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VOL. XIX. NO. 4.

FEB. 15, 1891.

PEACE ON EARTH  
GOD WILL FAVOR MEN



CLEANING  
IN

BEE CULTURE

DEVOTED  
TO  
BEEKEEPING

& HOME INTERESTS.

MEDINA, OHIO

BY  
A. ROOT



TERMS, ONE-DOLLAR PER YEAR.

W. FAHNING, DESIGNER, N.Y.C.

S. W. Conrad

3/10



# Gleanings in Bee Culture.

Established in 1873.

Devoted to Bees, Honey, and Home Interests.

Published semi-monthly by

A. I. ROOT, - MEDINA, O.

A. I. ROOT, EDITOR.

ERNEST R. ROOT, - ASSOCIATE EDITOR.

J. T. CALVERT, BUSINESS MANAGER.

**Terms.** \$1.00 per annum; two years, \$1.80; three years, \$2.50; five years, \$3.75, *in advance*; or two copies to one address, \$1.80; three copies, \$2.50; five copies, \$3.75. These terms apply both to the United States, Canada, and Mexico. To all other countries in the Universal Postal Union, 18 cents per year extra for postage. To all countries out of the U. P. U., 42 cents per annum extra.

**Discontinuances.** The journal is sent until orders are received for its discontinuance. We give due notice when the subscription expires, and further notice if the first is not heeded. Any subscriber whose subscription has expired, wishing his journal discontinued, will please drop us a card at once; otherwise we shall assume that he wishes his journal continued, and will pay for it soon. If you wish your journal discontinued at the end of the time paid for, specify that fact in ordering, and your wishes will be respected.

**Terms to Agents Who Secure Subscriptions.** Clubs to different postoffices, 90 cents each; or to the same postoffice, 75 cents each, providing that the names secured are for not less than \$1.00 each, nor advertised for less than \$1.00. In other words, a subscriber who, by personal solicitation, secures subscriptions in his own locality, may retain 25 cents for every name taken for \$1.00; but at least half the names so secured must be new, and cash must accompany order.

**Receipts for Money.** We send no receipt for subscription money. The change of the date on the little label shows you that the money has been duly received, and credited. During December and January it sometimes takes us three or four weeks before the date is changed.

**How to Send Money.** You can send money at our risk by P. O. order, express money-order, or bank check or draft, and where none of these means are available, by registered letter. Money sent in any other way is at your risk. We pay no exchange or express charges on money. Be sure to sign your express money-order, or indorse your check or draft, if not made payable to order of A. I. Root. If you neglect this it will have to be sent back to you.

**Rates of Advertising.** On not less than 5 lines, per single insertion, and for a uniform space each issue, our rates per nonpareil line are as follows:

**TIME RATES.**

1 to 2 insertions, per line.....	20c
3 to 5 " " " " .....	19c
6 to 11 " " " " .....	18c
12 to 17 " " " " .....	17c
18 to 23 " " " " .....	16c
24 insertions " " " " .....	15c

On from 3 to 7 inches space, 1c per line less than above rates.

On 8 inches or more, 2c per line less.

On less than 5 lines space, 1c per line more than above rates.

**SPACE RATES.**

There are those who would like the privilege of lengthening or shortening their ad., according to the season; i. e., large display advertisements, during the busy rush, and small ads. during the dull season. We append a table of "space rates," but it should be understood that the discounts are not quite as liberal as the "time rates" above. We will sell space, to be taken out any time within a year, to be used at the option of the buyer, at the following rates:

100 lines.....	\$ 19.00
200 lines.....	37.00
500 lines.....	85.00
750 lines.....	125.00
1000 lines.....	160.00

In contracting for advertising, be sure to specify whether you wish *time* or *space* rates.

For electrotyped advertisements we will allow an additional discount of 5 per cent on both time and space rates.

A. I. ROOT, Medina, O.

## CLUBBING LIST.

We will send GLEANINGS—  
 With the American Bee-Journal, W'y (\$1.00) \$1.75  
 With the Canadian Bee Journal, W'y ( .75) 1.65  
 With the Bee-Keepers' Review, (1.00) 1.75  
 With the British Bee-Journal, (1.50) 2.00  
 With American Apiculturist, ( .75) 1.70  
 With American Bee-Keeper, ( .50) 1.40  
 With all of the above journals, 5 65

With American Agriculturist, (\$1.50) 2.25  
 With American Garden, (2.00) 2.80  
 With Prairie Farmer, (1.50) 2.35  
 With Rural New-Yorker, (2.00) 2.90  
 With Farm Journal, ( .50) 1.20  
 With Scientific American, (3.00) 3.75  
 With Ohio Farmer, (1.00) 1.90  
 With Popular Gardening, (1.00) 1.85  
 With U. S. Official Postal Guide, (1.50) 2.25  
 With Sunday-School Times, weekly, (1.50) 1.75  
 With Drainage and Farm Journal, (1.00) 1.75  
 With Illustrated Home Journal, ( .50) 1.35  
 With Orchard and Garden, ( .50) 1.40

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



## CHEAP ENOUGH.

Sections, \$3.00 per 1,000. Foundation, 45 cts. per pound; Chaff Hives, \$1.25 each; Simplicity hives, 90 cts. each; Dovetailed hives, 80 cts. each, and very thing needed in the apiary, cheap. Send for illustrated price list for 1891, free.

"How I Produce Comb Honey," by mail, 5 cts. Third edition just out. Address

GEO. E. BILTON, Fremont, Mich.

3ftdb

Please mention this paper.

## NOW, FRIENDS, LOOK HERE!

I sell the Nonpareil Bee-Hive, White Poplar Sections, Italian Bees and Queens. Price List free. Write for one. 8ftdb

A. A. BYARD, West Chesterfield, N. H.

In responding to this advertisement mention GLEANINGS.

## Comb-Foundation Mills.

Made by

W. C. PELHAM,  
Maysville, Ky.

1-5db

In responding to this advertisement mention GLEANINGS.

## FOR SALE.

One 4-horse-power rotary engine. Will sell cheap to make room for larger power.

S. H. MUELWAN.

Blue Ball, Pa.

In responding to this advertisement mention GLEANINGS.

## Cash for Beeswax!

Will pay 25c per lb. cash, or 28c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 31c per lb., or 36c for best selected wax.

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

A. I. ROOT, Medina, Ohio.

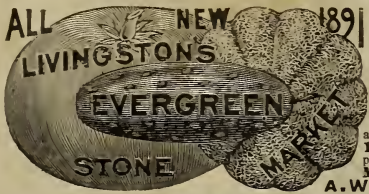
# The Wide Awake Bee-Keeper

Who reads the BEE-KEEPERS' REVIEW one year, or even a few months, is almost certain to become a regular subscriber. As an inducement to non-subscribers to thus become acquainted with the REVIEW, I will send it during the three succeeding months for 20 cts. in stamps, and I will also send three back numbers, selecting those of which I may

happen to have the most, but of different issues. A list of all the special topics that have been discussed, the numbers in which they may be found, and the price of each, will also be sent. Remember, the REVIEW has been enlarged, a beautiful cover added, and the price raised to \$1.00.

W. Z. HUTCHINSON, Flint, Mich.

In responding to this advertisement mention GLEANINGS.



## OHIO SEEDS FOR ALL CLIMATES

Our climate and seasons are suitable for growing and maturing all seeds. Our CATALOGUE is a well arranged, instructive Garden Guide, full of present day common sense ideas, and is sent FREE on application. Tells the new and easy way to grow Onions, 1500 Bushels on an acre. Describes our new Stone Tomato, packet 15 cts.; Evergreen Cucumber, packet 10 cts.; Market Melon, packet 10 cts.; or the 3 post-paid for 30 cents. Address A. W. LIVINGSTON'S SONS, Box 278, Columbus, Ohio.

In responding to this advertisement mention GLEANINGS.

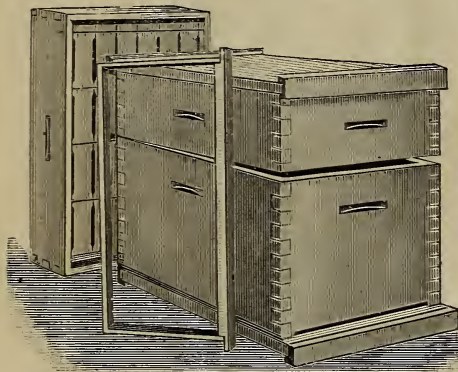


## SPRAY YOUR FRUIT TREES AND VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculia prevented by using EXCELSIOR SPRAYING OUTFITS. PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address W. M. STAHL, Quinex, Ills.

3-91b

In responding to this advertisement mention GLEANINGS.



## SAVE FREIGHT

By buying your supplies near home. Catalogue for your name on a postal card. Address 4-8db J. W. ROUSE & CO., Mexico, Mo. 9d Please mention this paper.

## BEE-KEEPERS' SUPPLIES.

GOOD AS THE BEST; CHEAP AS THE CHEAPEST. Send for my new Price List of Hives, Sections, Foundation, Queens, etc., etc. We are prepared to fill your orders at once, and guarantee satisfaction. Will pay 23c cash, or 25c in trade, for fair average BEESWAX, delivered here. 3-8db

A. A. WEAVER, Warrensburg, Johnson Co., Mo.

In responding to this advertisement mention GLEANINGS.

## NEW \* FACTORY.

Bee-Hives, Sections, Frames, Etc.

We have moved into our new factory, which is the largest and most complete in the world. We make the best goods, and sell them at the lowest prices. Write for free illustrated catalogue.

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

17-tfdb

In responding to this advertisement mention GLEANINGS.

## 100,000 STRAWBERRY-PLANTS.

Sharpless, Jessie, Crescent, Bubach, Warfield, Manchester, Cumberland, and Mt. Vernon, 40c per 100, \$3.00 per M. Haverland and Michael's Early, 50c per 100, \$4.00 per M. Crawford's, 60c per 100, \$5.00 per M. Special rates on large orders. Also Gregg, and other Raspberry plants; and a full assortment of grape-vines at low rates. D. G. EDMISTON, 4tfdb ADRIAN, LENAWEE CO., MICH.

In responding to this advertisement mention GLEANINGS.



In responding to this advertisement mention GLEANINGS.

## BEE-KEEPERS' SUPPLIES.

We manufacture all kinds of bee-keepers' supplies and novelties, for wholesale and retail trade.

Best Goods at Lowest Prices.

Send for FREE illustrated catalogue for 1891.

THE BUCKEYE BEE SUPPLY CO.,

NEW CARLISLE, OHIO.

3-8db

Please mention this paper.

## BEE-KEEPERS

Send for my illustrated Catalogue of Bee-keepers' Supplies. Prices reasonable.

F. W. LAMM,

Box 106,

Somerville, Butler Co., O.

3-8db

Please mention this paper.

## 1891. NEW BEE-HIVE FACTORY. 1891.

Root's Dovetailed Hive a specialty. Price List free.

Send for free, and order early of

1tfdb

GEO. W. COOK, Spring Hill, Johnson Co., Kan.

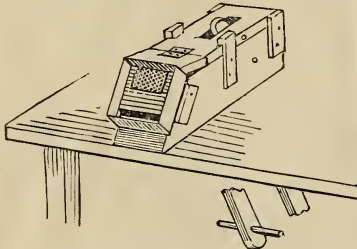
Please mention this paper.



