to work in the larvæ just as you describe. There was nothing for the bees to do but to tumble them out, even when they were alive and kicking. In fact, they were obliged to dig all through the combs to get the worms out. Some of these moth worms, however, were so small as to be hardly visible to the naked eye. Of course, when the worms were all hatched, the trouble was all over. Italian bees will prove a remedy—that is, if the matter has not righted itself already.

WHY DID THE BEES KILL THEIR QUEEN?

A neighbor of mine got me to divide his bees. Although it was late in the season, I told him it could be done, but he would have to feed them up. The colony was very strong, and good Italians. I looked the combs over once to find their queen, and missed her; then I looked the second time very carefully, and failed again. I thought she might be on the side of the hive, so I got an empty hive to set some of the frames in, so I could see her. I lifted out a few frames and saw a ball of bees on the bottom of the hive. I knew that the queen was in it. I called for a pan of water, which was soon at hand. I dropped them into the water, and they soon let go of the queen, but she was stung to death. The bees were very gentle, and as they were getting plenty of honey from the basswood you know that they were not disposed to rob. Could they just have been in the act of superseding her at that time? There were no queen cells in the hive, but plenty of brood in all stages. The queen was very prolific.

BEES BY THE POUND.

In selling bees by the pound, can you take the bees from one place and get the queen from another place and put her with the bees that are not her own, in the cage together, without the bees killing the strange queen? NIMSHI NUZUM.

Boothsville, W. Va., July 29, 1889.

It sometimes happens that, when we disturb the brood-nest, the bees will commence balling their queen. They know that something is wrong, and in trying to locate the blame they pitch into the poor queen, and sometimes kill her, as in your case. But as a general thing, if you smoke the ball until dispersed, close the hive up immediately, and leave them alone, you will probably find the queen all right in a day or so afterward. Now, here is the point: Those who introduce their queens think they must look them over every four or five hours, instead of letting the bees release them by the Peet or candy plan. When the bees release the queen quietly, without any disturbance from the apiarist, they are much less inclined to sting her than if the apiarist himself releases her—an operation which

HEADS OF GRAIN

FROM DIFFERENT FIELDS.

HOW TO CURE CLOVER-BLOAT WITHOUT MEDICINE OR THE KNIFE.

I read with much interest the article on clover-bloat, by Prof. Cook, in GLEANINGS for June 15, page 488, and I was greatly surprised to hear him recommending the use of the knife "in severe cases." Now, I have never failed to cure a case of bloat, without either knife or medicine. I will instance one case. When I arrived I found the animal leaning against the fence (it was a milch cow), bloated apparently to the full extent the skin would hold, moaning pitifully, and wet with sweat, and in ten minutes after my arrival the bloat was gone and the cow was comparatively easy. My remedy is not original with myself, and is pretty generally known in some sections where I have been, and I have been waiting in the hope that some one more capable than myself would reply to the professor's article, and give

THE REMEDY.

Take a billet of wood, 1½ to 2 inches in diameter (round is preferable), and 18 to 20 inches long. Tie a stout cord to each end; force it back into the animal's mouth, and tie the cords to the horns; if it should be without horns, put a strap around the neck to tie to. This prevents the animal from closing the gullet, and the gas will rush out of the mouth with a sound that can be heard for some distance. In severe cases it is well to give half a pint of melted lard after the bloat is gone.

Galion, O., June 22, 1888.

A. W. MUMFORD.

Why, friend M., what you tell us is astonishing, at least to me. I did not know before that such a thing is possible. As I understand it, the cylinder of wood is simply to prop open the jaws. In the absence of a cord or any thing of the sort, could not relief be given by simply grasping the stick in both hands, putting the arm around the horns, and holding it in place until relief comes? So important a remedy should surely be generally understood and widely published. Have others succeeded in a similar way?

CARRYING OUT CAPPED BROOD.

I am writing for a little information concerning my bees. There is something wrong that I can't account for. I got one of your ABC books, but that does not appear to treat the trouble. The bees are carrying out the brood just about the time the larvæ are getting their legs and eyes, and they still have life in them. I will inclose one in this letter, to show you the size when carried out, and the brood-comb is apparently all wasting. It is in holes that I can put my fingers through in places. The comb appears to have a natural color for brood-combs. I have two colonies affected in the above way. They are both young swarms—one on the 15th of June, and the other on the 27th. They are from the same colony. Now, if you can give me any advice it will be thankfully received, as I should like to do a little in the bee-business. They

requires the pulling-apart of the hive and a general disturbance of the bees as a result. We try to emphasize to beginners to let the introducing-cage do the work itself. In regard to taking the bees from one hive and the queen from another, and mixing them in the shape of a pound package, we think the queen will be accepted in a majority of cases. Sometimes when we have had an untested queen that we wanted to send out with a pound of bees in a nucleus that could hardly spare the bees, we have made up a pound from three or four different hives, mixing the bees thoroughly together. After that we drop in the queen. We have never yet had a report that the queen in such cages was killed. It is simply carrying out the Doolittle plan. Ordinarily, the bees and queen should be taken from the same hive, as it is better not to take any risk—especially so as every shipper should guarantee safe delivery of a live queen, together with the pound of bees, to his customer.

AN APIARY VISITED BY A CYCLONE AND THEN BY A FLOOD; RECOVERY FROM THE WRECK.

Six weeks ago I almost made up my mind to write and tell you to put mine among the Reports Discouraging. Last January, if you remember, I wrote to you telling you of the cyclone playing havoc with our bees. Well, this time it is the flood. The flood of June 1st destroyed nearly all our bees (60 hives). A number of the hives were completely destroyed, and in the rest there were more than one-half of the bees drowned in each hive. If I had not made a boom of timbers around our beeyard, bees, hives, and all would have gone away. Before the flood, our hives were full of bees, and we were in hopes we should get a good crop of honey; but our hopes are blasted. To date I have taken about *fifteen pounds* of honey, and it will be about all we can get this year. But it is surprising how they have built up since the flood. All the brood, sealed and unsealed, in the hives during the flood, the bees carried out, and now the hives are full of bees again. Within a square of our place, nine houses, two large ice-houses, and two bridges, were carried away, besides a number of barns, etc. At one of the bridges fourteen persons were drowned. Newberry, my postoffice address, is a suburb of Williamsport, and I suppose you have read how Williamsport, has suffered.

FRANK W. LIGHTON
Newberry, Pa., July 29, 1889.

HOW I GOT RID OF FERTILE WORKERS; FORMING NEW COLONIES, ETC.

Not having time to go through with any scientific operations to get rid of fertile workers, I continued to give them brood from other colonies as fast as I thought they could take care of it. After awhile the fertile worker ceased laying; they raised a queen from the brood given them, and she is now tending to business with "neatness and dispatch."

HOW BEES SPREAD THE NEWS IN A HIVE.

I took a frame of brood with the bees adhering, and put them in a hive by themselves. I put an empty frame beside the one with the brood, and then a division-board. Then I brought another frame and shook the bees into the new hive, and returned the frame. I fastened a queen-cell on to the frame that had brood. I knew the young queen was about ready to emerge, because when I put

the small end of the cell up to my ear I could hear her at work inside. Well, in an hour or two I went to see how they were getting along, and found them contented and happy. Quite a number of them were around the entrance, going through all the operations usually found when bees have established themselves and are contented.

While I was watching, a bee came out in a tremendous state of excitement. It rushed pellmell against the first bee it came to, then whack head-first against another, over the top of the next, until it had visited every bee around the entrance. In fact, its whole anatomy seemed to vibrate with excitement. This took place late in the afternoon, toward evening; and next morning I found the young queen on the comb. Now, Mr. Root, do you suppose that that bee was on hand when the young queen made her appearance and was carrying the good news to the rest of the bees? I wonder if she heralded the advent of that queen throughout the length and breadth of the new settlement; and I wonder if there will be as great rejoicings when she returns (if she does) from a successful wedding-trip.

ARCH. DUNCAN.

Wyoming, Ont., Can., July 27, 1889.

Giving plenty of brood in all stages of development to any colony having a fertile worker will sooner or later cure it. In fact, fertile workers are only the result of keeping the hive too long without queen or brood. I have never noticed the kind of behavior of the bees you describe, when a queen is hatched; in fact, I have never seen them make any demonstration of the kind unless it was when a laying queen was given them, or a comb of brood. Bees that are hopelessly queenless, and have been so for some time, will usually manifest their joy when either queen or brood is given them, and they manifest it in much the way you describe. The hatching of a young queen might, under some circumstances, produce such an effect. But, as I have said, I have never been able to see that the colony took much if any notice of such an event.

HIVE-LEGS IN BOWLS OF WATER; PALMETTO HONEY.

Every thing we ordered came, and there was no damage of any kind. I guess you wondered what we wanted with so many bowls. I have my hives on stands, each having four legs. The bowls are placed so that each "leg" stands in a bowl. The bowls are kept full of water. In some I put a little salt. The bees get water and salt as they need it, while the large ants can not get at the bees. I believe in shade, and have my six colonies under palmetto-trees, which are just commencing to bloom. The bees get a nice honey from it, something like white-clover honey, if I remember aright. I may send you a sample if I find a piece of comb of small enough size. When I send samples I like to send comb honey.

ORANGE-TREES.

I do not think orange-trees give honey every year alike. While the conditions were so that at Orlando a drop of honey could be seen in the blossom, I looked ever so often at them here, and at first imagined the bees were getting pollen; but by observing them closely I found they went home loaded with honey. Each bee visited quite a number of blossoms, and the trees "hummed" with the

busy workers. I also noticed some trees loaded with bloom which the bees scarcely looked at. The scrub-palmetto was a failure here this season. Just now bees are "at home," and cross.

MISS CLARA SLOUGH.

Daytona, Fla., July 22, 1889.

We did wonder a little what was to be done with the bowls, my friend, but it is all very plain now. Perhaps our three-cent bowls are the cheapest thing that can be furnished for this purpose. One objection has come up against their use in this way, and especially where they are used in hot climates—the rapid evaporation of the water; but to prevent this, the surface of the water has been covered with a layer of oil.

THE IGNOTUM AS EARLY AS THE DWARF CHAMPION.

Yesterday, Aug. 6, I picked my first Ignotum tomato, but at the same time picked one from both a Mikado and a Dwarf Champion, so that with me they are not proving any earlier than the others. It is a smooth tomato, weighing a little over a quarter of a pound, but I have others which will be much larger.

K. A. CLARKE.

Groton, Ct., Aug. 7, 1889.

Why, friend C., nobody ever claimed that the Ignotum is an early tomato, so far as I know. It was not intended for such; but notwithstanding, I did mention that the first tomato I had ripen in the open air was the Ignotum last season. Now another season has proved that it is as early as the Dwarf Champion, for which so much has been claimed. Our experience is like yours. Our first-ripe tomatoes were picked about the same day, from the three you mention, also from two others which I shall speak of in another column.

ANOTHER REASON WHY ONE SHOULD JOIN THE CHURCH.

Will you allow me to add one more thought to your four good reasons why one should join the church? It is a reason which would come with convincing force to every reader. It is found in Matt. 12: 30: "He that is not for me is against me; and he that gathereth not with me, scattereth abroad." What will that sound like to the large mass of church-goers—that the blessed Jesus himself explicitly declared that he considers every one who is not positively working under his standard as really working for the evil one? Just as in a harvest-field, one cuts the grain, another binds the sheaves, and a third gathers them into the barn, while the fourth, though he may be *in the field*, and even looking on with complacency, yet, if he is not *actually assisting* in the harvest, will not be entitled to the reward.

Mons, Va., July 26, 1889.

A. H. VAN DOREN.

A GOOD SUGGESTION ON HOW TO BURN SULPHUR.

I put one or two pounds of lump or stick sulphur into an old cast-iron dish; set it outdoors on three stones, over a slow fire, to melt. While I am watching it I tear old calico into strips, a couple of inches wide and as many feet long; put some of these into the melted sulphur; and when they are saturated I take hold with pincers on one at a time, and raise it straight up to let it drain off. After a few seconds, when it is dry I throw it aside, going on in this way till the dish is wiped dry. For use, take one or two strips, according to your tight box or

closet; put into an old pan; fix a raised cover of another one to protect your goods close by; apply a match, and you will be surprised to see what a great smudge you can make with a minimum of sulphur and heat.

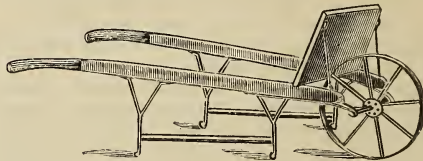
WM. GOLDSPOHN.

Lodi, Wis., July 29, 1889.

Your description reminds me of the way in which I used to see them fix their sulphur matches for brimstoning bees in my boyhood. I believe they did it exactly as you describe. But in this case is there no loss of sulphur from sublimation? or does it all get converted into sulphurous acid by burning?

HIVE BARROW—ANOTHER DEVICE OF H. FITZ HART.

Mr. Root:—In reply to your favor of July 2 I had forgotten to send you a drawing of my modified hive-cart. After sending you my idea that your artist so ably worked out in GLEANINGS of May 15, I chanced to see an old wheelbarrow, something of the pattern of your Daisy. I knocked out the bottom, put on two more legs, as shown, nailed a horizontal piece $2\frac{1}{2}$ inches from the ground, on the legs, in such a way that it would be level when the



barrow was being wheeled. To use it, I run it up to the hive I want to move, and drop it over; then I put a stick on the side-pieces, at each end of the hive, under the bottom-board. For use when taking out frames for extracting, I put a board on the two side pieces, and then pile my hives of full or empty frames on that. If made with two wheels instead of one I think it would be one of the most valuable articles about the bee-yard, especially where one is working 150 hives single handed, or has to move them in and out of the cellar.

Avery, La., July 6, 1889.

H. FITZ HART.

Very good, friend Hart; but we do not quite see what will hold the handle-bars of the barrow rigid. Is there not a liability of their wobbling sidewise, as you have represented it? On a good many accounts we think your hive cart illustrated on page 410 is better.

REVERSING OF HIVES AND SECTIONS; A CALIFORNIA APIARIST CONSIDERS IT.

I am greatly interested just now in some kind of a reversible frame of hive, or both. I have had a great deal of trouble this season to get the bees to go into the T supers to work in the sections. They would fill the lower part of the hive nearly to the bottom-bars with honey, and then laugh at me when I would look into the super to find it entirely empty. I fastened the frames in two hives so that I could reverse the whole hive. One of the colonies thus reversed took immediate possession of the super, and filled the 28 sections in about one week. The other did not go above after being reversed until I put on a super that was partly filled; then it went to work in earnest. I think that, if I could have reversed about 100 hives at the same time, I should have now several hundred dollars' worth of

comb honey. R. Wilkin has one of the Shuck reversible hives, which I have been examining. I think I should like it as a brood-chamber, to be used with the T super. Where can I get a few of the castings for the Hetherington reversible frame, shown on page 514? I wish to get as many reversible hives as I can this winter, and then select from them the one that I consider the most practicable for comb honey. I think it will be a long while before we get a more convenient hive for extracting from than a common L. hive.

L. E. MERCER.

San Buena Ventura, Cal.

I am exceedingly glad to see you give the above testimony in regard to the benefits of reversing. The same thing came up a year or two ago. But so many of our good bee-men have abandoned the reversing business entirely we were almost inclined to think it was a mistake. Very likely many of them never tried it. You ask why we do not try it here. Well, the truth is we seldom have our hives so crammed and loaded with honey as they do in places where there is a greater honey-yield, or where there are not so many colonies kept in a place. I think, friend M., if I were you I would experiment a little more before going largely into reversible hives. Our friend E. H. Cook, of the *Bee-hive*, says he always regarded the reversing craze as a "harmless lunacy." Will he try it a few times and see what he thinks of it? Perhaps he has; if so, we will take it all back.

A DEAF AND DUMB BEE-KEEPER.

I have been keeping 7 swarms of bees. I am deaf and dumb. I learned to handle bees about 3 years ago. I can tell signs of bees swarming out of the hives. I can't hear any humming, but my eyes see. I watch them every morning. I study your ABC of Bee Culture. I should like to keep a good many swarms of bees. Last week I took 35 sections of white honey. I expect to take about 75 more this week.

EDSON HULETT.

Pawlet, Vt., July 22, 1889.

We are glad to hear from you, friend H. We have at different times had quite a few bee-men on our list who were deaf and dumb; and, strange to tell, they are almost always good bee-keepers. What they lack in hearing, they somehow contrive to make up by sharp seeing.

SWARMING OUT, AND FORMING THREE CLUSTERS.

Quite a large swarm came off from my Heddon hive (I have only one of them) three weeks ago last Sunday morning, and settled in three separate clusters on a small peach-tree. I hived them all, in one hive, a one-story chaff, and they went right to work and have been doing well. How do you explain three separate clusters from one swarm?

Indiana, Pa., July 23, 1889. W. B. MARSHALL.

Very likely there were three queens, one in each cluster, and two of them, no doubt, were virgins, which went out with the swarm. The circumstance is nothing unusual.

REMINGTON'S PHARMACY; MORE GLUCOSE NONSENSE.

On pages 675 and 676 of Remington's Pharmacy the following is found. I give it verbatim, and you can draw your own conclusion, and remark there-

from: "It is not known whether honey is secreted by the bee or whether it exists ready formed in plants. The nectaries of flowers contain a sweet substance which is extracted by the insect. Large quantities of honey are obtained from California, the Southern States, and the West Indies. A still larger amount, however, is manufactured by flavoring and coloring artificial glucose." * * * * "Owing to the difficulty of obtaining pure honey in large cities and towns, its place in many official preparations has been filled by substituting syrup or glycerine."

GEO. F. WILLIAMS.

New Philadelphia, O., July 22, 1889.

That is the kind, friend W. Pitch into the cyclopedias and pharmacies, and dig up all their false statements. And now let us all go for the publishers. Can you not give us the address of the publishers, and the date when it was put out? The closing sentence is pretty cool indeed. Will the pharmacy please tell us the name of the city or town where pure honey is not to be had every day in the year, and in any quantity? If our cyclopedias and such like books of reference are going so much on the Rip Van Winkle style, they will soon find that our progressive American people will leave them high and dry on dusty shelves, unused and uncared for.

REPORTS ENCOURAGING.

Plenty of honey; from 14 to 31 colonies, and 700 lbs. of honey; best ever known here.

Thornville, O., July 26, 1889.

GEO. BEAGLE

I started with 19 colonies and now have 43. Have taken off 600 lbs. of section honey.

Little Rock, Ill., Aug. 5, 1889.

JESSE BRADY.

I have 12 colonies of bees. They are doing finely. Honey is only 8 and 10 cts. a pound for the best clover.

NEWTON NIXON.

Olds, Iowa, Aug. 6, 1889.

We had 43 colonies in the spring, which have increased to 70. Though the season has been very dry, we have extracted a little over 3600 lbs. of honey, chiefly clover and basswood.

FANNY POND.

Bloomington, Minn., July 30, 1889.

NO LOSS FOR THE LAST FOUR WINTERS, AND HONEY COMING IN AT THE RATE OF 5 LBS. PER DAY, ON THE SCALE HIVE.

You will have to put me in Reports Encouraging. I have wintered in the cellar four winters without the loss of any bees. I had 17 colonies, spring count, for 1889, and have had 15 new swarms. I use the Heddon method of hiving on the old stand, and do not have any after-swarms. My hives were full of honey when set out of the cellar, and have continued so up to basswood bloom. They put in a large amount of honey from the basswood, which closed a few days ago; but the honey-flow still continues from other flowers. Myscale hive indicates about 5 lbs. per day, of fine white honey. The honey-flow will continue here until frost comes. One swarm came out, and it left without clustering. I followed them to a hollow tree, about half a mile. I have Italians and hybrids. The Italians are the best honey-gatherers with me.

J. ROUSE,

Camden, Minn., July 27, 1889.

THE GREATEST HONEY-FLOW EVER KNOWN.

There has been the greatest honey-flow this year I have ever seen since I have had bees. I divided mine early, and both parts got strong, and swarmed. I started with 60 colonies, and increased to 130, and have taken over 4000 lbs. of honey—one-third comb, the rest extracted. The clover is still fair, with a good prospect of a full crop.

GEORGE BRIGGS.

New Sharon, Iowa, July 23, 1889.

ENCOURAGING FOR COLORADO.

This is the finest season for crops ever known in Colorado, and promises to be fine for honey. There are great fields of alfalfa, and it is being raised more and more, and very fine honey is made from it. Colorado promises to be a great honey State. Henry Knight, an extensive bee-keeper ten miles from Denver, sold six tons of honey last season.

Denver, Col., July 24, 1889.

J. L. PEABODY.

OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

All queries sent in for this department should be briefly stated, and free from any possible ambiguity. The question or questions should be written upon a separate slip of paper, and marked, "For Our Question-Box."

QUESTION 139—*a. Do you let the bees supersede the queen naturally? b. Or do you think it pays to supersede, as a rule, yourself, say in one or two years?*

a. No; b. Yes.

A. E. MANUM.

a. Generally; b. Yes, if she shows signs of failure.

S. I. FREEBORN.

a. Generally I do. b. That's an unsettled question with me.

C. C. MILLER.

a. Not as a rule. b. It pays, because you can select your breeding stock.

RAMBLER.

a. Yes, unless I have a poor one. Then I do the superseding.