Contents of this Number.

Albany Convention.....	130	Honey, When to Sell.....	133
Basswood.....	129	Honey-boxes of Paper.....	133
Bee, Standard.....	132	Jinricksha.....	136
Bees, Confining.....(Q. B.)	138	Kegs vs. Cans.....	134
Binding Journals.....	124	Manum's Apiary.....	121
Clovers.....	118	Pasturage, Artificial.....	130
Doolittle on Comb Honey.....	126	Planning.....	125
Fixed Distances.....	131	Rambler on Bunker Hill.....	122
Foundation, Wiring.....	131	Sections, Two-pound.....	134
Foundation Trade.....	137	Singapore Coolies.....	133
Glossing Honey.....	134	Spider plant.....	128
Honey by Freight.....	134	Staples, L. D., Convicted.....	142
Honey from Cacti.....	126	Sulphuric Acid.....	120
Honey, Glassed.....	134	Wax, Rendering.....	120

The Burdsall Foundation Fastener



THE BEST MACHINE MADE.

Satisfaction guaranteed. Send for catalogue and price.

The Burdsall Apiary and Supply Factory, 4-11db Box 744, Lebanon, Ohio.

In responding to this advertisement mention GLEANINGS.

SYRACUSE, NEW YORK,

IS A DEPOT FOR THE EAST FOR ALL OF A. I. ROOT'S APIARIAN SUPPLIES.

FOUNDATION is Our Own Make.

Don't buy foundation of us, for it would please you.

F. A. SALISBURY.

In writing to advertisers please mention this paper. 4tfdb

Established 1878.

SMITH & SMITH,

Wholesale and Retail Manufacturers of

BEE-KEEPERS' SUPPLIES.

KENTON, OHIO.

Price List Free. 4tfdb Mention Gleanings.

\*THE CANADIAN\*

Bee Journal Poultry Journal

Edited by D. A. Jones. Edited by W. C. G. Peter.

75c. Per Year. 75c. Per Year.

These are published separately, alternate weeks, and are edited by live practical men, and contributed to by the best writers. Both Journals are interesting, and are alike valuable to the expert and amateur. Sample copies free. Both Journals one year to one address \$1. Until June 1st we will send either Journal on trial trip for 6 months for 25 cts.

The D. A. Jones Co., Ltd., Beeton, Ont.

In responding to this advertisement mention GLEANINGS.

JAPANESE BUCKWHEAT, 1/2 bu., 50c; bu., two or more, 80c; sacks included.

4-5d W. B. COLLINS, Blackwater, Cooper Co., Mo.

UTILITY BEE-HIVE.

Unexcelled for SIMPLICITY, CONVENIENCE, and CHEAPNESS. Every part perfectly

Interchangeable, Reversible, and Invertible, adapted to interchange with Simplicity, and other frames and bodies. 3d

For introductory prices, circulars, etc., address

LOWRY JOHNSON, MASON TOWN, FAYETTE CO., PA.

3tfdb

Please mention this paper.

ATTENTION, CALIFORNIANS!

I have for sale 1600 1-lb. V-groove one-piece white basswood sections, 1 1/2 wide, made by A. I. Root. Price \$5.00 per M, put on cars at King City, Monterey Co., Cal. For 5000 or more, write for special prices to C. K. ERCANBRACK, JUN., Lonoak, Monterey Co., Cal.

In responding to this advertisement mention GLEANINGS.

STRAWBERRY GROWING a certainty and a pleasure, by growing the "Enhance." Fully tested; succeeds everywhere. Most reliable, firm, largest shipping and all-purpose berry extant. Send for description and price. You will want it.

4-5d HENRY YOUNG, Ada, Ohio.

FOR SALE. Black Minorcas and Pekin duck eggs, \$1.00 per 13. Bear-paw corn, 75c peck, \$2.75 per bush. J. V. HURLESS, Archer, Harrison Co., O.

Queens Ready to Mail.

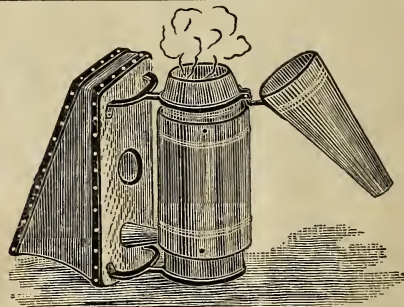
Tested Italian queen, \$2.00; 3 f for \$5.00. Will mail them now and guarantee safe arrival. Untested, \$1.00; 3 for \$2.75, or \$9.00 per doz. sent after Mar. 20. Make money orders payable at Clifton. Send for price list.

COLWICK & COLWICK,

4tfdb

Norse, Bosque Co., Texas.

In responding to this advertisement mention GLEANINGS.



Smokers, Foundation, and all kinds of bee-keepers' supplies furnished at lowest cash price. If you want the best Smoker in the market get one of the Quinby old reliable—made the strongest; and although the first cost is more than that of any other made, the Jumbo is the boss of all. It has been used constantly in yards for 8 years, and still it goes. Send and get price list of Smokers, Foundation, Sections, and every thing used in the apiary. Dealers should send for dealer's list on smokers.

4tfdb

W. E. CLARK, ORISKANY, N. Y.

In responding to this advertisement mention GLEANINGS.

10 pkts. SEEDS 25 Cts.

For 25c we will send you terms to agents, and the following 10 pkts. of seeds, that you may have a few samples to show to your friends when taking orders. Winningstadt Cabbage; Seminole Watermelon; Early Red Turnip Beet; Hollow Crown Parsnip; Grand Rapids Lettuce; Rosy Gem Radish; Montreal Muskmelon; Golden Queen Tomato; 1/2 pt. Alaska Peas (1c pkg.) Mikado Tomato.

47db

G. D. BLACK & BRO., INDEPENDENCE, IOWA. SEED GROWERS.

In writing to advertisers please mention this paper.

## HONEY COLUMN.

### CITY MARKETS.

**KANSAS CITY.**—*Honey.*—The demand for comb honey is more liberal. Receipts and supply are very light. We quote 1-lb. comb, white, 16@18; dark, 12@14; 2-lb. California, white, 14@15; same, dark, 12@13. Extracted, 6@7. *Beeswax*, 22@25.

Feb. 11. CLEMONS, MASON & Co., Kansas City, Mo.

**ST. LOUIS.**—*Honey.*—No extracted honey in market. It would bring, if bright, 6½@7c. Comb in light demand at 13 for dark, 16@17 for bright. *Beeswax*, prime, 26@27c. D. G. TUTT GRO. Co., Feb. 11. St. Louis, Mo.

**CINCINNATI.**—*Honey.*—Demand is good for extracted, with a liberal supply on the market of all but Southern honey, which is still scarce. It brings 6@8 cts. a lb. on arrival. There is a fair demand for choice comb honey at 16@17c a lb. in the jobbing way. No sale at all for dark comb honey. *Beeswax* is in good demand at 24@26c a lb. for good to choice yellow on arrival. CHAS. F. MUTH & SON, Feb. 14. Cincinnati, O.

**CHICAGO.**—*Honey.*—Market continues to be weak in tone, only small lots being taken by the trade, and that which falls below a choice article is very slow of sale. Best grades bring 17@18c; fair, 15@16c; dark, 12@13c. Extracted, steady at 7@8c, and in fair demand. *Beeswax* is selling at 28c for yellow to mixed. R. A. BURNETT, 161 S. Water St., Feb. 10. Chicago, Ill.

**ALBANY.**—*Honey.*—The demand for comb honey is good for this season of the year, and stock on the market is small. Extracted buckwheat in good demand. No change in prices. CHAS. McCULLOCH & Co., Feb. 11. Albany, N. Y.

**NEW YORK.**—*Honey.*—Extracted dark in good demand at 7@7½c per lb. California light amber, 7½; white, 7½. Comb honey all sold. *Beeswax*, 29c; supply small. F. G. STROHMAYER & Co., Feb. 11. New York City.

**BOSTON.**—*Honey.*—Fair demand for honey; supply very short. Fancy 1-lb. combs, 19@20c; fair to good, 18@19c; 2-lb. combs, 16@17c. Extracted, 8@9c. No *beeswax* on hand. BLAKE & RIPLEY, Feb. 11. Boston, Mas.

**SAN FRANCISCO.**—*Honey* remains firm and in good demand, and we quote: Extracted, 5½@6½; comb, 12@15. *Beeswax*, 25c, and in good demand. SCHACHT, LEMCKE & STEINER, Jan. 22. San Francisco, Cal.

**DETROIT.**—*Honey.*—Comb honey is selling slowly at 14@15c per lb. Extracted, 7@8c. *Beeswax*, 27@28c. Bell Branch, Mich., Feb. 11. M. H. HUNT.

**FOR SALE.**—Choice white-clover extracted honey, in 120-lb. cases; per case, \$12.00. Autumn honey, per case, \$9.00. J. A. GREEN, Dayton, Ill.

**FOR SALE.**—700 lbs. of clover honey in home-made kegs holding 55 lbs., for 8½ cts., delivered on cars at Farley. Can ship by I. C. R. R., or Chicago, St. Paul & Kansas City, or the M. & S. P. R. R. JAS. SCOTT, Farley, Ia.

**FOR SALE.**—Six 60-lb. 5-gallon tin cans of clover extracted honey, at \$5 per can, F. O. B. cars at Otsego. CALVIN LOVETT, Otsego, Allegan Co., Mich.

**FOR SALE.**—2000 lbs. comb honey in 12 and 24 lb. crates. L. WERNER, Edwardsville, Ill.

**FOR SALE.**—500 lbs. choice extracted honey, at 10c here, pkg. included. W. H. S. GROUT, Kennedy, Chautauqua Co., N. Y.

**FOR SALE.**—Extracted honey, in 70-lb. tin cans, at 10 cts. per lb. f. o. b. LEWIS HAINES, 4d Moons, Fay. Co., O.

**FOR SALE.**—1200 lbs. extracted white-clover honey in barrels or 60-lb. cans, as desired. E. J. BAXTER, Nauvoo, Ill.

**FOR SALE.**—Choice honey in sections, cans, and C. pails. Send for price list to OLIVER FOSTER, 12tfdb. Mt. Vernon, Ia.

### PRICE LISTS RECEIVED.

Since our last issue we have received price lists of bees, hives, and apianian supplies in general, from the following parties:

Leahy Manufacturing Co., Higginville, Mo.  
W. A. Chrysler, Chatham, Ont.  
D. A. Jones Co., Beeton, Ont.  
G. M. Doolittle, Borodino, N. Y.  
A. A. Byard, West Chesterfield, N. H.  
J. W. Rouse & Co., Mexico, Mo.  
Luther & Horton, Redlands, Cal.  
E. Kretchmer, Red Oak, Ia.  
A. L. Kildow, Sheffield, Ill.  
B. Davidson, Uxbridge, Ont.  
Jacob T. Timpe, Grand Ledge, Mich.  
W. J. Row, Greensburg, Pa. Queens only.  
Burdall Apiary & Supply Co., Lebanon, O.  
The following are from our press:  
J. D. Goodrich, East Hardwick, Vt.  
Levering Bros., Wiota, Ia.  
E. J. Shay, Thornton, W. Va.  
J. F. Michael, German, O.  
J. E. Stewart, Prophetstown, Ill.