A. B. MASON.

a. Yes, unless the queen has ceased to be prolific. b. I don't think that superseding queens pays, as a rule.

C. F. MUTH.

I always let the bees do the superseding, as they know best when to do it.

PAUL L. VIALON.

a. Very often we do. b. But it pays well to supersede, in all cases, yourself.

P. H. ELWOOD.

a. Yes. b. As a rule, I think it pays better to let the bees do their own superseding. They can do it cheaper, and with fewer mistakes, than I could.

J. A. GREEN.

a. I have usually left this to the bees; b. I shall look after it more in future. I believe it will pay to do so, if we can manage it so as to lose little or no time.

A. J. COOK.

a. No, not as a rule. b. Yes, I think it pays for us to take this business into our own hands. For a fuller answer to this question see article in GLEANINGS for 1888, page 525.

O. O. POPPLETON.

a. Yes, if they do so in time; b. When the queen begins to play out, and the bees do not supersede her, I kill her, and either supply the colony with another or let the bees raise one.

GEO. GRIMM.

In conducting large apiaries I think it pays best to leave this matter pretty much with the bees.

H. R. BOARDMAN.

Let the bees do it, as a rule, unless you notice that a queen is failing, when it is a good plan to replace her.

DADANT & SON.

a. As a rule, I do; but many times, when I find a queen is faulty in some respect, I supersede her; b. I should not supersede a queen that was a good layer and her progeny docile and good workers, even if she were three years old.

MRS. L. HARRISON.

a. Generally; b. Not unless I wish to change the strain of bees which certain colonies have. There are very few colonies indeed in my apiary which I could benefit by taking this matter into my own hands, as the bees know their wants along this line much better than I do.

G. M. DOOLITTLE.

My practice is to let the bees attend to that matter. I think they know rather better than I do when a queen needs superseding. Yet the practice of superseding, at two years old, all queens not known to be specially excellent, seems to commend itself as a sensible plan.

E. E. HASTY.

a. Yes, in many instances. b. Were I running an apiary exclusively for queen-rearing, I think I should do the superseding myself; but in running for surplus honey I should let the bees do it, except in a few instances here and there, when I happened to blunder on to the necessity, and had every thing in readiness to supersede with.

JAMES HEDDON.

a. Sometimes we find that a queen is not doing good work, then we kill her and give brood from some other good colony, and let them raise a queen. But as long as a queen is doing good work we don't destroy her. b. I think it pays to supersede a queen when she doesn't do good work, regardless of her age; but I would not supersede a good prolific queen on account of age. Let her remain as long as she does good work.

E. FRANCE.

a. Ordinarily I let the bees supersede the queens themselves; but if their merits are in any way doubtful, I kill them. I started cropping, intending to kill all two-year-olds; but I am thinking they will not give me a chance. In March, 1888, I cropped the left large wing of 283 old and young queens; in March of this season, only 80 of those queens were left, and I think that more than half of them are gone now. I am inclined to think that bees are more reckless of queens in California than in the States east. b. It will take a little more experience to decide about the paying.

R. WILKIN.

I am inclined to think there would be more superseding than there is if it were not so much bother, especially where there are large apiaries and out-apiaries besides. A great many start out with the determination to supersede every queen that is not first-class, as soon as she is discovered; and after awhile it becomes too much of a task to keep track of them, and, like Hasty's book, is abandoned. Most bee-keepers I visited, however, promptly replace poor queens when they come across them; and in several places, by asking questions I found they were in the habit of superseding queens where the bees were very cross, even though they produced good crops of honey.

QUESTION 140.—*a. What is the longest time you have known a queen to give good service? b. How long will queens usually give good service in the hive?*

- a. Five years; b. Two years. A. J. COOK.
 a. Three years; b. Two years. S. I. FREEBORN.
 a. Four years; b. Three. DADANT & SON.
 a. Three years; b. I think two years, on an average. E. FRANCE.
 a. Between four and five years; b. Three and one-half years. JAMES HEDDON.
 a. I have had some for four years. b. Usually two years. PAUL L. VIALLO.
 a. Four years. b. Not over three years, and very often not over two. J. A. GREEN.
 a. I hardly know; but I think not to exceed 3½ years; b. Three years. GEO. GRIMM.
 a. Almost four years. b. They are often as prolific as the best, in their third year. C. F. MUTH.
 a. If no mistake has been made in my entries, five years. b. Perhaps two to three years. C. C. MILLER.
 a. Five years; b. Two years. Usually, a queen hatched in June or July will be in her prime the next season. A. E. MANUM.
 a. Four years. b. Queens carefully bred, three years; but as a rule, I try to have queens not much over two years old. RAMBLER.
 a. Four seasons. b. For two full honey seasons. I am inclined to think, that here in Cuba not more than one full season. O. O. POPPLETON.
 a. Five years. b. Good queens, two years; the best, three years, if not crowded too hard, and two much hardship in wintering. P. H. ELWOOD.
 a. Four years; b. For two years; some, perhaps a half, for three years. I think that most begin to fail "a leetle" the third year. MRS. L. HARRISON.
 I doubt if the average queen can be made profitable more than three years; and I think the most useful period of their lives is spent in two years. H. R. BOARDMAN.
 a. Five years. b. With me, two years usually, although one of the best colonies I now have has a queen three years old, and is now better than ever before. A. B. MASON.
 a. Five years; b. The average life of my queens is not far from three years. If they do not do good work, the bees find it out and supersede them, this being done with some in the second year, and not till the fifth year with others. G. M. DOOLITTLE.
 a. Years ago, while living in Cadiz, O., I got a queen from Italy. I do not know how old she was when I got her. I kept her three years, and sold her, with the colony she was in, for \$15.00. The purchaser, the next season, had her stolen from his hive, so we lost the run of her. While I owned her she had one wing off, one leg off, and the foot off another leg, yet hobbled around and laid as many eggs as any queen I had. b. I should be inclined to consider queens good for three years, in the East, and for two years here. They get to rest more in the East. R. WILKIN.

As I neither clip wings nor raise queens for sale, nor run many colonies for extracted honey, my facilities for knowing the age of my queens are much less than usual. The long period that sections are on, where surplus comes in in September, as well as

in previous months, is a serious bar to knowing when queens are superseded. When I began bee-keeping I got a blank-book and entitled it "Queen Ledger," and was going to have the life history of every important queen all down in black and white. But somehow or other the thing didn't run well, and not a record in the book would be of any value if published. E. E. HASTY.

I am surprised to find that so many report having had queens that would do good service for four or five years. In regard to superseding queens, I once had a queen that I thought did not lay up to the standard, so I took her out of the hive and gave her to a friend who happened to be there. She was a fine Italian, and her bees were beautiful, and good workers. But the colony had been weak so long that I decided it was her fault. My friend, however, put her in a strong colony, and afterward decided that she was one of the best queens he had, even though she was in her second year. This incident has led me to be more careful in deciding too hastily that a queen ought to be superseded.

THE OLD GERMAN BROWN BEE.

BY W. P. HENDERSON.

How sweet to our taste was the honey of childhood,
 When corn was in tassel and robbing time came!
 The honey from linden, from poplar, and red-bud,
 From clover and vervain, was sweet "all the same."
 The long line of gums, and the bark shelter o'er them,
 The big roll of rags, and the buckets hard by—
 The neighborhood old folks, with cob pipe and long stem,
 And e'en the old black bee which stung near the eye.
 The wicked old black bee, the old native brown bee,
 That stinging old black bee that closed up the eye.
 Such nectar! such sweetness! oh, who but a laddie
 Could relish such chunks as they passed to and fro?
 For bee-bread and larvæ were mixed just as cut from
 The top of the gum to the cross sticks below.
 The mead and metheglin, and cherry-tart pies!
 Oh! who in his raising e'er wished or asked more?
 Come back, ye old times, and enliven our dotage,
 And give us the bee and the honey of yore—
 The thick linden honey—the honey-dew honey,
 The rich candied honey and stinging brown bee.
 How fondly we cling to and cherish the mem'ry
 Of hollow elm gums and the comb they contained!
 Of piggins and pails full, stored by in the pantry,
 And boiler with wax through the old meal-sack strained.
 Alas, what a change! now with sections and sling-
 ing,
 And fancy-marked bees from beyond the broad sea!
 No swarming, no tin pans to gladden life's evening,
 We sigh for the ugly old German brown bee.
 The old stinging workers—the brown colored workers,
 The dark-colored, homely, old spiteful brown bee.

Murfreesboro, Tenn.



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

HOW ALBERT MADE A NUCLEUS.

I had one stand of bees myself. When papa was extracting honey he would cut off the queen-cells and throw them away. I picked them up. I gathered young bees off the ground, and put them in a box, and the queen hatched out and became fertile. Papa extracted 120 lbs. of honey from my bees last year. ALBERT DEGLANDON, age 9.
McDade, Tex.

BIRDS AND DUCKS.

I do not know much about bees, so I will write about birds and ducks. There are many different kinds of birds. A little speckled bird has a nest in a small tree in our yard. There are four little birds in the nest. The old bird is very tame, and comes close to the door and eats the crumbs we throw out. We often throw crumbs out for them. Several years ago we had some ducks and a fish-pond. In the summer the water got low, and the ducks worried the fish to death. We sold the ducks and have raised none since. IDA HOWER, age 12.

Macy, Ind., July 7, 1889.

WHAT A LITTLE GIRL THINKS OF THE SERMON OF JULY 15.

I think the sermon of July 15 is good. I think that Christians ought to join the church as soon as they are converted. I joined the church when I was 11 years old, and I never have regretted it and never shall. I intend to live for Christ as long as I live. A protracted meeting begins at Dyer to-night, and I hope we shall have a revival of religion at this place. The county Sunday-school convention will be held at Dyer this month. I am very much interested in Sunday-schools, and I wish to attend and learn something if I can.

Dyer, Ark. ROSA MANUEL, age 14.

BEE-KEEPING IN FILLMORE CO., MINN.

Six years ago my father got two colonies of bees, and now we have 115. Mr. Shaw, one of our neighbors, had a colony of bees that swarmed three times in three days. Did you ever hear of such a thing? People say they never saw so much white clove as there is this year. There is a large number of runaway bees this year. One of our neighbors had a swarm of bees go into his barn, and another swarm went down the chimney of his house. Do

you think bees are deaf? Most people think bees can hear, but father says they can not. My brother found a swarm of bees at one of the neighbors'. He helped put it in a box, for they had no hive, and the last we heard from them they were doing nicely. PETER H. SEVEY, age 12.

Preston, Minn., July 22, 1889.

Yes, friend Peter, bees will swarm three times in three successive days; and if the queen's wings are defective this is nothing unusual. Tell your papa that those competent to know think bees can hear. We all have good evidences of it.

THROWING WATER AT SWARMS.

When our bees swarm we throw water at them, and they settle. We put salt water in the hive, and they go in. HATTIE FORREY.

Harrison, Kan., Mar. 30, 1889.

Water is a good thing to bring down swarms, but salt water, we feel sure, has little to do with making the swarm accept the hive.

PAPA'S BEES; THE NICE WHITE SECTIONS, ETC.

Papa has about 50 stands. We have had about 9 swarms this summer, and could have had more if we had wanted them; but papa cuts out the queen-cells, and that stops the swarming. He uses the Simplicity hive, and he thinks it is the best. He also uses the yucca brush when extracting. I like the little white sections you send us, when they come out of the hive, full of nice white honey.

Papa has taken the premium at the fair, and everywhere he has exhibited. He took out about 4000 lbs. of nice honey last season. He has the A B C book, and I like to read it very much.

Reno, Nevada. FLOSSIE MOORE, age 10.

PAPA'S BEE-CELLAR.

Pa moved all his bees, about sixty hives, two miles, a year ago last December, and put them in a new cellar under our new house, which looked nice and clean, with a cement floor. During the winter the cellar got awful damp and cold, nearly freezing. We did not move to the new house until March. About two-thirds of the hives were dead by the middle of May. We had no honey last year. Pa fed the bees on white sugar syrup last fall. We have a furnace in the cellar where the bees are this winter. Pa has a thermometer hanging on one hive, which stands about 47° or 48°.

FLORENCE M. HARTMAN, age 10.

Woodbridge, Ont., Can.

BEEES IN GERMANY.

The last report I have had from Germany, bees are doing well. They are gathering heather honey at present. Heather honey is about the best, and it blooms for a long time. This honey is sold in the comb, as it can not be extracted. The hives papa sent out with mamma are now filled with bees. Bee-keepers from all around have been looking at our hives, etc., in our German apiary.

To-day papa bought a large swarm. It cost about \$2.00; but he gave a smoker and an A B C book for it. Do you think it is worth it? Our bees are filling up boxes very fast. We had a lot of weak stocks which we united, and papa thinks that honey will bring a large price next fall. In GLEANINGS of July 15 I noticed that the price of extracted honey was 7 cts. per pound. We sell all our honey at

25 cts. per pound in New York, and have no trouble in getting this price. ANNA BLANKEN, age 12.
Jersey City, N. J., Aug. 1, 1889.

A TALK TO THE CHILDREN.

A LITTLE WOOLLY-HEADED BEE-KEEPER AWAY
DOWN IN LOUISIANA.

I HAVE been thinking a good deal about the juveniles of late. The way it came about was this: I took out the head of a barrel that A. I. Root had sent us, containing honey, cases, etc.

It was the pretty nails, that I drew out with the hammer, that pleased me so much. How smooth and bright, and how nice they felt to my fingers—so different from the rough ones I have been accustomed to handle! I hope that you will enjoy wire nails as much as I do. These nails made me think of what an old man once said to me: "My old days are my best days. When I was young, and we lost the fire, what a time we had to kindle it with flint and tinder-box! and now we can so easily strike a match!" I remember one of my cousins telling me that their fire went out, and they lived in a new country, far from neighbors, and that her "daddy" had to fire a gun into some shavings to kindle it. What I was thinking about, children, was this: That you are going to live in a yet better age than we are now living in. I thought about it as I sat in my rocking-chair and whacked together the pretty one-piece sections. How different our honey is from what I used to eat, taken from log gums, after the poor bees were smothered with burning sulphur! It tasted mighty good, though; and, didn't we have a licking good time for awhile, although the comb was black, and honey mixed with bee-bread?

We enjoyed ourselves just as much as you do now, and I sometimes think more, in going to school in log houses, carrying our dinners, and building playhouses at noon, visiting one another, and treating with sumac berries passed around on broken dishes. How delicious they were after frost! I was a child on the frontier, and there were no apples but crabs; wild strawberries had a better flavor than any tame ones I have ever tasted, and plenty of blackberries and plums.

By the way, I had a letter lately, from a lady away down in Louisiana. I got acquainted with her at New Orleans when I was at the bee convention, during the Exposition. Here is an extract: "I am a raiser of orphan children. I have raised five—three are with me now—one white and two negroes—all bound to me, as that is the terms of our taking them, in this State. I have had but one girl in the lot, and she is with me now. I have two boys of my own, and one white orphan boy. They are smart, industrious boys; but the little negro boy is a treasure. He is twin with the girl I have, but smaller and frail. They are both as black as coal. The boy is my right hand in the bee-yard. He is neatness itself, and keeps my things all in order. The white boy and he do the marketing together. They are each about ten years old."

Children, how many of us have as good a reputation as this little African? Wouldn't you like to see him in the apiary, with his woolly head? I should. I wish Mr. Root would get his picture, and put it in GLEANINGS, and the apiary with its beauti-

ful Southern flowers, pomegranates, and figs. Don't you?

MRS. L. HARRISON.

Peoria, Ill.

Thanks, Mrs. Harrison. We have enjoyed your talk very much. It would afford us great pleasure to make an engraving of the little woolly-headed bee-keeper, and the apiary with its beautiful Southern flowers, pomegranates, etc. Just tell your lady friend in Louisiana to procure a photograph at our expense, and have the same forwarded direct to us. We should be glad if she would also give us a short item to accompany the engraving.

OUR HOMES.

And Jonathan caused David to swear again, because he loved him: for he loved him as he loved his own soul.—I. SAM. 20: 17.

ONCE in a while we see friendships among men, somewhat like the friendship of David and Jonathan, as expressed in our text. At least, a few times in our lives we meet with those in whom we have such perfect confidence that nothing can shake it. There is a class of people who seem fond of telling that even such friends have been proved false; but I do not believe it. Whenever you meet a man who seems always rehearsing the frailties and wickednesses of his brother-men, be a little slow in giving him your confidence. The one who sees evil in his fellow-men, very likely judges others by himself. In my business relations I have found a good many in whom I have such perfect confidence that I should have no hesitation whatever in giving them my pocket-book, telling them to use what they like, and I should never care to count the money afterward to see what they took. Their word would be just as satisfactory, or more so, than an inspection of the pocket-book. While it is true, that we ought to be careful about putting so much confidence in anybody, and while we do best, perhaps, to wait till years have tested and tried our friends, I think we ought not to be backward in recognizing and accepting the good that is in our fellow-men, when we find it. So much for a preface to my little story.

After I had visited the bee-keepers of Boscobel, Wisconsin (as I will tell you about elsewhere), I was on board the train again for Richland Center, the principal point of my visit. Part of the trip was to be made on a caboose car attached to a freight train, and it got along rather slowly. In my pocket was a letter from a friend at Orion, Wis. In mapping out my trip, however, I decided—or, rather, Ernest and John decided for me—that I could not very well make Orion without considerable delay. Below is the letter I have been speaking of:

Brother Root, Dear Sir:—Here I come, with an invitation to you to come and see us at the Riverside Bee farm when you make your visit to friend Freeborn and our great basswood belt. Come, brother Root; come, if you can. I will lend you my Bible while you are here, to read. I will sit down and hear you read and explain; in fact, all you have to

do is to ask and you shall receive all within my power. I will meet you at Muscoda; bring you home to breakfast, dinner, supper, or even your noonday sleep; show you the beautiful valley of the Wisconsin River for miles and miles, by taking a small walk up on the bluff. I would make you as happy as I could while you are here. I would take you back to the station, bid you good-by; and then if my dear wife were alive and could have enjoyed your visit I should have been the happiest man living, having seen A. I. Root, of Medina, Ohio. My prayer is, and shall be, that it is the Lord's will that I may see you.

F. L. SNYDER.

Orion, Wis., June 15, 1889.

You may be sure I read the above letter several times, and it was with much regret that I made up my mind to forego such a kind invitation. For one thing, I felt curious to know why an entire stranger should so greatly desire to see me. I felt a little surprised, too, at the devout tone of the letter, expressed as it is in humble phrases. I decided I had never met *exactly* such a man as the writer. Well, while I was on that freight train waiting for them to unload and load at each station, I happened to listen to the conversation of a couple of men sitting on a pile of lumber near the track. One of them happened to speak the word "Orion." I at once stepped from the car, and, approaching him, said:

"Will you excuse me, sir? but you just now mentioned the name of the town of Orion. Will you please tell me how far distant it is from this point?"

"Why, it is only the matter of a mile and a half or so, just over the river;" and he pointed over his shoulder with his thumb, and went on with his talk.

Only a mile and a half from the man who wrote that kind letter! It was already near sundown, and I had bought my ticket to Richland Center; but as I looked along the sidewalk in the direction he pointed, the temptation to exchange the dusty freight car for a walk on foot was too strong to be resisted. Perhaps I am a little dull, but I did not remember at the time that the name of the town where we were stopping was Muscoda, the very place that friend Snyder mentions in his letter. Never mind the name of the town. I was within a mile and a half of the good friend who wrote that letter, and that was enough.

"All aboard!" shouted the conductor; but as I did not respond to his call, he spoke again.

"Here, you man, get on board quick."

I replied that I had decided to stop where I was.

"But you have paid your fare to Richland Center. If you want to go there, get on quick, for we haven't any time to lose."

I thanked him, but started off along that sidewalk that seemed so enticing, with its pretty shade-trees illumined by the rays of the declining sun. Before leaving home, my wife gave, as one plea to be permitted to stay, that I would always be pushing off into the country, or going off crosslots on foot; and then a woman—even such a one as her dear self (she did not say just that in so many words, but she knows very well

that no companion on earth is so pleasant to me as her own *dear self*) would only be a hindrance. Well, this was just one of those places where I enjoyed the liberty of going where I pleased and doing just as I pleased. There were livery stables, doubtless, in Muscoda, but I would not have exchanged the prospect of the walk in the evening, along that street, for the best livery rig that could have been furnished just then. Before I had gone many rods, however, it occurred to me that, if my good wife were present, she would have spoken something as follows:

"Now, look here, dear husband, you certainly should go to the hotel and get your supper before you go into that household and surprise them, and possibly upset them, by coming unexpectedly. Your good friend spoke of his *motherless* home. You can forego the livery if you choose, but get your supper first, so as not to make trouble."

I took my wife's advice—I mean the advice she would have given if she had been present. And by the way, friends, I have got much into the habit of late years of asking myself what my *wife* would do or advise under certain circumstances. So, very likely a great part of the credit you have given me at different times justly belongs to her. I had a very nice supper; and I enjoyed it the more because a nice pleasant gentleman sat at the table with me. Now, a good many people go through the world, especially while traveling, without talking. You can do as you please, of course; but I think we ought to get acquainted. Perhaps you have heard me say something of the kind before. Of course, I asked my companion at the table about the town of Orion, and whether he knew Mr. F. L. Snyder. After a little explanation he said he knew him. Then we talked about bees and other things. Several times I felt a little surprised that my companion seemed to get the hang of things as he did; and at the close of the meal he put out his hand and said something like this:

"Mr. Root, I am exceedingly glad to have had the pleasure of even twenty minutes' chat with the author of the A B C of Bee Culture."