## THROUGH AN ERROR,

My advertisement in GLEANINGS, Feb. 1st, **inside back cover** (which please see), failed to say: For \$2.00 I will send 1 lb. each of Timpe's Seedlings Nos. 1, 2, and 4, postpaid; or for \$2.25 I will send 1 lb. each of Nos. 1 and 2, and 2 lbs. of No. 4, prepaid (give your express office). Remember, I am giving **one full colony and seventeen 3-frame nuclei of my five-banded Italians**, for largest yields, largest potato, and best names suggested. And to every order received within 30 days from this ad't I will give from **2 to 5 packets** of choice garden-seeds (novelties) **free**.

**Order now**, before the stock is exhausted. Potatoes and seeds will be sent the last of March or first part of April, **all charges paid**. If possible, send express or postoffice money order. Catalogue now ready, mailed for 1-cent stamp.

**Jacob T. Timpe**, Grand Ledge, Mich.

In responding to this advertisement mention GLEANINGS.

### 75 Fine Tested Italian and Albino

\* \* \* **Queens For Sale at \$1.75 Each.**

Select tested golden Italian queens, \$2.50 each. Select tested Albinos, \$2.00 each. First come first served. Untested by April 15, \$1.00 each, or 6 for \$5.00, or 12 for \$9.00. Orders booked now, and pay for queens when received. I guarantee safe delivery and satisfaction on every queen by mail. Thanks for last year's patronage.

4-8db

**J. W. TAYLOR, Ozan, Ark.**

In responding to this advertisement mention GLEANINGS.

## ROOT'S COMB-FOUNDATION MILLS.

We wish to say that we are handling Root mills this season, and can furnish them to the bee-keepers of Canada less than you can buy a single mill from Ohio. All mills warranted. Write us if you want to buy. You will save money by doing so. We shall sell comb foundation, brood, at 40 cts. per lb.; section comb at 45 cts. All wax will be bought from Eckermann & Will, Syracuse, N. Y., and every pound warranted pure wax, or \$5.00 will be given for every pound that is not right.

Box 72.

**R. E. Smith,**  
**Tilbury Center, Can.**

**FOR SALE.** The walls and water power of an abandoned gristmill, 10 acres land in a good location for a bee-supply business. No factory near, and large apiaries in every direction, or will take partner. Address GEO. W. RANDALL, 4-5d Big Rock, Iowa.

**FOR SALE.** Three or four S. C. B. Leghorn cockerels, as good stock as can be found in the world. Come and see them. Write for prices with your address on postal, and you will receive by return mail my new descriptive circular, free. 4-5-6d ROBT. C. SMITH, Swissvale, Pa.

**WANTED FOR CASH.** From 50 to 75 colonies of Italians or hybrid bees, to be delivered about first of May. Langstroth hives preferred. 4tfdb E. C. ELVER, Mt. Horeb, Dane Co., Wis.

**BARRED PLYMOUTH ROCK COCKERELS, \$1.00;** hens, 75 c. Also Quinby-hive corner-clasps for sale 20tfdb L. C. AXTELL, Roseville, Ill.



# Leahy M'fg Co.,

—UNDOUBTEDLY THE—

## LARGEST PLANT IN THE WEST,

Built exclusively for the manufacture of Apiarian Supplies. One and One-Half Acres Floor Space. We sell as Cheap as the Cheapest, and our goods are as Good as the Best. Parties will do well to write us for estimates on large orders. We will send you our catalogue for your name on a postal card. Address **LEAHY MFG. CO., Higginsville, Mo.**

In responding to this advertisement mention GLEANINGS.

The **Bee World** is published monthly at 50c per year. It is devoted to the collection of the **latest NEWS**, inventions, and discoveries throughout the **bee-keeping world**. If you want to keep posted, you cannot afford to do without it. **Subscribe now.** Sample copies free. 2-7db W. S. VANDRUFF, Waynesburg, Pa.

In responding to this advertisement mention GLEANINGS.

**EGGS!** Brown Leghorn, White Leghorn, \$1.25. Black Minorca, Plymouth Rock, Pekin Duck, \$1.50. Light Brahma, Langshan, Game, \$2 per 13 eggs. Strictly pure-bred. Ship safely anywhere. Illustrated circular free. **GEER BROS., St. Marys, Mo.**

In responding to this advertisement mention GLEANINGS.

## Dewey's Peet Cage.

During the season of '91 we shall ship queens from imported stock direct from Italy in our new and **SAFE SHIPPING and INTRODUCING CAGE.** Sample and description of this cage by mail, 10c.

**F. H. & E. H. DEWEY, 55 Mechanic St., Westfield, Mass.**

In responding to this advertisement mention GLEANINGS.

## NEW FACTORY.

On or about Feb. 10, 1891, we will move into our new factory, built exclusively for the manufacture and sale of

### APIARIAN SUPPLIES,

located in Ottumwa, Wapello Co., Iowa, where we will manufacture and sell all kinds of Apiarian Supplies at the lowest possible prices, after the above date. Write for illustrated catalogue, to 1tfd

**GREGORY BROS. & SON, Farragut, Fremont Co., Ia.**

In responding to this advertisement mention GLEANINGS.

# JUST OUT.

SOMETHING ENTIRELY NEW IN

# HIVES!

CIRCULAR FREE.

Address

**JAMES HEDDON, DOWAGIAC, MICH.**

2-3-4d

Please mention this paper.

## NEW KODAKS.



"You press the button, we do the rest."

**SEVEN NEW STYLES AND SIZES, ALL LOADED WITH TRANSPARENT FILMS.** For sale by all Photo. Stock Dealers.

1-2-3-4d **THE EASTMAN COMPANY, Rochester, N. Y.** Send for Catalogue.

In responding to this advertisement mention GLEANINGS.

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10% to 25% by getting the Five-Banded Golden Italians. Took **First Premium** at Illinois State Fair in 1890. The judge said: "They were the quietest bees on exhibition; the drones were almost pure yellow." Warranted queens, \$1.25; Tested, \$2.00; Selected Tested, \$3.00. Order now, pay when queens arrive. Send stamp for price list. 1tfd

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Birds and eggs in their season. Cockerels \$3 to \$5; choice hens \$2 each; eggs \$3 per setting; 2 settings, \$5.

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OFFICES:

**65 CLARK ST., ROOM 14, CHICAGO, ILLINOIS, and TOPEKA, KANSAS.**

Manufacturers of and dealers in bee-keepers' supplies. For prices of bee-hives, sections, shipping-crates, frames, foundation, smokers, etc., write for circular and special prices before placing your order. **J. B. KLINE, Sec.**

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Thoroughly tested, and guaranteed to **SELF-HIVE** every swarm that passes through it. Sample mailed for \$1.00.

**AMERICAN APICULTURIST** one year and Swarmer by mail, \$1.50. Sample **APICULTURIST** with full description of **SWARMER**, illustrated, free. 1-4db **H. ALLEY, Wenham, Mass.**

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# GLEANINGS IN BEE CULTURE

A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS.

Published by A. I. Root, Medina, O.

Vol. XIX.

FEB. 15, 1891.

No. 4.

## STRAY STRAWS

FROM DR. C. C. MILLER.

A STATE SOCIETY is beginning to be talked of in Illinois.

HUTCHINSON calls me a "gossiper." Wait till I catch him away from home.

A TRADE-MARK for a body of bee-keepers is talked of. It might be a good thing. It might be a bad thing. I don't know.

DRONES. Prof. Cook thinks, depend on the nurse-bees for their albuminous food—an additional argument against tolerating them.

ILLINOIS doesn't propose to be left in the rear. She has a bee-keeper in her legislature—J. M. Hambaugh, Spring, Ill., a good square man.

FIRE IN BEE-CELLARS is needed if too cold. I use it oftener for ventilation. Heat the air, and the cold outside pure air will rush in to take its place.

HEDDON says the black bee is most amiable of all, but stings more, because it takes wing more readily. I'd rather have bees that don't take wing so readily.

THE EDITORIAL "WE" has been banished from the columns of the *Review*, and Hutchinson slings around his I's as easily and gracefully as if he had *always* talked good English.

I SWEEPED OUT the shop cellar for the first time, Jan. 13. I got about two quarts dead bees—not many from 112 hives after 66 days' confinement; time enough for bushels, though, before spring.

PAINTED MUSLIN is not advisable for hive-covers unless it is better than oil cloth. I tried 200 covers of extra good oil cloth, and they lasted so short a time that tin is much cheaper.

NO FIRE in my bee-cellars this winter till Jan. 10. Then I saw some mold on dead bees on cellar bottom; didn't smell just the best. Temperature 42°; raised it to 53°. This was in shop cellar.

A SMALL BEE-SPACE between top-bars and sections was considered, at the Northern Illinois convention, of as much or more consequence, in preventing brace-combs, as thick top-bars.

POISON FOR MICE is thus daintily served up by E. C. Eaglesfield (*A. B. J.*). He says, "I take a cooky and moisten one side, then place the crystals of strychnine all over it, and lay it where nothing can get at it but rats and mice."

"OBSERVER," in *C. B. J.*, wonders what I'll think when I hear that "steps are being taken to put a stop to the importation of bees by the pound from Uncle Sam's, unless they have passed through quarantine." I think that

Canadians will show good sense to take any steps to make the danger from foul brood less. If I had smallpox at my house, I shouldn't want any of the family to go to a neighbor's.

LAMPS AND OIL-STOVES have been used to warm cellars, but I never tried any thing of the kind till this winter. Then I put a gasoline-stove in the shop-cellar. It's better than none, but I don't like it. The combustion fouls the air.

"BEES visit only one kind of flower on the same trip." That's old but not always true. When forage is plentiful it may be true; but when scarce they'll change from one kind to another several times on the same trip. I've seen 'em do it.

A HONEY HOUSE OR SHOP, a number of writers in the *Review* agree, should be at the *side* of the apiary, never in the center. Heddon makes a good point in preferring it at the south side, that you needn't look against the sun in watching for swarms.

TAYLOR'S SECRET is out. The *Review* says he keeps his honey in a warm honey-house, with fire in winter. Of course, it's a good plan. More than that, I suspect if the place is kept hot enough long enough in the fall it will do with little or no fire through the winter.

"DO BEES EAT EGGS?" That's the question up now, and I hope we'll learn when they do and when they don't. I know I've had bees starve to death, leaving eggs in the hive; and I know if I remove a queen from a hive, I expect nearly all the eggs to disappear within 24 hours.

THE REVIEW is getting down to business, reviewing. Hutchinson knows how. Now that I've had my fling at him, I must own up that he has furnished plenty of material from which good cream could be had. He did a good job of skimming, too, on the new books that were published last year.

ANOTHER IDOL FALLEN. I've always had such faith in Prof. Cook, but I've found him out at last. Friend Root tells (p. 61) about a man being hasty, and imagining evil of others, and then says Prof. Cook has done much to bring about this state of affairs. And to think that I had loved the professor as a brother!

MANAGER NEWMAN says: "Suppose now, that in America it were once established by law, that, to wantonly kill bees, were a punishable crime! How quickly the owners of the deadly cider-press and sugar-refineries would have to *screen out* the bees—or the Union would be after them!" Well, "suppose now" the Union gets such laws made.

LEGISLATION is coming to the front as one of the needs of bee-keepers. Daniel Wyss, in *American Bee Journal*, calls for laws forbidding poisonous spraying when trees are in

bloom. Different States are asking legislative aid to help the honey show at the World's Fair. Prof. Cook, in his president's address at the Michigan convention, urged a law against spraying fruit-trees in bloom. About three-fourths of the convention were with him. They appointed a permanent committee on legislation.

**SORE-THROAT REMEDY,** from the *Medical Brief*.

Amm. tinct. guaiac	- - -	4	drachms.
Comp. tinct. cinchonæ	- - -	4	"
Potass. chlor.	- - -	2	"
Extracted honey	- - -	4	"
Powd. acaciæ	- - -	q. s.	
Water	- - -	2½	ounces.

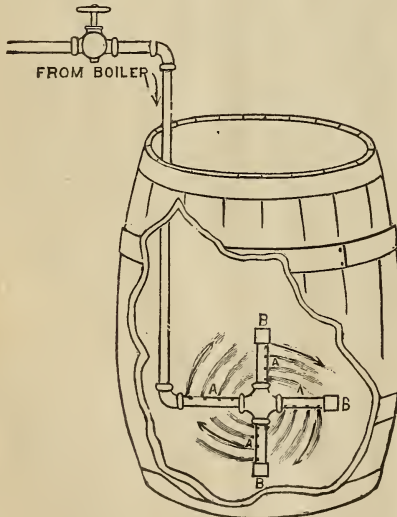
To be used as a gargle, and a teaspoonful may be swallowed every second hour.

## GENERAL CORRESPONDENCE.

### RENDERING COMBS WITH SULPHURIC ACID.

#### HOW TO GET THE MOST WAX POSSIBLE OUT OF OLD COMB.

After reading E. France's article on rendering old combs into wax, on page 15, I thought I could give you a better plan, and one which would take that dark-colored wax and make it into as nice wax as any you ever saw. It will be so clear, that, when melted, you can see to the bottom of a dipperful, looking like wine. By this plan you can take the refuse of cakes of wax, that which is scraped off the bottom after cooling, and looks like sand, and make it into as nice wax as can be made. This last season we had a barrel of this dark stuff, which looked like dirt, and you would have said it was not worth the trouble; but I put it through the process, and got from it 60 lbs. of yellow wax, worth at least \$15.



APPARATUS FOR RENDERING REFUSE WAX WITH SULPHURIC ACID.

I know that iron or galvanized iron will turn wax a dark color. I went to quite a little expense rigging up steam-pipes, and tanks of galvanized iron for my foundation business. The first melting did not show much, but after

melting the scraps over three times I stopped making and tried to find out what was the matter. I knew the wax at first was all right, and concluded, after a while, it was either the galvanized iron or steam of too high pressure. I then went to work, tore down all the fixtures, and went back to melting in a large wooden tub. This wax, which was almost a dark green, I put through my process of melting, and had yellow wax again. My plan, whereby I can render 100 lbs. of wax from old combs in three hours, is as follows: Get a barrel that is good and strong, and  $\frac{3}{8}$  steam-pipe, long enough to reach from a steam-boiler to the bottom of the barrel. Copper pipe would be better, but I find the small surface of the pipe touching the wax does not make any appreciable difference. You want a valve to shut off the steam, four pieces of pipe five inches long, an elbow, a cross, and three caps. In the pieces of pipe five inches long drill three  $\frac{1}{8}$ -inch holes, spaced about two inches apart; screw an elbow on the bottom of the pipe coming from the steam-boiler; then one of the short pieces of pipe in the elbow; now screw on the cross, then the three pieces of pipe, and put a cap on the end of each. Turn the pipes until the small holes point all one way, so the steam in issuing will set the water whirling. Now fill the barrel one-fourth full of clear water. Put in one pound of sulphuric acid; turn on the steam, and when boiling put in the old combs. Let all boil until heated thoroughly, and stir with a large stick at the same time.

Now you will want a press. Mine is simply a box made large enough to hold three racks, made of  $\frac{3}{4}$  x  $\frac{1}{2}$ -inch square sticks 15 inches long, nailed to two end pieces 15 inches long, so there will be  $\frac{1}{8}$  inch between the slats. In the bottom of the box I have a tin dish one inch deep, and it just slips down inside nicely. At one side the tin is turned down, and a hole is made in the bottom of the box for the wax and water to run out. Get a rim two inches wide and twelve inches square made from  $\frac{3}{8}$ -inch stuff, and three pieces of burlap three feet square. Lay one of the racks in the tin dish in the bottom of the box; on this the two-inch rim; over this one of the pieces of burlap. Press the burlaps down in the rim, and dip the melted wax over into it until full to the top of the rim. Bring the burlaps over the top; take out the rim; lay another rack on top of this, and so proceed until you have the three filled; then place a follower on top of all, and a common jack-screw on top of the follower. Make a frame out of 2x4 scantling to go under the box and come to the top of the jack-screw. You will want two bolts to go through the top and bottom pieces of the frame. Have them of  $\frac{3}{8}$  round iron, and screw the nuts up tight. Put the top piece of the frame over the jack-screw, and turn the screw slowly so as to give a chance for the wax to run out. After it has stopped running, take out the refuse, and you will find the wax nearly out. You could not get out of a barrel of comb, after pressing, if it were possible to get it out, over a teaspoonful of wax. We have tried a number of ways, but the above is the best.

I tried an arrangement inside of a barrel to continually stir the comb; and over the comb, under water six inches. I had a screen to keep refuse from rising. I thought all the wax would in time rise to the top, but more stayed under the screen than came to the top. I also tried keeping two barrels of comb, that was thoroughly broken up, moist with water for two years, to see if I could not rot the cocoons and pollen so it would be like dirt. If I could rot it, I could get out all the wax, and not make me a press, but simply melt it in water, and the dirt would settle. This was a failure. The smell



of the stuff when melting would fairly knock a man down at ten rods. I was very sick with malaria shortly after. Some thought I caught it from that bad-smelling boiling mixture. The wax I did get out of it was all right. I had to use the press to finish up. No more jobs like that for me. I can take cakes of wax that come to me dark, and, after rendering, they will be a nice yellow color. You simply want to melt them in the acidulated water, cover the barrel over tight, and throw an old horse-blanket over the whole; let it stand five hours, and then dip out in pans carefully, so as not to disturb the dirt at the bottom. Save all the refuse from scraping the bottom of cakes, and put through the same process.

F. A. SALISBURY.

Syracuse, N. Y., Dec. 5, 1890.

[Thanks for your valuable article. When I visited the Dadants a few weeks ago I learned that they treated their refuse, that would not refine by ordinary methods, with sulphuric acid. I do not remember just exactly the proportion of sulphuric acid they use with the water, but I think their method and plan was very similar to the one you describe. If I am wrong they will please correct. Mr. Dadant told me when they first used sulphuric acid, the man who used it earned for them \$75 the first day, and a smaller amount the second day, until all the cast-away wax refuse which could not be refined by ordinary methods was used up. The price at which wax now sells renders this a very important matter. Mr. C. P. Dadant told me not to throw away old refuse; that a great deal of first quality of wax can be gotten from it by the use of the solar wax-extractor and sulphuric acid. The action of the acid seems to be to rot or disintegrate the cocoons and other matter, so as to free the wax.] E. R.

#### MANUM'S VILLAGE APIARY.

HOW FRIEND MANUM MANAGES TO AVOID HAVING HIS BEES TROUBLE HIS NEIGHBORS.

*Mr. Editor:*—Having often been asked by bee-keepers and others whether my bees in the village were troublesome to my neighbors, I will give you a little of my experience in this respect, as related to my friend J. H. Larrabee, in answer to his questions while visiting me.

"Manum, do your neighbors ever complain that your bees are troublesome here in the village?" asked Mr. Larrabee.

"No, not very much. In fact, nearly all seem to be interested in the success of my business, and they show a very friendly disposition toward the bees. There are times, however, when I have to be on my guard to prevent any annoyance to my nearest neighbors. For instance, in the spring of the year, when the bees have their first flight, if it happens to be on a washing-day, the ladies in the vicinity of the apiary scold a little if their clothes get spotted, as they most certainly will if put out to dry when bees are flying; but many of them have learned to wait until the bees have had their flight, before putting out their clothes, especially those who have had their clothes soiled once to the extent that they were obliged to wash over again."

"Suppose they are thoughtless, and do put out their clothes, and they get spotted; how do you manage an amicable settlement?" asks Mr. L.

"Oh! that is quite a simple matter. Whenever I learn that my bees have soiled my neighbors' clothes, or annoyed them in any way, I just present them with a few boxes of honey,

which has never as yet failed to sweeten and harmonize their natures."

"I notice one of your neighbors has a nice lot of fruit-trees just over the fence from your apiary. Does he ever complain that the bees annoy him?"

"No; he has never complained of being annoyed; but when I first started in the business, and when an occasional swarm would cluster on some of his fruit-trees, he would watch—from a distance—and request me not to cut limbs unnecessarily; but when he found that I never cut a limb nor branch he became quite interested in the bees; and now, whenever he finds a swarm clustered he notifies me of the fact, but I never fail to present him with honey in such a case."

"Do your neighbors ever complain that your bees injure fruit, especially grapes?"

"Yes, a few years ago I had two neighbors who had a nice lot of grapes; and it being a very dry season, the grapes cracked open when ripening; and there being a dearth of honey at the time, the bees visited the grapes in large numbers, and were really a great annoyance. One of these men once spoke to me about it, asking me if I could not fasten my bees in their hives until after his grapes ripened and were gathered; but a few words of explanation convinced him that it would not be best for me to do so. He thought the bees punctured the grapes; and all I could say on that subject failed to convince him that they did not. I finally went with him into his graperies, where we watched; and by much watching and experimenting, I succeeded in convincing him that the bees worked on only such grapes as were already punctured or cracked open, caused by the severe drouth. I told him that if we could only have a shower, the trouble would be ended; and it so happened that it did rain the very next day, and sure enough the bees did not visit the grapes any more that season. This man is now a friend of the bees, and has never been troubled that way since, owing to the fact that we have not since happened to have a drought at that season of the year. The other neighbor, who, by the way, is of a very different temperament, said nothing to me about the bees working on his grapes, but tried to get even with the bees by destroying them. One morning he called to his nearest neighbor, 'Hill, come over here; I want to show you something. There. See those boards there? Well, now, you just keep quiet and I will show you how I fix Manum's bees that are eating up my grapes.' He had two boards, each four feet long, arranged fly-trap fashion, the inside of which was covered with syrup to attract the bees; and, slam went the boards; and then with a shingle he scraped off the bees. 'There,' he says to Hill, 'I shall keep that trap at work till I kill every bee Manum has got, unless they let my grapes alone.' It happened that Hill knew something about bees, and he laughed at this good man for his folly, telling him that, instead of doing me an injury, he was doing me a good service; because, as the honey season was over, I had many more bees in each hive than I wanted, and that those he was killing were the old ones that I wanted to get rid of, and, besides, that young bees were hatching much faster than he could kill the old ones. He advised him to talk with me on the subject. That day I chanced to meet Mr. Hill, when he told me what he had witnessed, and we had a good laugh over it. But I called on my good friend and tried to settle with him for the damage the bees had done, but he would take nothing. I explained to him as well as I could the condition of things, and related my experiment with the other neighbor that very morning.