He smiled a little as I replied:

"Why, my good sir, I have not even told you my name; and as you are not a bee-keeper yourself, what should you know of the A B C book?"

"Well, it is true I am not a bee-keeper, and never have been; but notwithstanding, I have read the A B C book, and enjoyed it. I wish you much pleasure in your visit among the bee-men of our State of Wisconsin."

It was now so late that I walked off hurriedly. The town of Boscobel seems to have been drawn out toward the river. We found pleasant residences and churches, and other fine buildings, for almost a mile; then we came to a toll-gate and a great long bridge. It was not a railroad bridge, but just a bridge for pedestrians and vehicles. And now burst on my gaze for the first time the Wisconsin River. Just as the sun

was disappearing I reached the further shore, and a little further on I reached the town of Orion, resting on the banks of the Wisconsin. The banks were grassy, clear to the water's edge. The waters were pure, and as clear as crystal, while many beautiful islands dotted the stream here and there. Now, I want to say, that, although I have seen many beautiful rivers in my travels, north, south, east, and west, I have never met any sight so entrancing as the Wisconsin River as it appears from the town of Orion. Seeing a group of men near the postoffice I approached them. As I came up I gathered that their conversation was about buckwheat. I smilingly broke in upon them, and asked if it were not likely there was a *bee-keeper* among the number, judging from their topic. Almost the first person I addressed proved to be Mr. Snyder. As he introduced me to the doctor I spoke to the little crowd something as follows:

"My friends, has it often occurred to you that you ought to thank God for the surpassing beauty that is spread out here before us around your home?"

The doctor replied:

"Mr. Root, the man who has lived to the age that most of us have here, and who has neglected or forgotten to do so, would be low and base indeed."

I love that village doctor, and always shall. A few more steps, and friend Snyder showed me his home. It is right on the banks of the river, directly opposite one of the most beautiful islands. The pasture lot for the cow is right on the hillside, sloping toward the river. Said hillside is so steep that I suggested to friend Snyder that I should be afraid the children in their plays might roll down into the river. But he said they never did.

After my walk I felt a little thirsty. I had planned to hunt up a glass of lemonade somewhere in the town, before going to friend Snyder's; but I came on him so suddenly that I did not have time. When, however, I invited him to go with me and get some lemonade he replied:

"Oh! we have lots of lemons at home, and nice cool water. Just see if I can't fix you up some that will fill the bill."

My wife says my only excess in the way of drinks is lemonade. And if she had not seen me drink a whole pitcherful after the labors of a hot summer day were over, so many times, she might feel worried as to the result. But it never hurts me a bit—no, not even if I drink a pitcherful just before going to bed. (Of course, I mean a *small* pitcher.) Well, if somebody should ask me where I found the nicest lemonade I ever tasted in my life, I would say that it was the pitcherful that friend Snyder's mother made for me that evening after my walk. Before I got the lemonade, however, I had to be introduced to the little ones of the household. They had all heard of Uncle Amos. Why, bless you, the baby's name was Ernest R. Since God had taken their mamma to her far-away home, friend Snyder has been almost father, and *mother* too,

to the little ones. They help him make garden, and they help him handle the bees; and, oh! isn't that a pretty garden and apiary on the banks of the river? No wonder friend Snyder has christened it "Riverside Apiary." We looked at the Ignatum tomatoes, and at various vegetables and plants that adorn their pretty little garden, grown from seeds bought of Uncle Amos; and the show of Chapman honey-plants was larger and finer than any thing of the kind I ever saw anywhere else. Why, the great balls were away up above our heads. The bees did not pay much attention to them, however, for basswood was just in its prime at the very time when these were blooming.

It was getting to be bed-time for the little folks, however, and I was duly installed in the big arm chair and given the family Bible. Before opening it, however, I wanted to know a little more of the particulars just why Uncle Amos came to be such a welcome guest in that little home. Friend Snyder is a "big man"—big in a good many ways. His home is but an humble cottage; but for all that, it is a home far pleasanter to me than the finest palace our land can furnish. One of the most beautiful sights I have ever beheld is to see a strong man devoted heart and soul to his own home, his garden, his bees, his children, and to the work of making the home for the little ones around him a pleasant and happy place; and, above all, letting Christ Jesus be "Lord of all" in the home. In answer to my inquiries my friend spoke something as follows:

"Mr. Root, my wife and I began reading GLEANINGS before we kept any bees at all. I am a carpenter by trade, and one of our neighbors here in Orion employed me one winter to make some bee-hives for him. One day while I was eating my dinner I happened to see a sort of magazine on the work-bench, that Mr. Stewart had been reading, and he probably forgot to take it home. I turned the pages over absently, and finally began to read the coarse print. The style of teaching rather pleased me, although I then neither knew nor cared about bees more than to make the hives as I was directed. I became more interested, and asked Mr. Stewart if he would just as soon lend me a few more of those journals. Of course, he was glad to do so, and through them I became acquainted with A. I. Root. I talked with my wife about it, and in due time we had some bees of our own. Of course, it did not take us very long to find out that A. I. Root was more devoted to one other matter than to the bees; and as we had begun to consider him as our teacher, we followed him through the Home Papers and Our Neighbors. Pretty soon we felt it a duty and a *privilege* to unite with the little band of Christian workers here in our town, and now you know why I wanted to see you here in my home."

My stay was necessarily short, in order to meet all the friends I expected to meet, or had promised to meet, and on this account I got only a glimpse of the pretty little church by starlight where friend Snyder and his wife had united with the people of

God. Very soon after they had become rooted and grounded in Christ Jesus, it became evident that God was calling his dear companion and the mother of his children to a home beyond. But cheerfully and peacefully she went down through the dark valley; and now that his loved companion is on the other shore, it is not strange that friend Snyder feels all the more drawn to the work of laying up treasures in heaven, as well as doing what he can to make proper provision for the motherless ones in his home. I planned to take a view of the river after sunrise in the morning, and also to visit the bluff mentioned in his letter, before taking my departure; but, alas for human plans! in the morning it was so foggy that getting a photograph of the river was out of the question; I did manage to get a couple of views of his exceedingly neat and pretty apiary, although I had to get it without direct sunshine, which is especially needed for the Kodak. A picture of the apiary will be given in a future number. In the morning, while we were talking, friend Snyder's oldest boy, who helps him with the bees, came in to say that a certain colony, calling it by number, was "hanging out."

"Well, what if they do hang out, my young friend; what do you do about it?"

He replied that his papa did not allow his bees to do that way.

"Ah, indeed," said I. "Well, friend Snyder, if you have a plan for keeping bees from hanging out, I should be glad to see it."

He smilingly replied, that, if he remembered correctly, it was a plan he learned of A. I. Root. His hives have movable bottoms, and in a minute or two a little block was put under each of the four corners. Then the lid of the hive was raised a little so as to let a draft of air through. It did the business. In a little time the bees that were on the front had all gone inside. In this way our friend manages so as to keep all of his bees in the hives; and I am inclined to think that he accomplishes a good thing by so doing; for when the bees commence to go out in the morning, no clusters are observed hanging about on the fronts of the hives while the others are at work. In other apiaries during my visit, many and many a time could I see bees, almost by the bushel, hanging idly on the outsides of the hives, even while the basswood flow was at its height. I am firmly convinced that tons of honey are lost by letting bees loaf when they should be at work. The shop and extracting-room were as neat as a pin. Great broad doors could be swung open at both ends of the building, so as to get any amount of air during the extracting time; and when the bees become troublesome, wire-cloth doors take the place of the ordinary ones.

Another attraction to me was the beautiful springs that bubbled forth at the base of the river bank near the water. There are beautiful fish in the Wisconsin River, and the way they keep fish for sale is to keep them alive in a basin made by one of these springs; then when you want a fish, instead

of going to a meat-market you just go and weigh up a live one, picked out of this spring, with the hands, and there it is, all ready to be dressed.

Some years ago the Wisconsin River was navigable for steamboats; but the Government, in attempting to improve the channel by means of some costly experiments, running up to something like half a million of dollars, did the very opposite of what they intended to do; that is, the theory of the plans did not work, and the river was made entirely unfit for steamers, while it answered very well before they did anything to it. It is bad enough for individuals to make blunders with their own property; but what shall we say when such blunders as the above are made?

Now, dear friends, I want to tell you that a peculiar tender relation always exists, or at least always should exist, between the one who has been led to Jesus and him who did the leading. There are doubtless many friendships in the world like the friendship of David and Jonathan; but there ought to be a hundred times more of them. Jonathan's father was David's most bitter enemy; but although his persecution and injustice were perhaps as great as any other man ever bore, David, would not, even to save himself from harm, touch a hair of Saul's head, or, in his own words, "The Lord forbid that I should stretch forth my hands against the Lord's anointed." His wife was Saul's daughter, and his best friend on earth was Saul's son. No wonder that his forbearance stands out like a landmark to encourage and cheer generation after generation not to become weary in well doing. Sometimes in going over our ledgers the clerks tell me that a certain one is behind in making his payments. When I glance at the name, old recollections come up. Perhaps the one in question was led to Christ years ago by the Home Papers. My directions are at once, "No, no; do not trouble him."

"But," replies the book-keeper, "we have waited a long while."

But my reply is, "Never mind; he will surely pay if it is a possible thing for him to do so; and if he is not, I am willing to lose it."

You see, after the letters that have passed between us we have learned to know each other, and a faith has come up that nothing can dim or diminish. I know this friend will pay me when he can, without taking the trouble to write to him at all. What a pleasant thing it is to have such a faith in your fellow-men!

And now, dear friends, we who are members of the different churches, or, if you choose, we who are followers of Christ, should have just such confidence in each other. We should be of one family, and there should be an especial bond or tie between us, that should say in our hearts, if not in words, "No, no; you must not speak nor write harshly nor unkindly to that man." Sacred and solemn ties make you of one kinship and one blood. "We be brethren."

OUR OWN APIARY.

CONDUCTED BY ERNEST R. ROOT.

BEES AND RED CLOVER.