This good man seemed to have gained new knowledge of things, and admitted that he had acted a little hasty. That evening I presented his wife a few boxes of honey, and in return he sent me a fine selection of choice grapes. Since then all has been peace and harmony between the bees and fruit-men in this place, so far as I know."

"Do the ladies near you ever complain that the bees trouble them while they are canning fruit, making pickles, etc.?"

"No particular complaints have come to me, and yet some of my neighbors have mentioned that, on such occasions, the bees would enter the house; but, surmising the cause of their intrusion, they closed the doors. But these instances are now very rare, as nearly every house is provided with screens, which prevent the bees from entering, as well as flies. Let me tell you, Mr. Larrabee, that I believe that I am in an exceedingly favorable locality so far as regards kind and sympathetic neighbors, for I have not, to my knowledge, a neighbor who is not interested in my success, for there is hardly a person of my acquaintance but that, when I meet him, inquires after the bees, and expresses a wish that I may be successful. I will give you the experience of one day with my neighbors, as I noted it down. In the morning I went to the office to mail a few queens, when I met a neighbor, who asked, 'Manum, how are your bees doing this season?' My answer, of course, was, 'Not very well yet.' 'Well,' says my friend, 'I am sorry. I hope they will yet make you a lot of honey. I have been thinking of you for some time, and wondered whether you were getting much honey.' In a few moments I met another neighbor who asked, 'Manum, are your bees doing any thing this summer?' 'Well, Mr. Wright, they are doing just about nothing.' 'Well, what is the matter? You have had several poor years now in succession, and I did hope they would do well this year. Do you salt them enough? I remember when I was a boy my grandfather used to salt his bees, and he said they worked better when salted.' The next person who hailed me was a lady. 'Mr. Manum, your bees must be making lots of honey now, for I see so many clover-blossoms everywhere; and yesterday there was a lot of bees getting honey from the clover on our lawn, and I forbade the children from playing there for fear they might disturb the bees, for I am so anxious that your bees do well for you this year, you have had such bad luck for a few years past.' On my return from the office, I harnessed a horse and started for one of my out-apiaries. I had gone but a short distance when I met a farmer who inquired about the bees much as the others had, and asked whether I thought bees would get as much honey from Japanese buckwheat as from the other varieties, and remarked that, if they could, he would sow five acres instead of one, as was his custom, and said that he thought that, inasmuch as my bees were a benefit to buckwheat, farmers ought to sow more and reap the benefit from the bees, and at the same time help me.

"I soon met another farmer who asked, like all the others, how the bees were doing, and then asked whether it would be any damage to me if he should cut his alsike clover, which I had induced him to sow, while it was in blossom. I told him, that undoubtedly it would rob the bees of so much pasturage, and, besides, it would damage him; for, unlike the red variety, alsike clover makes better hay if allowed to stand until nearly all the blossoms turn brown, because it is finer than red, and of such a nature that it is much harder when allowed to mature; and, again, that, unlike red clover, it

seeds with the first crop; hence, if allowed to nearly mature, the seed furnishes much additional nutriment; whereupon he decided to let it mature. On that day I met 11 persons who manifested a similar interest in my welfare and success, as did those whom I have mentioned. In fact, I do not know of a person of my acquaintance who is not friendly to the bee-business; hence, I say, that, judging from an occasional article that appears in the bee-papers regarding the enemies of the business, I feel that I have a favored locality in that respect, for I have most excellent neighbors."

Bristol, Vt.

A. E. MANUM.

### RAMBLE NO. 37.

#### THE BAY STATE APIARY.

We reluctantly bade our Rhode Island friends good-by, and sped on our way toward the Bay State Apiary. Our route conducted us through the city of Boston, and here our patriotic blood became so stirred up that we lost our reckoning. But Boston people have erected a massive stone tower on Bunker Hill, where the traveler can climb up 294 steps and get a wide view. This view enabled us to get our reckoning again in a manner highly satisfactory. We immediately ran downstairs and followed our reckoning, and were safely landed in Wenham, about 11 o'clock. A street-car was standing



BUNKER HILL MONUMENT; THE RAMBLER GETTING HIS EYE ON HENRY ALLEY.

near, and an inquiry elicited the information that Mr. Alley lived half a mile from the depot. We journeyed by street-car until the conductor pointed out the residence of our friend, and we were soon exchanging our identity with Bro. Alley. Our identity seemed to be satisfactory, and we were invited to rest a while in his den, and we gratefully accepted a rocking-chair. We found Bro. A. just giving the finishing touches to the October issue of the *Apiculturist*, and his letters and MSS. were in a rather promiscuous heap upon the table. We also noticed a large pile of "Thirty Years Among the Bees," ready to mail, besides quite a number of *Apiculturists*. There were also several crates of



fine comb honey and cans of extracted honey which had just been brought from a local fair which Mr. A. had just been attending. Both quantity and quality showed that Eastern Massachusetts had enjoyed a good honey-yield.

A call to dinner transferred our talk to the dining-room. While engaged in doing justice to Bay State substantial, who should come to share them with us but Bro. Pratt, of Beverly, Mass.? After dinner we all felt remarkably well and good-natured, and we adjourned to the bee-yard. Bro. A. had just put up his last shipment of queens; and as they were piled up nicely on the cover of a Bay State hive we brought our camera to bear upon them, Bro. A., and the queen-rearing portion of the Bay State



LAST SHIPMENT OF QUEENS FROM THE BAY STATE APIARY, SEPT., 1890.

apiary. He is manipulating a Bay State hive, and we caught a very good view. Forty full colonies are in the home yard, besides over two hundred queen-rearing hives. The little hives and tin feeders were scattered promiscuously, with entrances toward all points of the compass.

We expressed a desire to see the yellow Carniolans, and were immediately shown a colony that would ordinarily pass for very good Italians. But these bees, when the hive was opened, showed all the traits of the dark Carniolans. No veil nor smoke was used. Quick motions near the comb or over the hive were not resented. As to honey-gathering qualities, we should think that Eastern Massachusetts is not the locality to test them for prodigious yields; but Bros. Alley and Pratt both have great confidence in the superiority of this strain over all others.

We were next shown the colony in which was installed the celebrated \$100 queen. This colony had thrown off a swarm quite early, and during the season sixty frames of brood had been drawn from the parent colony alone for queen-rearing. But whatever prodigies the colony had done, we noticed that they were very active; and though it was during the last days of September, they were busy at work; and, allowing the Rambler to judge, it was the best colony in the Bay State apiary.

#### HOW ALLEY INTRODUCES A FERTILE QUEEN WITHOUT CAGING.

While talking about introducing queens, Bro. A. said he would show us how to do it. Taking a fine large fertile queen from a nucleus he stepped to a full colony, removed the cover, and dropped her, in an unceremonious manner,

among the bees. We watched her a few moments. The bees were friendly, and she marched straight down between the combs, the reigning majesty. The colony had been queenless three days, and it was *just the proper time* to introduce her. Much earlier or much later than 72 hours would have resulted differently.

#### HOW TO INTRODUCE A VIRGIN.

We will now go with Bro. A. and introduce a virgin queen to a nucleus. The tobacco smoker is lighted, and the caged queen, perhaps just from the nursery, is taken to the queenless nucleus. A green plantain leaf is inserted in the entrance, the cover removed, and a couple of whiffs of tobacco smoke, and another as the queen is dropped, and the cover is replaced. We thought that was doing things quite rapidly, and removed the cover to look a little longer. Bro. A. says, "Wait a few minutes, and we will examine them again." He keeps a record of the condition of the nucleus, with a shoetack system. The Rambler will not undertake to describe the various positions, slants, and angles, and what they mean.

About this time we returned to the nucleus, and found every bee in the bottom of the nucleus in a stupefied condition; and when their senses returned, the virgin queen was accepted. The plantain leaf soon wilted, and the bees could pass to their work. It struck the Rambler all of a sudden that these 200 nuclei, so well stocked with bees, would make several good colonies, and we asked what was to be done with them.

"Oh," said he, "some frosty morning I will brush the bees off into the grass. It doesn't pay to unite and feed up. The bees usually die during the winter, and they might as well die now, and save all of the bother. I purchase bees in the spring to supply the waste."

The little combs are packed away in barrels, and secretly headed up to keep mice away from them.



MR. ALLEY, MR. PRATT (AN INVETERATE CIGARETTE SMOKER), AND THE RAMBLER. TALKING BEES, AND THE TWINS EATING HONEY.

The full colonies were wintered outdoors in double-walled Bay State hives. We now and then found a drone-trap kicking around in the grass. In fact, we should judge that the grass had got a little the start of Bro. Alley while raising his 1200 queens and editing the *Api*.

His apiary was, however, about as tidy as the average run of bee-yards where there is much work done. We have noticed that these gilt-edged apiaries are the ones that do not bring in a large amount of surplus cash.

While in the Bay State apiary we did not talk so fast and get so absorbed as to fail to notice a very pleasant feature in the apiary. Two wee bits of granddaughters were upon his lap or following his steps when at a safe distance from the bees. They were indulged with saucers, plates, and spoons and honey; and while we were talking bees, the honey was distributed in various directions. Bro. A. is positive in his views, and believes his method of queen-rearing is *the* method. His claim, that queens should be reared from the egg, though not much discussed at the time, had the effect of setting the Rambler to thinking about the matter, and the results of our cogitations will be given in our next.

RAMBLER.

[Now, look here, old friend; while we are greatly rejoiced at this pleasant glimpse of friend Alley's place of abode, when you tell us you "ran downstairs" on Bunker Hill monument we think you are getting decidedly in the way of skipping along almost too fast. I have been up and down those "stairs," as you call them, myself, and I did not feel very much like running. In fact, I sat down and blowed several times between the top and bottom. I am very glad if you can see friend Alley's ranch from the top; but when I was there I did not know of friend Alley's place nor about bees either. In my next visit I will be sure to hunt him up—yes, even if he does, as I have heard, manage to get a good deal of tobacco out of the way. While we are in the open air, I suppose I should not mind it very much. That idea of a plantain leaf for closing an entrance is certainly unique. By the way, didn't I have a little hand in that discovery? You know I told you that Dr. Miller threw some green leaves on the top of any hive that needed attention. If they forget to remove the leaves when they go away, the leaves dry up and blow away. In any case, they know at a glance (by the looks of the leaves) about how long ago the mark was made. Now, then, if we wish to close an entrance, say for a few hours, a green leaf will fill the bill. In regard to introducing a queen by just letting her loose, I suppose some of you know you can do this at almost any time, about three times out of four. When honey is coming briskly, and the colony has been queenless long enough to start queen-cells, we can do it certainly nine times out of ten. I hope friend Alley will excuse me for remonstrating against brushing the bees off on the grass. Brush them into a hive, give them a comb or two, and some sort of queen, and let them be happy while they live. Keep them, like the old horse, for the good they *have* done. We do not like your reflections on gilt-edged apiaries, exactly, friend R. It is true, there are apiaries where the gilt-edged feature is carried to extremes. I have seen some of them myself—some of those professional men, for instance, who have lots of money. A real nice attractive apiary wants to be the work of somebody who has to scratch and scrape, just a little, to make both ends meet. This will keep out of sight superfluities (just for show), and yet have things neat and in order, arranged so as to give the greatest facilities for rapid work. I am very glad of that glimpse you give of the twins. We would not have missed them for any thing. By the way, we wonder how *many* of the veterans have arrived at the dignity of being called "grandpa" by some little "new edition." Friend Alley, we lift our cap and extend our congratulations.]

## HOW TO BIND A VOLUME OF GLEANINGS.

### PLAIN DIRECTIONS, AND HOW TO DO IT SUBSTANTIALLY AND NEATLY.

I have just finished binding the last volume of GLEANINGS; and the thought comes to my mind, "What do its ten thousand readers do with the back numbers?" To many of them it is no doubt as interesting, entertaining, and instructive, as it is to me; and I wonder how many preserve them as carefully as I do, and how they do it. Some, no doubt, take them to a book-binder, have them bound substantially, and then give them a good corner of the book-case or library. Another way is to lay them aside, on a shelf, or in a drawer, where they will be handy to re-read, or for reference. But we all know what becomes of unbound journals and magazines—or, rather, we *don't* know. They are mislaid, borrowed, and never returned—disappear mysteriously during some house-cleaning raid, or are carried out of sight and out of mind to the garret or lumber room. Another method, *my* way, and so I think it a good one, is to bind them in tough paper covers at home; and, with your permission, I will tell your readers how to do it neatly, cheaply, and well.

You will need some brass wire, as heavy as or a little heavier than a stout pin; a hammer, an awl, a file, or a pair of snips to cut the wire; pliers to bend it; paste, and some heavy tough paper.

GLEANINGS is ten inches long. Get a piece of soft wood that length, an inch or more wide, and a quarter of an inch thick. An inch and a half from the end, and one-fourth inch from the edge, make a hole through this stick with a small gimlet, or with the awl; and, a half-inch further on, another. Make a like pair at the other end, and another pair at the middle. Now take the cover and advertising pages, and the little wires that hold the leaves together, from the issue for Dec. 15. Lay it, last page up, on a soft board; lay the stick on it, the edge with the holes in it parallel with the back of the magazine; and, putting the awl in the holes in the stick, punch similar holes in the paper. Lay it off, last page down, and treat Dec. 1st in the same manner, and so on to July 1st. Twelve numbers make a handy volume to bind or to read. Now cut three pieces of the wire, three or four inches long, and bend them in the shape of a double-pointed tack, the points half an inch apart and an inch and a half long. Cut two pieces of the heavy paper about  $7\frac{1}{2} \times 10\frac{1}{2}$ ; and, three-fourths of an inch from one edge, punch holes like those in the journals. Put the bent wires in the holes in one piece, and lay it on the table, wire points up. Then take the issue for Dec. 15th and put the wires through the holes in it, and so on until you have as many numbers as you wish to bind in one volume. Put the other piece of heavy paper on top of these, and hammer the whole down around the wires.

Don't be afraid to strike hard; get it solid, and then cut the wires down to within one-fourth inch of the book, and clinch them, bending the points toward each other. Now paste the extra half-inch of the covers over the back of the book, first one; and when that sticks well, the other; and across the back, and extending an inch or two on the covers, paste a strip of thin linen. Take the cover pages of GLEANINGS for July 1st, and cut off the last leaf close to the print, and another cover cut close to the print of the first page, and paste these over all, putting on the back cover first. Now put it under a press of some kind until dry; then if you want to trim the edges, and can't get to some printing-office where they always have machines to do this work, clamp



the edge tightly in a vise, with a smooth straight-edged board between the jaws and the paper, and with a sharp draw-knife you can shave the solid paper almost as easily as wood. But remember that I said, a *sharp* draw-knife.

If you have handy fingers, and follow these directions carefully, I am sure you will turn out a job you will be proud of; in any event, you will have your favorite GLEANINGS in a shape to make reading and reference easy.

A good paste is gum tragacanth, softened in pure water, with a few drops of spirits of camphor or carbolic acid added, to keep it from molding. It should have only enough water to thoroughly soften it.

E. J. BAIRD.

Orlando, Fla., Jan. 10.

[The method you describe is the same as that used by professional book-binders on books bound in paper, with the exception that they employ machinery, and you make use of common simple tools in the possession of most bee-keepers.]

### PLANNING.

#### STUDYING OUT PROBLEMS IN BEE CULTURE WHILE YOU SHOULD BE LISTENING TO THE SERMON.

I hardly know whether to say that planning is one of the inalienable rights or one of the essential requisites of a bee-keeper. I have sometimes thought I should like to have every thing settled, so that I could know just what was best to do in every thing, and have no more studying or planning to do than a teamster hauling cordwood. But I don't know that I'd be happy then. I'm afraid I'd be planning how to have something else to plan about.

When do you do the most of your planning? I think a great deal, if not the most of the planning of bee-keepers, is done in bed. I judge so from so often hearing them talk about lying awake nights figuring over something, and also from the amount of night planning I have done myself. When is your best time for planning? that is, when do you seem to do the quickest and clearest work at making plans? I don't think I can answer that question so well for others; but for myself, to be entirely candid about it, my mind seems to be in the best shape for it when sitting in church trying to listen to a sermon. Please don't understand me as recommending that time for you to do your planning, nor even as saying that I ever deliberately sit and consciously spend my time planning through a whole sermon. Ordinarily I give the sermon my whole attention; and I think my pastor, if asked, would say that I was one of his helpers by keeping my eyes steadily fixed upon him. But suppose some bee-keeping problem has been in my mind for several days. I've been working hard upon it, sometimes thinking the answer just within reach, then finding myself overcome by some new difficulty. Saturday night finds me still working on it; and after going to bed I keep turning it over in my mind until I drop asleep. Perhaps I wake up in the night, and the first thing that comes in my thoughts is that problem. Just then the question comes, is it before or after 12 o'clock? In other words, is it Saturday or Sunday? If the clock doesn't happen to strike about that time to settle the question, I conclude it's better for me to go to sleep anyhow—if I can. If I wake in the morning before it is time to rise, up comes that problem; and after making an effort for some time to think of something else I arise in self-defense and take to some good reading. Then I get along perhaps all right

until I get to church and get settled to listen to the sermon. Directly some word switchès my mind off upon a track that leads directly to that problem, and, before I know it, I am chasing it up full speed, and am surprised to see how easily I can get over some of the difficulties that before seemed insurmountable. In a minute I recollect myself with "Hold up, there! I thought you were listening to the sermon!" and the reply comes, "Well, isn't it too bad not to follow it up when following it up a little further would finish it up, I feel pretty sure, in nice shape?" But I bring myself up with a round turn, and, with perhaps an occasional slip, let the problem alone till Monday morning, when I am likely to find myself in pretty good shape to handle it.

Now, I have a word of advice for the younger members of the fraternity. You are likely to do a great deal of planning, and more depends on the quality than on the quantity of such work. Don't decide, from what I have said, that Sunday is a better day for planning than any other. It isn't. Why, then, did it seem so in my case? Simply because for a time my mind had been kept free from that kind of work, and was rested. If I should keep to work right on through Sunday, the same result would not follow. The point I wish to make is, that you are not wise to hold your mind too closely to any plan till it is too tired to work well. Many a night I have lain thinking till too tired and drowsy to think very much about any thing, and then, having a sort of feeling that the thing must be settled then and there, have roused myself by a strong effort, only to find that I was then simply wakeful, without the power to do any good headwork.

On the whole, I think you will be the gainer to refuse resolutely to do any sort of planning after you go to bed. Just for the time, you may seem to lose by it, but not in the long run. When you find your mind tired, stop, and go at it some time again. Don't try to be too abstract in your planning. If you are planning to do something with a hive, don't tire yourself trying to imagine how such and such things will look when you have placed them so and so. Get the things right before you and it will be easier and better for you.

Before you do a great deal of planning, read up what has been done by others in the past. Not long ago a beginner showed me a house which he had built for wintering bees, and asked my opinion about it. It was nicely built, costing about \$70.00; but if he had possessed himself of the books a bee-keeper ought to have, and also the back numbers of the leading bee-journals, he would have seen that he had nothing new or approved.

C. C. MILLER.

Marengo, Ill., Jan. 17.

[Well, well, old friend; and is it really true that you are fighting temptation so exactly along the same line that I have been for some time past? It has been one of the mysteries to me, why my mind (or, rather, my "planning machinery") should always start with such tremendous energy just as soon as Sunday morning comes, and especially when the sermon commences. I have a great many times noticed that, when older people want to talk, say at the breakfast-table, it is just the time when the little ones, and perhaps the baby who can not talk at all, begin their prattle; and I have seen canary birds that would be as quiet as you wish until somebody commenced conversation, then they would almost split their little throats in the effort, as it appeared, to drown the conversation. The business of talking seems to be infectious. Well, in studying the matter over it has occurred to me that this invol-

untary thinking machinery is like the canaries and the little household prattlers. Just as soon as something of importance is going on, it just puts in its level best to be heard; and in this matter of the worship of God I am sure that *Satan* makes an effort to divert our attention and to draw us away, if possible, from holy things. *He* can not bear to see us take up the Bible. He will keep us away from church if he possibly can; and he will help us to make all manner of excuses, and he does not give it up even then. If he finds we are bound to go to church *any way*, he follows up, keeps close at hand, and just as soon as the man of God commences something that is really spiritual and elevating, then he pushes in week-day traffic. He holds up a thousand and one allurements to draw us away, if it be a possible thing, from the subject in hand, and to make us lose the great spiritual truths that have been so carefully prepared to do us good. Many and many a time I have with resolute will put away green-houses and schemes for gardening during the Sabbath. I have said to this planning machinery, "Now, look here, you just shut up and keep still. When it comes Monday morning we will have a good time in working out these problems, and perhaps have a good time in putting them in practice; but not *another word* of it on God's holy day." Why, I have sometimes even longed for Monday morning, that I might plan and build with a clear conscience. When Monday morning came, however, the thing that looked so enticing during the sermon had little or no attractions at all, and possibly it was all dropped until *another* Sunday morning, when it was sure to start out anew. Sometimes I have been foolish enough to follow these plans out, at least somewhat on Sunday; but they never turned out well. If we are to enjoy God's spiritual gifts to the fullest extent, we must obey his holy command, and forbear not only physical but *mental* work on the Sabbath. I confess that I feel more encouraged to fight these battles when I know that somebody else has had temptations along the same line; and who knows but there are others besides Dr. Miller and myself among the readers of GLEANINGS who have like trials and temptations? Let me say to such, "Be not weary." In the 7th chapter of Revelation we have the following words: "These are they which came out of great tribulation, and have washed their robes, and made them white in the blood of the Lamb. Therefore are they before the throne of God, and serve him day and night in his temple." ]

#### MORE ABOUT THE HONEY FROM THE CACTI.

##### CACTI-BLOSSOMS AS LARGE AS COWBELLS, AND HONEY BY THE SPOONFUL.

In the Dec. 1st issue of GLEANINGS, p. 858, under the heading of "One of the Cacti," Prof. Cook asks, "Who will inform us in the matter?" The readers of GLEANINGS would not, as a whole, be any more than amused were I to write up the cacti (the 31 varieties) of Arizona, and the amount of honey secreted in the flowers, from the fact that a true statement would simply be taken as a wonderful exaggeration. B. F. Johnson, of Tempe, now a resident of Mexico, tells me that the cacti in Mexico have more honey than ours in Arizona. Mr. Editor, you have long been acquainted with the pen of Mr. Johnson; and as to his truth and veracity, I leave the readers of GLEANINGS to judge, when he tells us that in Mexico some of those cacti have a bloom as large as a cowbell, and honey lying in that bloom till you can gather it up with a teaspoon. It won't be long

before the readers of GLEANINGS will read, "Pure cacti honey, from the deserts of Arizona," on the eastern market. But we expect trouble in getting it on the markets, as it grains in the bloom. It grains in the hive too; and when you people strike it in the condition of Yankee maple sugar in the can, you will cry out, "Adulteration!" But, buy just a little; try it; and next time you will hunt the market for Arizona cacti honey. GEO. K. MILLER.