IN the Question - Box department not many issues ago, the value of red clover was very lightly esteemed. This year Neighbor H. had 15 acres of peavine clover within an eighth of a mile, or such a matter, of his Lafayette apiary. Our bees had ceased working on white clover and basswood, and robbing was the order of the day. But the bees in the Lafayette apiary, some two miles south, instead of robbing, were busy on red clover. Neighbor H. thought they were just as busy on this as he had ever seen them on white clover; and as he desired me to see it I hitched up Bess (that is my new horse) and went down, accompanied by Elizabeth. Yes, there was that same happy roar in the apiary that we hear during our regular honey season, and bees were tumbling down in front of the entrances heavily loaded. The hives showed that a large amount of this new honey was being gathered. The flavor of the honey was very pronounced. While Elizabeth stayed by Bess to see that she did not break off the end of the thill and kill herself, as did my other horse, I started off a few rods in the direction of the peavine clover. I just wish that those who have any doubt as to whether Italians will work on red clover could have seen the sight that I saw, have seen, and expect to see again. There was the same contented hum of thousands of bees here and there, stopping to take a sip of those great big rosy heads of clover.

THOSE HONEY QUEENS.

It may be that there are some Italians that work better on red clover than others. Perhaps it should be said that the bees of the Lafayette apiary are almost wholly from those two imported honey queens, spoken of in this department before. As the progeny of these queens have shown themselves to be greatly superior to the progeny of other queens, Neighbor H. has made the bees of this apiary almost entirely the descendants of these queens, and the drones are reared entirely from them. While the particular strain of bees may have shown unusual energy on the red clover, yet it is a fact that the average Italians are red-clover bees—at least in our immediate vicinity. Even at our home apiary, when there is a field of red clover within range we almost always notice bees at work on it to a greater or less extent.

SMOKERS; HOW TO MAKE A CLARK SMOKER GO ALL DAY WITHOUT GOING OUT.

I notice that our friend Dr. Miller has some trouble with his smoker going out. As he fills his smoker in much the same way that we do, and as our smoker never goes out after being set fully going, I must lay the difference to the fuel. We use a kind of excelsior, such as I have before explained, that comes from the hand-holes of hives and crates. It is a rather spongy sawdust,

lasts well, and, I think, it never goes out when once *fully lighted*. Dr. Miller's plan of filling the smoker now is, I believe, the same as our own. We grab up a handful of the excelsior, after having made sure that the grate is clear; shove it into the fire-box, and cram in as much as we can, till we have quite a solid mass of packed sawdust and excelsior mixed. We then, with the point of a pencil, or with the end of the finger, punch a draft-hole centrally clear through the fuel. A match is lighted, and the bellows worked. The flame of the match will shoot into this draft-hole, and ignite. The bellows should be worked vigorously for some little time, until the fuel is well on fire. After that the smoke will last for some two or three hours, and never go out. At the end of this time we simply replenish by cramming in more excelsior sawdust, omitting, however, to make a draft-hole, which is unnecessary, on account of the remnant still burning from the first filling. To help Dr. Miller out, and his able assistant Emma, I have decided to send them a bag of this kind of fuel. If it does not work in his hands as it does in ours—well, I will lay it to locality.

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

OUR REPORT IN REGARD TO THE NEW VEGETABLES.

AUGUST 15.—The kidney wax bean has once more proved itself so greatly superior to both black German wax and the golden wax bean, that we are strongly inclined to drop the latter altogether. The black German wax is perhaps more tender and succulent when it gets old than the new kidney wax; but it rusts so badly that we feel almost like giving it up. The kidney wax is just as early as either. The pods are much larger, in greater profusion, and the one fact of having great long tender pods of immaculate whiteness, without a speck or blemish, is a big advance. If the beans are hoed when they are wet, they will be spotted, and show something like rust. They answer also very well for the first shell bean; but unless cooked immediately, the beans soon turn to a brownish color which is very forbidding. The white kidney beans are not nearly as forbidding in this respect; and as the York State marrow is a little earlier than any of them for a shell bean, we think we shall put it back in our price list again.

Henderson's bush lima bean is behaving itself admirably. None of them are yet ripe enough to show; but every stalk is loaded with beautiful broad pods, about the size of good-sized peapods, only having the appearance of a regular pole lima bean. The foliage also looks exactly like that of the pole lima.

The beans received from Colorado, that looked so much like Henderson's, all ran up poles. They are therefore, without question, the Seewee, or Carolina pole beans, while Henderson's is the same thing dwarf-

ed. As an illustration of how wonderfully prolific they promise to be, I will mention that I counted 100 pods on a single stalk. But very likely, these will not *all* mature.

This year again emphasizes the value of the Jersey Wakefield cabbage, H. A. March's strain, above any thing offered in the catalogues. The heads are so hard and solid that, if you undertake to handle a barrel of them, you begin to think it must be filled with cast iron; while if you purchase a barrel of cabbages from the city markets, you can toss the barrel into a wagon, without any trouble whatever. We have been planting the Jersey Wakefield pretty much altogether for cabbages during the whole summer. The only trouble is, they burst unless they are gathered promptly; but they are so much harder and so much crisper than any other, our customers willingly pay more for them.

Our celery has given us a great deal of trouble this season, because it runs up to seed, especially during hot weather. If anybody has a strain of celery that will give us early stalks, say in June, and not run up to seed, we should like to get hold of it. The Golden Self-blanching comes the nearest to filling the bill.

The Corey extra-early sweet corn has this season done wonders. We have had roasting-ears on the market for over four weeks before anybody else had any at all; and for all of two weeks we got 2 cts. an ear. We have managed this year so as to have one crop follow another just exactly as we wanted it. There has been no glut in the market, and we have had enough to supply all the demand at fair prices.

We are overloaded with cucumbers, however. We sold them for a good while at 10 cts. a pound, and then at 5 cts.; and now we offer them at a penny apiece, or 60 cts. per 100; and customers can have them just as big or just as little as they choose. The objection to selling cucumbers by the pound when they get to be very plentiful, is, that people begin to call for small ones; and of course we can not sell pickles by the pound at the same price that we do great big cucumbers; therefore they had better be sold by the hundred.

Grand Rapids lettuce and Henderson's New York are the standard kinds of lettuce for hot weather.

The Silver-King onion is the one for the market-gardener, providing he does not have too many at one time. They need to be sold about as fast as harvested, or they will rot.

The Stratagem pea is the standard for us, after we get through with the Alaska and American Wonder. It is not much trouble to sow them or drill them in, every ten days or two weeks.

I am very much pleased to be able to report Henderson's Puritan potato as standing with us at the head of the list. We have never had a nicer potato for cooking, especially for baking, in our household. Well-ripened potatoes, nicely baked, can be shaken out of the peeling by rapping on it with a knife, and the quality is equal to any. The shape is also equal to if not bet-

ter than any other potato we have ever got hold of. They come out of the ground so clean and white that one almost imagines they are Brahma hens' eggs. They are not quite as early as the Early Ohio; so the latter will still be retained as a first early potato. Last, but not least, they are wonderfully productive. To get our Early Ohios extra early, we planted large-sized whole potatoes; and, by the way, whenever you want potatoes before anybody else, plant whole ones, or, better still, sprout them in the greenhouse, and pick out the largest potatoes you have. Now, the Puritans were cut, most of the pieces, very small, in order to get the most possible from a limited quantity of seed; but the yield per row was fully equal to the Early Ohio. If it does everywhere as it does with us, it is going to be one of the staple potatoes.

Out of our 13 early pumpkins sent us by kind friends, just one has a ripe pumpkin on the vines at this date. It is not a yellow pumpkin, however, but it is of a light cream color. We are indebted for it to the writer of the following, which came to us on a postal card last winter:

Mr. Root:—I send you to-day a packet of pumpkin seed. It is light yellow in color, a new kind with us. It is excellent for pies.

J. T. VAN PETTEN.

Linn, Kan., Feb. 25, 1889.

Burpee has certainly given us an improvement in crook-neck summer squashes. His Mammoth Summer crook-neck is a sight to behold, on account of its immense size, and at the same time the quality is fully equal to the old kind.

The Ignatum and Dwarf Champion tomatoes fully sustain their reputation; but somebody, I can not now remember who, has given us a new tomato that threatens to overturn every thing else. It is the "Peach" tomato. They are wonderfully like peaches, and just as early as any thing we have. They are not very large, however; and the vital point is, can Livingston or somebody else make them larger? Now, it seems to me that friend Livingston and the catalogue makers were all of them singularly dull when they forgot or omitted to tell us that the Peach tomato is in one respect ahead of and above and beyond any other good-sized tomato. It never rots. How do I know? Why, because I recognized it as belonging to the Plum and Pear tomato family just as soon as I saw it, and these have never been known to rot. You may remember that we have discussed this matter before. We had seriously thought of holding on to the King Humbert; but it was shaped so much like a flat-iron instead of egg-shape, as the catalogues gave it, that nobody would have it. Now, the peach tomato has just as pretty a shape as any tomato ever brought out. Some of the specimens are as large as fair-sized peaches, but there are a great many rather small ones. Can it be made larger, and how soon can we have it? I should not omit to mention the fuzz, or bloom. It seems really comical to think that Nature, in her sporting, has copied the fuzz on the peach. But it is so. If you arrange them in a basket so that only the blossom end is visible, you

could cheat people very well. When they turn them over, and look at the stem end, then they discover that it is not a peach.

The Lorillard tomato, with us, rots the worst of any thing we ever got hold of; and almost all of our tomatoes, except the Peach, are rotting at the blossom end before they get ripe. Perhaps after they get down to the business of bearing ripe tomatoes, they will get over it. May be the great abundance of rain has something to do with it.

Our garden for testing honey-plants is now looking very pretty. A bed that was made of a five-cent package of mixed portulacas takes the shine, and also takes pretty much all the bees. The melissa, or beebalm, is pretty well covered with bees; but owing to the fact that only a few blossoms are out at a time, comparatively, it does not present the scene of activity as do the figwort and some others.

GLEANINGS IN BEE CULTURE,

Published Semi-Monthly.

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

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, AUG. 15, 1889.

Thy way is in the sea, and thy path in the great waters, and thy footsteps are not known.—PSALM 77:19.

WE notice by the last issue of the *Revista Apicola*, published in Spain, that Frank Benton's present address is Krainburg, Haute Carniole, Austria.

THE ILLUSTRATED HOME JOURNAL.

Published by Thomas G. Newman & Son, of Chicago, Ill., we are glad to recommend as being a first-class publication of the kind. It is well illustrated, and the matter all of it as it should be, suitable for the home. The price per year is now \$1.00 per annum, or we will club it with GLEANINGS for \$1.75.

A GREAT HONEY-YIELD IN TEMPE, ARIZONA.

YOU will notice by the statistical department that our friend Gregg, of Tempe, Arizona, reports 20,280 lbs. from 190 colonies. Now, this is the more astonishing to me, as Tempe is dependent entirely upon irrigation. They do not have any rain to amount to anything at all, if I am correct. My younger brother lives there, and I believe he is in the near neighborhood of Mr. Gregg. Now, then, friend G., if you have secured a crop of over 20,000 lbs. of honey, you can certainly afford to tell us all about it—what it came from, how you did it, etc. If the honey was produced by irrigation, may be some of the rest of us may bring in irrigation to make our honey crop a little surer than it is at present. In this connection perhaps it would be well to remark that Frank McNay, of Wisconsin, produced 20,000 lbs. from 32) colonies, and S. I. Freeborn, of the same State, 32,000 from 300 colonies. This latter about equals Mr. Gregg's yield per colony. Chas. Dadant & Son secured 35,000 lbs. from 400 colonies.

RAISING CELLS ABOVE QUEEN-EXCLUDING HONEY-BOARDS NOT NEW.

FRIEND Heddon has called our attention to the fact that the subject given in the heading is not new, and that, some five or six years ago, he discovered it was possible to raise cells and young queens above a queen-excluding honey-board. He has referred us to an article which he wrote on page 518 of GLEANINGS for 1885. A paragraph of it reads as follows:

I have also discovered that two queens can be kept in the hive, one on each side of the excluder. In fact, wherever I have used the excluder, as soon as I put eggs and young larvæ above it (where the queen could not go), queen-cells were started in quantity. In several instances last season, young queens were hatched. In two such, where we had put the queen above (to test the excluding powers of the board) she remained above, and a young queen was reared, hatched, and fertilized, below. This point is going to be of value to us in future.

He mentions the same thing in his book (published in 1885), on page 78, in similar language. Mr. J. D. Fooshe published the plan as new, and Doolittle corrects him by saying that the same was already given in his book. Now, Mr. Heddon bobs up and says he published it before either, and produces the printed proof. Notice, in friend H.'s last sentence of the paragraph quoted that he (Heddon) had succeeded in having a queen reared and fertilized above the perforated metal. Now, who will bob up and antedate the published report of the whole lot of them? Verily there is nothing new under the sun, or at least it looks that way sometimes.

A KIND WORD FOR THE A B C BOOK.

IN the *Review* for August, one of its correspondents complains of the A B C book. The editor is kind enough to make the following points in his reply:

While we do not agree with all of the teachings contained in the A B C of Bee Culture, we regard it as one of the most consistent books ever written. Instead of bewildering the beginner with a thousand and one descriptions of different hives, "traps and calamities," its author sticks to one hive, one system, and one every thing else down through to the last chapter. And while they may not be the best, they hang together; each part fits the other; and if Mr. Root can furnish these things cheaper than the reader can make them, said reader ought to be thankful. We think many of the accusations of "ax-grinding" are unjust. A man doesn't always think an article is best because he adopted it; rather he adopted it because he thought it best. We don't wish to be understood as saying that the A B C mentions only one hive or system, but that the reader who follows the instructions given will never find himself in a muddle by having adopted the parts of two opposing systems.

Many thanks, friend Hutchinson. During my early experiences in bee culture I was so much mixed up and mystified by the advice contained in the different books and agricultural papers on the subject of bee-keeping that I made up my mind to write up a plain, simple book of directions; and you have perhaps put it in words better than I have seen it before; in fact, better than I could have told it myself. The fact that I invented and manufactured many of the goods I described, I have always felt to be in one sense a drawback. On this account I tried to have the A B C book as free from any thing like ax-grinding as possible. If I am correct, nowhere in the A B C book is it mentioned that we have the articles for sale, although I have several times said that the expense ought not to exceed a certain amount; and I also gave the very fullest directions possible to enable

each bee-keeper to make his own implements. At the same time, it was difficult to ignore the fact that hives and a good many other things are necessarily made much cheaper when made by machinery than they could be made by hand.

ITALIANS ON RED CLOVER.

ERNEST'S remarks in another column remind me of a talk I had with E. France. We were riding in a buggy past a clover field, and he was so positive that Italians did not work on red clover that I spoke something as follows: "Friend F., if I can't find you Italians—lots of them, on the heads of red clover over in that field, then I shall be very much mistaken." He stopped his buggy, and I clambered over the fence; but to my great astonishment I looked in vain, even where the heads of clover were thickest. Not a honey-bee was to be found, although there were some bumble-bees. Now, in our own State I never before found such a field of clover as that in the month of July, without being able to find at least some Italians on the blossoms; and usually I find them in great numbers; in fact, I have convinced those who were skeptical, by just taking them out into a clover-field. Now, please remember, when you feel like being positive, that things of this kind are quite different in different localities. Perhaps I should add, there were plenty of Italian bees close by the field mentioned.

MARKING SPECIAL HIVES IN THE APIARY.

WHILE at Dr. Miller's I noticed him several times grasping a bunch of grass, clover, or even green foliage from the trees, and tossing it on top of the hive; and as I was making it my business to find fault with every thing, I commenced in this fashion: "Look here, old friend; that green stuff will soon dry up in the sun, and the wind will blow it away. Why don't you take a stick or stone?"

He stopped long enough to put his hand on my shoulder, saying, "My dear brother, that is just exactly what I want it to do. If we can get time we are going to examine the hives thus indicated, before we go away to-day; but if we can not, we do not want any mark left on it. If there is not wind enough to blow it away before we get around again, from its wilted and dried up appearance we shall know that it was put on at the last visit, and not during this present one."

Do you see the point, friends? The green stuff not only indicated that the hive was to be looked after, but it also, by its appearance, made a sort of date, indicating roughly the time the mark was put on the hive. If I am not mistaken, I saw other bee-keepers making use of exactly the same idea.

CONVENTION NOTICES.

The Iowa bee-keepers are anticipating a good time at their annual meeting, to be held on the fairground, during the State Fair, Aug. 30 to Sept. 6. J. W. MOORE, Sec'y. Des Moines, Ia.

The Cortland Union Bee-keepers' Association will hold their annual basket picnic at the Floral Trout Park in Cortland, N. Y., Tuesday, Aug. 30, 1889. M. H. FAIRBANKS, Sec'y.

The fifth semi-annual meeting of the Susquehanna County Bee-keepers' Association will be held at New Milford, Pa., on Saturday, Sept. 14, 1889. All are cordially invited to attend. H. M. SPELEY, Sec'y.

The American International Bee-keepers' Association will meet in the Court-house, Brantford, Canada, Dec. 4, 5, 6, 1889. All bee-keepers are invited to attend. State and district bee-keepers' societies are invited to appoint delegates to the convention. Full particulars of the meeting will be given in due time. Any one desirous of becoming a member, and receiving the last annual report, bound, may do so by forwarding \$1.00 to the secretary. R. F. HOLTERMANN, Sec'y. Brantford, Ont., Can.

SPECIAL NOTICES.

MORE ABOUT THE FAIRS.

No doubt many of our readers will make exhibits at their respective fairs, and will exhibit goods you already have, and not take advantage of our offer made a month ago. If any of you who thus exhibit care to distribute advertising matter for us, we shall be pleased to supply you with our usual outfit, and will send along with it free a copy of our cloth-bound A B C as remuneration for your services. We send along with the outfit, instructions for using it. The outfit consists of 100 advertising cards, 25 \$1000 reward cards, 10 price lists, 10 copies of GLEANINGS and 10 GLEANINGS posters. If any of you can use more to advantage, please say how many more, and we can send all together.

TIN AND GLASS HONEY PACKAGES.

We call our readers' attention to our page of honey-packages on the inside of cover to this number. Many of you are already familiar with these and their merits from the way your orders have been coming in. The 5-gallon square cans are now about as cheap as barrels—in fact, cheaper than barrels of the same capacity, and they are better in many ways. They are very convenient to draw from, especially with the little honey-gate to screw on to the cap. When we get honey in barrels, the first thing we do is to empty it into square cans. If we don't, it will very soon get to leaking and making us trouble.

Our new lot of 1000 nests, raised-cover pails, have a handsome swedge and fancy cover, which add much to their appearance. Our carload of glass tumblers and pails have been going so well we have had to get 47 bbls. more stock since the carload came, not two months ago. We have also received many words of praise concerning them from customers.

PRICE LIST OF JONES LITHOGRAPH LABELS.

Name of Label.	Size in Inches.	Price e.		Postage		Print'g Add's		
		100	1000	100	1000	1000	500	250/100
5-lb. Jones Lithogr'h.	6½ x 14	1 00	9 50	12	1 20	1 00	75	50 30
2½ ditto	3½ x 14	.60	5 50	.6	.52	1 00	75	50 30
1 ditto light.	4½ x 9½	.50	4 00	.4	.35	1 00	75	50 30
1 ditto darker.	4½ x 9½	.50	4 00	.4	.35	1 00	75	50 30
¾ ditto.	2½ x 8½	.25	2 00	.3	.28	.90	75	50 30
¼ ditto.	2 x 7½	.25	2 00	.3	.25	.90	75	50 30
¾ ditto.	1½ x 5½	.15	1 00	.2	.18	.90	75	50 30
A do., for 1-lb. Cart'n.	4½ x 4½	.40	3 50	.3	.20	1 00	75	50 30
B do., for " "	4½ x 4½	.40	3 50	.3	.20	1 00	75	50 30
C do., for 2-lb. " "	5½ x 5½	.45	4 00	.4	.30	1 00	75	50 30
D do., for " "	5½ x 5½	.45	4 00	.4	.30	1 00	75	50 30
E ditto.	2½ x 16	.50	4 50	.4	.26			
F ditto.	2½ x 16	.50	4 50	.4	.26			
G ditto.	2½ x 13½	.55	5 00	.5	.42	1 00	75	50 30
H ditto.	2½ x 13½	.55	5 00	.5	.42			
I ditto.	3½ x 14	.60	5 50	.6	.52	1 00	75	50 30
J ditto.	3½ x 16	.60	5 50	.6	.52			
Abbott Oval Lith'ph.	2½ x 2½	.30	2 00					

Those of you who have never seen these labels can form little idea how handsome they are; and that you may see them without much expense we will put up a sample package of 1 of each kind, and mail postpaid for ten cents. Eight of the above may be divided into 2 and 3 labels each, so that you can get a small lot (over 30) of handsome lithograph labels, no two alike, for only 10 cts. These sample packages would be very good for labeling a small fair exhibit. They would at least add variety. We can not, of course, print your name and address on the sample package or any number less than 100, and those opposite which we give no price for printing, have no blank place for such printing, and hence can not be printed. All the above are un gummed. You can not get lithograph or many colored labels on gummed paper.

IF YOU WANT BEES

That will just "roll" in the honey, try Moore's Strain of Italians, the result of ten years' careful breeding. Reduced prices: Warranted queens, each, 70c; 3 for \$2.00. Strong 3 L. frame nucleus, with warranted queen, \$2.50. Safe arrival and satisfaction guaranteed. Those who have never dealt with me, I refer to A. I. Root, who has purchased of me, during past nine years, 405 queens.

Address J. P. MOORE, Morgan, Pendleton Co., Ky.