Tempe, Ariz., Jan. 11.

[Thank you, friend M. In passing through Arizona, nothing, perhaps, interested me more than the wonderful class of vegetation you have mentioned. It was not the time of flowers when I was there, but the fruits not only interested me but refreshed me greatly. I looked over in the direction of Mexico, and longed for liberty to go down and investigate. Providence permitting, may be I shall some time have that pleasure.]

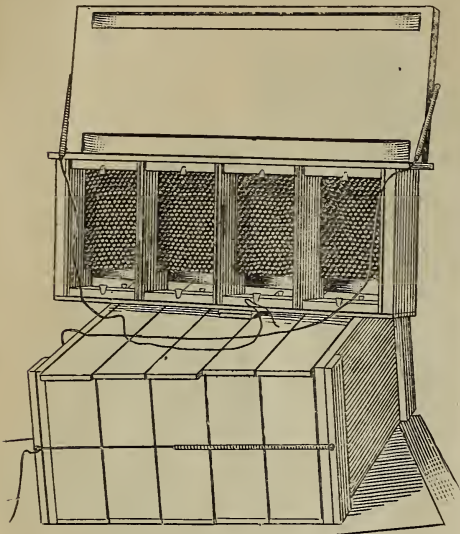
#### SURPLUS ARRANGEMENT.

##### DOOLITTLE'S METHOD OF SECURING COMB HONEY.

As we go back over the past in memory, we can not help seeing the great strides made in bee-keeping during the last thirty years. We have many new things to-day that were hardly thought of at that time, such as comb foundation, the honey-extractor, queen-excluding metal, etc., which are often mentioned as the "great advancements;" but it seems to me that the improvements regarding some of the things that were used thirty years ago should call forth our admiration fully as much as do the many new things. I think, in no other one thing has the advancement been any greater than in our mode of taking comb honey. Thirty years ago the smallest section, or honey-box, as it was then called, held six pounds of honey, or thereabouts, the same having three combs. Soon followed the two-comb box, then the one-comb box, next the two-pound section, the  $2\frac{1}{2}$ -pound section, the one-pound, and finally from the half-pound down to the Harmer two-ounce package, all coming in rapid succession, when a want for any or all of these was felt. Well, with the advent of sections came the want of something to hold them, keep them clean, etc.; and many have been the inventions for this purpose, such as wide frames, single and double tier; honey-racks, crates, T supers, etc., all of which have had their advocates. After testing many of these different arrangements I decided on the one-tier wide frames as being the best; and in using them I adopted the plan known as "side and top storage combined," with which I was very successful for many years. I never did like the tiering-up plan, used so successfully by many, for the reason that, in this locality, it so often happened that the season would close before many if any of the sections were finished, leaving me with a large lot of unfinished sections on hand, with few if any completed for market. With the side and top storage plan I could take the sections off the top as fast as finished, raise the partly finished ones from the sides to the top, and, by putting in empty sections at the sides, keep the bees on new work there and finishing it on top. When the season drew toward a close, no more was put in at the sides, and thus I had nearly all the sections which were used during the season finished at the end of the honey harvest. In this way remarkable results can be secured; in fact, I do not believe there is any other plan known whereby as much nice white comb honey can be obtained as by the above, where any



one has the time to carry it out; but it requires time and close attention to all of the minute details connected with it.



DOOLITTLE'S SURPLUS ARRANGEMENT.

While I sometimes think that enough more honey can be obtained to pay for all this extra trouble, yet of late I have adopted a somewhat different plan whereby nearly if not quite as much honey can be obtained with much less work; and for want of a better name I have called it "the lateral plan." Before adopting this lateral plan I obtained and tried nearly all of the different cases and supers in use, and, after a careful testing of the whole, I came to the conclusion that, taking all things into consideration, this had more advantages and fewer disadvantages than any of the others. That the reader may know just how the wide frames are used by this plan I have had an engraving of them made, so as to save the talk necessary in telling them what I wish to.

My hives are all chaff hives, and I use on each, when working for surplus honey, a queen-excluding honey-board, which extends out over the chaff at either side of the brood-chamber, so that I can put on from three to ten of these wide frames, just as I wish. On most of my hives I place five wide frames at the beginning of the season, fixed and held together as shown in the lower part of the cut. The center wide frame contains sections with combs left over from the previous season, used as "bait" sections; and as these go directly over the center of the brood-nest, the bees go to work in them at once as soon as there is any honey coming in from the fields. As soon as the bees get well to work in these five wide frames I load my wheelbarrow with wide frames, having sections filled with foundation, as shown in the center of the engraving, and, arriving at a hive, I unwind the string from around the flat-headed nail, shown at the left of the lower part of the engraving, which allows the coil-wire spring to assume the shape you see them at the top part of the cut, when the wide frames can be handled as I please. Instead of handling them as some do, putting the added wide frames between the others, I simply take off the side board and add wide frames to each side to the amount needed, when the side boards are

placed back, the springs drawn to a strong tension, the strings wound a little more than one turn around the nail-heads to hold them, when I am ready to move on to the next hive. In a week or so I start out in the same way again. I now find from one to five frames of sections finished, out of those put on at first, which are taken off and the bees shaken off the four sections by taking hold of the projecting ends of the wide frames, the same as they are shaken off from a brood comb. The remaining wide frames of unfinished sections are now drawn together over the center of the brood-nest, when the necessary number of wide frames of sections is added to each side. In this way I keep working till the season begins to draw toward a close, when, instead of adding more sections at the side, the unfinished ones are drawn together, so that at the end of the season I have no more unfinished sections than I wish as bait-sections to commence the next year with. In this way the bees are kept at work in a natural manner, building their comb outward all the while, and finishing their work at the center, which has a tendency to reduce swarming, and give a greater yield of finished honey than by any other method with which I am acquainted. The plan also allows of adjusting the amount of surplus room to the wants or size of the colony, so that no colony is discouraged by too much surplus room being given at first, and none are crowded for want of room. It also keeps the wide frames drawn tight together at all times, so that, as the lumps of propolis soften with heat, which may be on the wide frames or sections, the slack is always taken up; and they can be tiered up by those who wish to tier up, by simply making suitable slots in the tops of the wide frames, like those in the bottom—reversed or handled as a whole, cost little if any more than any good arrangement for surplus comb honey; and as a whole it takes no more time to prepare and manipulate them and the sections than it does any other *first-class* arrangement; while the sections are kept almost entirely free from propolis. If the reader will refer to the upper part of the cut he will see how the propolis trouble is obviated on the outside of the outside tier of sections, where the greatest annoyance comes by way of propolis, where the outside sections are clamped against any flat surface. A rubber band or a wire, or even a string, can be made to answer in place of the springs; but as they cost only 25 cents per dozen, and are so much better than any thing else, they are much the cheapest in the end. I still use  $1\frac{1}{4}$ -pound sections, the same being two inches wide, and glass all my sections. This will help the reader to understand the cut better. As long as these  $1\frac{1}{4}$ -lb. glass sections find a ready sale in our Eastern markets at the same price as one-pound sections unglazed, I shall continue to use them; but I am always ready to accept any real improvement as soon as I find it out.

G. M. DOOLITTLE.

Borodino, N. Y., Feb., 1891.

[Friend D., you will, by your plan of working, get nicer honey than by the usual way of letting the cases remain on the hive until they are all sealed. But you will also have more labor, I think, than by some of the other methods that do not give as nice a product. Then the question is, "Does the extra price received pay for the extra amount of work?" For a market that wants nice glass sections, I am inclined to think it does; and if you can arrange things so as to make your way of taking out all sections, as soon as finished, but little if any expense, more than the other way, you certainly are ahead. I believe the best results will

also be obtained by having a spring, or some equivalent, to constantly pull the sections (and wide frames if they are used) tight up against each other.]

If we could give the appropriate colors to the blossom and stem, we should have a well-nigh perfect representation of our common red clo-

### THE SPIDER-PLANT.

NEW ENGRAVINGS FOR THE A B C OF BEE CULTURE.

By Ernest R. Root.

While looking over the seed catalogue of one of the prominent seedsmen, W. Atlee Burpee, we ran across a very accurate engraving of the spider-plant—the best representation that has ever been made, so far as I know. As we are now revising the A B C of Bee Culture, making new engravings and such other improvements as will make the work more valuable, we concluded to re-engage it; and for the benefit of our journal readers I here submit it.

The bees on the wing, going to and from the blossom, is characteristic of their behavior toward the plant. But there is just *one* thing that the cut does not show, and that is the little drop of honey sparkling in the blossom, but which the reduced size makes it impossible to show.

Aside from being a honey-plant, spider-plant is one of the most ornamental shrubs ever placed in a flower-garden, and so advertised in Burpee's catalogue. As we state in the A B C book, it is not of sufficient value to a bee-keeper, however, to warrant planting them on a



COMMON RED CLOVER.

ver. The stem has the usual characteristic fringe of hairs, and the shape of the leaves is also characteristic. It may seem to some of our readers almost unnecessary to represent any thing so common; but there are places where even red clover does not grow; and for the benefit of the bee-keepers who are unacquainted with it, I am glad to show them what it looks like. Perhaps I should remark that peavine clover is just the same, only the stems are much longer.



CLEOME

CLEOME PUNGENS, OR SPIDER-PLANT.

large scale. But a few of them will adorn the dooryard, and give you a chance to see how the bees fairly swarm upon the blossoms. Those large crystal drops of nectar and the greed of the bees in the early morn, is a sight to behold.

### RED AND WHITE CLOVER.

While I am about it, I might as well present you with two engravings that we have adapted for the A B C book.



WHITE CLOVER.

□ This engraving shows the most valuable of all honey-plants to the bee-keeper. Without it, bee-keeping in the United States and Canada would assume hardly half its present proportions; and but for it we should be without one of the finest honeys in the world—the very finest, if we except the alfalfa. Our artist, it seems, caught a bee while in the act of appropriating the delicious nectar.

### BASSWOOD, OR LINDEN.

By the by, we have also had another engraving of basswood made expressly for the A B C book; and its importance as a honey-plant is second only to the white clover as above.