In responding to this advertisement mention GLEANINGS.

Books for Bee-Keepers and Others.

Any of these books on which postage is not given will be forwarded by mail, *postpaid*, on receipt of price.

In buying books, as every thing else, we are liable to disappointment, if we make a purchase without seeing the article. Admitting that the bookseller could read all the books he offers, as he has them for sale, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. I very much desire that those who favor me with their patronage shall not be disappointed, and therefore I am going to try to prevent it by mentioning all the faults so far as I can, that the purchaser may know what he is getting. In the following list, books that I approve I have marked with a *; those I especially approve, **; those that are not up to times, †; books that contain but little matter for the price, large type, and much space between the lines, ‡; foreign, §.

BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

8 Bible, <i>good print</i> , neatly bound.....	25
10 Bunyan's Pilgrim's Progress**.....	35
6 First Steps for Little Feet. By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can hardly be found a more attractive book. Beautifully bound, and fully illustrated. Price 50c. Two copies will be sold for 75 cents. Postage six cents.	35
5 Harmony of the Gospels.....	35
3 John Ploughman's Talks and Pictures, by Rev. C. H. Spurgeon*.....	10
1 Gospel Hymns, consolidated Nos. 1, 2, 3 and 4, words only, cloth, 10c; paper.....	05
2 Same, board covers.....	20
5 Same, words and music, small type, board covers.....	45
10 Same, words and music, board covers.....	75
3 New Testament in pretty flexible covers... ..	05
5 New Testament, new version, paper cover.....	10
5 Robinson Crusoe, paper cover.....	20
15 Story of the Bible**.....	1 00
A large book of 700 pages, and 274 illustrations. Will be read by almost every child.	
5 The Christian's Secret of a Happy Life**.....	25
8 Same in cloth binding.....	50
1 "The Life of Trust," by Geo. Muller**.....	1 25
1 Ten Nights in a Bar Room, by T. S. Arthur*.....	05

BOOKS ESPECIALLY FOR BEE-KEEPERS.

As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You will notice, that you can judge of the size of the books very well, by the amount required for postage on each.

Postage.} (Price without postage.)	
12 A B C of Bee Culture** Paper.....	88
15 A B C of Bee Culture** Cloth.....	1 10
5 A Year Among the Bees, by C. C. Miller **.....	70
14 Bees and Bee-keeping, by Frank Cheshire, England, Vol. I.**§.....	2 36
21 Same, Vol. II.**§.....	2 79
or, \$5.25 for the two, postpaid.	
1 Bees and Honey, by T. G. Newman.....	1 00
15 Cook's New Manual** Cloth.....	1 35
5 Doolittle on Queen Rearing**.....	95
2 Dzierzon Theory**.....	10
1 Foul Brood; Its management and cure; D. A. Jones**.....	09
1 Honey as Food and Medicine.....	5
10 Langstroth on the Hive and Honey-Bee**†.....	1 40
15 Langstroth Revised, by Ch. Dadant & Son**.....	1 85
10 Quinby's New Bee-Keeping**.....	1 40
10 Queen-Rearing, by H. Alley*.....	1 00
4 Success in Bee Culture, by James Heddon*.....	46
1 The Production of Comb Honey, by W. Z. Hutchinson**.....	25
7 The Apiary; or, Bees, Bee-Hives, and Bee Culture, by Geo. Neighbour & Sons, England*§.....	1 75
1 British Bee-keeper's Guide - Book, by Thos. Wm. Cowan, Esq., England*§.....	40
3 Merrybanks and His Neighbor, by A. I. Root.....	25

MISCELLANEOUS HAND-BOOKS.

5 A B C of Carp Culture, **.....	35
3 A B C of Potato Culture, Terry**.....	35
This is T. B. Terry's first and most masterly work. The book has had an enormous sale, and has been reprinted in foreign languages. When we are thoroughly conversant with friend Terry's system of raising potatoes, we shall be ready to handle almost any farm crop successfully. It has 48 pages and 22 illustrations.	
5 An Egg-Farm, Stoddard**.....	45
1 Barn Plans and Out-Buildings*.....	1 50
1 Cranberry Culture, White's.....	1 25
1 Canary Birds; paper, 50c; cloth*.....	75
1 Draining for Profit and Health, Warring.....	1 50
5 Eclectic Manual of Phonography; Pitman's System; cloth.....	50

6 Fuller's Practical Forestry†.....	1 40
10 Farming For Boys*.....	1 15

This is one of Joseph Harris' happiest productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.

10 Fuller's Grape Culturist**.....	1 40
7 Farm, Gardening, and Seed-Growing, by Francis Brill**.....	90

This is by Francis Brill, the veteran seed-grower, and is the only book on gardening that I am aware of that tells how market-gardeners and seed-growers raise and harvest their own seeds. It has 186 pages.

10 Gardening For Pleasure, Henderson*.....	1 40
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While "Gardening for Profit" is written with a view of making gardening PAY, it touches a good deal on the pleasure part; and "Gardening for Pleasure" takes up this matter of beautifying your homes and improving your grounds, without the special point in view of making money out of it. I think most of you will need this if you get "Gardening for Profit." This work has 246 pages and 134 illustrations.

12 Gardening for Profit,** New Edition.....	1 85
---	------

This is a late revision of Peter Henderson's celebrated work. Nothing that has ever before been put in print has done so much toward making market-gardening a science and a fascinating industry. Peter Henderson stands at the head, without question, although we have many other books on these rural employments. If you can get but one book, let it be the above. It has 376 pages and 138 cuts.

8 Gardening for Young and Old, Harris**.....	90
--	----

This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes thorough cultivation of the soil in preparing your ground; and this matter of adapting it to young plants that are to be brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of this book. It has 187 pages and 46 engravings.

5 Gray's School and Field Book of Botany... ..	1 80
5 Gregory on Cabbages; paper*.....	25
5 Gregory on Squashes; paper*.....	25
5 Gregory on Onions; paper*.....	25

The above three books, by our friend Gregory, are all valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.

10 Household Conveniences.....	1 40
2 How to Propagate and Grow Fruit, Greer*.....	25
5 How to Make Candy**.....	45
10 How to Keep Store*.....	1 00
10 Irrigation for the Farm, Garden, and Orchard, Stewart*.....	1 40

This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, brooks, or windmills, to take the place of rain, during our great droughts, is the great problem before us at the present day. The book has 274 pages and 142 cuts.

3 Maple Sugar and the Sugar-Bush... ..	35
--	----

By Prof. A. J. Cook. This was written in the spring of 1887, at my request. As the author has, perhaps, one of the finest sugar-camps in the United States, as well as being an enthusiastic lover of all farm industries, he is better fitted, perhaps, to handle the subject than any other man. The book is written in Prof. Cook's happy style, combining wholesome moral lessons with the latest and best method of managing to get the finest sugar and maple syrup, with the least possible expenditure of cash and labor. Everybody who makes sugar or molasses wants the sugar-book. It has 42 pages and 35 cuts.

10 Money in The Garden, Quinn*.....	1 40
1 Poultry for Pleasure and Profit**.....	10
11 Practical Floriculture, Henderson*.....	1 35
1 Peach Culture, Fulton's.....	1 50
10 Profits in Poultry.....	90
2 Silk and the Silkworm.....	10
10 Small-Fruit Culturist, Fuller*.....	1 40
3 Strawberry Culturist, Fuller*.....	15
10 Success in Market-Gardening**.....	90

This is new book by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Boston, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a windmill and steam-engine whenever a drought threatens to injure the crops. The book has 208 pages, and is nicely illustrated with 110 engravings.

10 Talks on Manures*.....	1 90
-----------------------------	------

This book, by Joseph Harris is, perhaps, the most comprehensive one we have on the subject, and the whole matter is considered by an able writer. It contains 366 pages.

2 The Carpenter's Steel Square and its Uses; Hodgson; Abridged.....	15
2 Treatise on the Horse and his Diseases.....	10
10 The New Agriculture, or the Waters Led Captive.....	1 00
3 Winter Care of Horses and Cattle.....	40

This is friend Terry's second book in regard to farm matters; but it is so intimately connected with his potato-book that it reads almost like a sequel to it. If you have only a horse or a cow, I think it will pay you to invest in the book. It has 44 pages, and 4 cuts.

8 What to Do, and How to be Happy While Doing It, by A. I. Root.....	50
--	----

3 Wood's Common Objects of the Microscope**.....	47
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Address your orders to

A. I. ROOT, Medina, Ohio

GLEANINGS IN BEE CULTURE.

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QUALITY AND WORKMANSHIP UNSURPASSED.

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We manufacture a **Full Line of Bee-Keepers' Supplies**, including "**Falcon**" **Brand Foundation**, and gladly

FURNISH ESTIMATES, AND SOLICIT CORRESPONDENCE.

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EASTERN * DEPOT

(Bees.) —FOR— (Queens.)

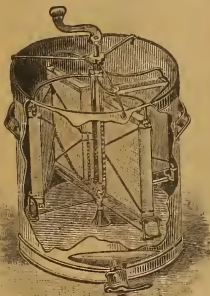
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WHITE POPLAR OR BASSWOOD SECTIONS.
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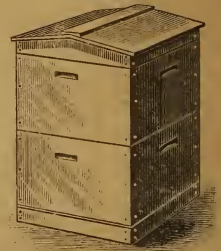
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A STEP FORWARD TOWARDS SUCCESS!

After carefully studying the demand of consumers and dealers, and selecting of the many styles of packages for comb honey the very best and the most attractive, we have now prepared an improved paper carton combined with a comb-protector. Honey, put up in these packages, will be bought in preference to all others at highest market price. Our patent comb-protector will prevent leakage and soiling of sections. Comb honey can be easily and quickly put up in our cartons. These advantages and the small cost of our cartons and comb-protector will save labor, time, money, and honey. Strohmeyer's patent comb-protectors require $\frac{3}{4}$ inch of the inside height of crates. Price list and sample carton sent free on application.

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SECTION PRESS.

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For putting together one-piece sections. Every section square, and a smart boy or girl can fold 100 in six minutes. Try one and you will never regret it. Send to your supply dealer or to 5-16db

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Every farmer, and all beginners in bee-keeping, as well as those more advanced, should have it, as it is especially adapted to their wants. Fully up to date. Price \$1.00, by mail. In beautiful paper covers. Illustrated. Address:

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In responding to this advertisement mention **GLEANINGS.**

SHIPPING - CASES

To hold twelve $4\frac{1}{4} \times 1\frac{1}{2}$ sections, or fourteen 7 to the foot. \$6.00 per 100; 2x9 glass for same, 65 cts. per 100. Free price list of Bees, Queens, Nuclei, and every thing needed in the apiary. M. H. HUNT,

14-16-18d

Bell Branch, Mich.