Our artist, who was looking over some beautiful plates in a standard work in one of our public libraries, accidentally ran across a rep-



resentation of basswood. It was so accurate that we instructed him to copy it, as faithfully as he could, by a wood engraving, and we give the result below.

The same thing is what the Canadians call "linden," and we across the line, as a general rule, term it *basswood*. There is no difference, but climatic influences have their effect upon it. Among the hills of York State the leaves assume mammoth proportions.

not more plentiful than it is. It is one of the main stays, where it grows, of the honey-producer, and one of the most valuable woods in manufacture. It will hardly do for outside exposure to the weather; but it is admirably adapted for packing-boxes, and is used in immense quantities in the manufacture of furniture, forming the bottoms and sides of drawers, the backs of bureaus, dressing-cases, etc., and it is also employed extensively in the manufacture of paper; in fact, the envelopes that are sent out from the Home of the Honey-bees are said to be made from basswood "pulp."

It has often been said that we are cutting off our own noses in using it for one-piece sections—that we are "killing the goose that lays the golden egg." Well, it is true that apiarian-supply dealers may use quite a little; but still, the amount that *they* use is very insignificant in comparison with that employed by furniture makers, packing-box concerns, and paper-makers.

After all, there is one redeeming feature. The basswood is a very rapid grower. We thought at one time that we had used about all the basswood in this



AMERICAN BASSWOOD, OR LINDEN.

I measured one, you remember, that was 14 in. long. While this leaf was among the largest, yet the leaves were, on the average, about twice the size of those in our own locality. In Illinois I noticed that the basswoods seemed to be less thrifty than in Ohio. The leaves seemed to be smaller, and the bark of the trees of a little different appearance. The engraving above represents quite accurately the typical forms, however. The European variety has smaller leaves, and differs from *Tilia Americana* in a few other minor respects.

It is rather to be regretted that this tree is

section, to say nothing of the enormous quantities shipped in from Michigan and other States. But somehow the farmers are now bringing in beautiful nice white basswood lumber; and where they get it in our vicinity is a sort of puzzle to us. Our

superintendent, Mr. Warner, assures me that at least some of this lumber is from a second growth of trees that sprouted ten years ago from the stumps of old trees—said trees having



been cut for us ten years ago. *If* basswood will replace itself in ten or even twenty years, so that it can be used again for lumber, there is yet hope that it may continue to bless the bee-keeper.

There is one thing certain—that basswoods do not do nearly as well away from the shade of other trees. In our basswood orchard there are trees that are protected by some large oaks, that made a growth from three to four times as large as those out in the open field. Those trees that are in the shade of our factory are much more thrifty than those along the roadside without the shade of buildings or of other trees.

## THE NEW YORK STATE BEE-KEEPERS' CONVENTION.

NOTES, BY ERNEST.

On the morning of the first day it rained furiously, and the streets of Albany were literally puddles and streams of water—so much so that it was very difficult for a pedestrian to make his way from one point to another without getting wet feet. When I registered at the Globe Hotel I looked to see whether I could find the names of any bee-keepers I knew which were recorded before mine, but nary a one. I was afraid the large amount of rain the night previous would dampen the spirits of a great many who possibly had thought of coming. In fact, after breakfast I sat down in the hotel and waited for the bee-keepers to come in.

While thus employed, my thoughts reverted to the time when, last fall, I had arrived at this very same hotel after a bicycle run of 50 miles. I came in, I remember, muddy, wet, and tired, and my clothing was somewhat torn by the effects of that bulldog encounter, an account of which I have already given. For curiosity I thought I would ascertain whether the clerk remembered me. "Oh, yes!" said he; "you are the chap who came in so dilapidated from that fifty-mile run through the mud from Durham. I could not forget that."

He was very glad to see that I had survived the journey, and inquired whether I expected to take a similar run again.

"Never," I replied, "over such roads, nor through such mud, and, much less, by the house of the box-hive bee-keeper who owned that ferocious bulldog."

After a pleasant chat with the clerk I asked where to take the electric motor over to Troy. "Just a couple of blocks down the street." A ride on the electric car brought me to Troy. I made a short visit with relatives, and then returned to Albany and thence to Agricultural Hall. I inquired of the janitor where the bee-keepers' convention was. *He* hadn't seen any bee-keepers. He was told that they were to occupy *that* hall, pointing to an unoccupied room on the second floor. As I looked out on the streets running with water, I concluded that York State bee-keepers had become discouraged—even the president and secretary. Pretty soon, in came a gentleman, and after a little I began to inquire whether *he* knew anything about a *bee*-convention in that building. No. He had been looking for the same thing all the afternoon. We "exchanged our identity," as the Rambler puts it, and fell to talking about bees, as to how they would winter, etc. I am such a poor hand to remember names that I can not now even remember who he was. "At any rate, I wonder what is going on in that room down there," I said, pointing downstairs. "I saw a couple of men go in a moment ago."

I inquired of the janitor, who said it was an *agricultural* meeting. "I don't care very much about agriculture," said I, turning to my friend, "but let's go in and see what they are doing." Cautiously I opened the door, and, presto! there sat President Elwood in the chair, the secretary at his table, and a whole convention of *bee-keepers*. In various parts of the room were familiar faces whom I first met on my bicycle tour. My first thought was, "Why in the world didn't you people have a sign out and let folks know where you were?" I learned afterward that the place of meeting had been changed to another room—a room that had previously been occupied by an agricultural meeting; hence the janitor's mistake.

## ARTIFICIAL PASTURAGE.

I arrived just in time to hear the discussion in regard to artificial pasturage. Among the plants discussed were the Chapman honey-plant, alfalfa, and sweet clover. The reports in regard to the first named were not very favorable. It seemed to be remarkable as a yielder of nectar, but its difficult propagation renders it impracticable for bee-keepers at large. George H. Ashmead had sown the Chapman honey-plant seed broadcast by moonlight.

"Why did you do it after dark?" some one asked.

"Oh! I did not want everybody to know what I was doing. It has not been called a bad weed: but some folks, if they had seen me sowing it, would have declared that I was sowing something that would work mischief to the farmers. But there was not one of those seeds that ever came up."

Mr. Thomas Pierce, of Gansevoort, had tried sowing sweet clover, but none of it came up. Referring to the moonlight sowing, he banteringly said he would have some compunctions of conscience. That did not distress our friend Mr. Ashmead at all. He sowed upon waste places. He knew that the plant was not a bad weed, and he was not going to give his neighbors even a *chance* to think so. In regard to sweet clover, he had seen dirt thrown from the bottom of a well 30 feet deep, and sweet clover and mustard started from it.

The discussion then turned to alsike. In some parts of York State the farmers were introducing it, at the advice and suggestion of bee-keepers. In some cases they like it, and in some they don't. Where they did not take to it, it was ascertained that it grew up rank, and then rotted and died. It was recommended by some that it be sown with timothy or red clover. It is then not apt to lodge, and it makes a fine growth. Testimony was not wanting, to the effect that it is a splendid honey-plant—superior to ordinary white clover; and, as somebody said, "Bees work on it immense."

George H. Ashmead said that the farmers were going back on alsike in his locality. They complain that there is no after, or second growth. He thought that, if he could get them to sow it early enough, they would have two crops. Another thing, farmers complain that alsike turned their butter white. They had tried it, pasturing their cows two weeks on alsike and two weeks on white clover. The alsike, every time, they reported, would turn the butter white. When cows were pastured on common red clover the butter resumed its natural color. But there was one strong point: and that was, that alsike hay will not give horses the heaves as does red clover. Alsike has no fine fuzz that rattles down through the hay.

J. C. Stewart sells alsike seed to farmers, and distributed Mr. Newman's alsike pamphlets; and he discovered that the pamphlets helped to



sell for him a good deal of the seed, besides giving him a little larger percentage of honey.

It was generally agreed, that, where farmers do use it, they regard it as the finest hay in the world. Mr. West said that his cattle would paw through the snow to get at it—a thing they would not do for any other clover or vegetation.

Referring to the scattering of seeds by the roadside or upon other waste places, President Elwood thought, as a matter of expediency and abstract right, we should be careful not to scatter upon the lands of others. We have a perfect right to do it on our own ground.

Somebody asked why clover seemed to yield honey at some times and not at others. Mr. W. L. Coggs shall said that, if the atmosphere is right, we get honey; but if not, we do not, that's all.

#### Evening Session, First Day.

The matter of the use and abuse of foundation was brought up. Some argued that we were using too much, and that only starters, even in the brood-frames, were more profitable. There were not wanting others who insisted that they wanted full sheets every time. Mr. Ashmead thought that a good deal depends on how we work the bees, and the time of year in which the foundation was built out.

#### WIRING FOUNDATION.

As is usually the case, a good many wired their combs and they could not get along without it; and a good many did not wire, and could not see the need of it. The latter, as a general rule, seemed to be those who do not move their bees very much. W. E. Clark wired his frames horizontally. I asked him how it could be done, and not have the combs wavy. W. L. Coggs shall replied by saying, "Don't stretch the wires too tight."

Our genial friend Mr. J. VanDusen, of Sprout Brook, N. Y., who turns out that beautiful flat-bottomed foundation, was present, and he was called upon. He did not see the need of wiring frames at all; but he would use the light-weight brood foundation wired—that is, wired in the foundation. This prevents ail sagging, and his customers, as a general rule, seem to be pleased. I noticed that a good many nodded assent, and I was surprised that there were so many large bee-keepers who use the flat-bottomed article. They like it, and prefer it to the natural base.

The discussion finally turned as to how to fasten foundation into sections. Almost every bee-keeper had a little different method, and his method, of course, was the best. After resolving it down, I found that the methods of all could be classed under two heads—those who use the melted-wax plan, and those who use a machine whereby the edge of the foundation is pressed into the wood. W. E. Clark, of smoker fame, had bought one of Bro. Root's Gray machines. He liked it very much. He subsequently purchased one of his improved Clark machines, and that was very much better yet. This machine was simply perfect, and with it he could put in foundation as fast as he could count.

Mr. Thomas Pierce, N. D. West, and quite a number of others, used the melted-wax plan, and they could do it very rapidly. They did not see the need of any machine to do it with. They just dipped the edge of the foundation into some melted wax, and then quickly set it right down in the section. Mr. Charles Stewart had used both the improved Clark machine and the melted-wax plan. He had got well used to both ways, but preferred the melted-wax method. He could do it a good

deal faster and a good deal better. George H. Ashmead and several others nodded assent.

Some one asked whether the three-cornered starter was as good as full sheets. W. E. Clark answered that "climbers," as they are called, are not as apt to be built clear out to the edges of the sections as full sheets of foundation. There seemed to be a general agreement on this point.

#### Morning Session, Jan. 24.

"Shallow versus deep brood-chambers; narrow spacing and fixed distances," was the topic of a paper by Mr. Noah D. West. "Narrow spacing," he said, "is something less than  $1\frac{1}{2}$  inch. We want that spacing that will give us the most brood." His experience was in favor of  $1\frac{1}{2}$ . As to bee-space,  $\frac{5}{16}$  has the preference; but he admitted that he had burr-combs, and had to use honey-boards.

#### "DO WE WANT FIXED DISTANCES?"

"Yes, sir," said he; and he gave me a sly twinkle as he peered over the edge of his paper. Twenty years ago he began using the Quinby-frame hive. He now uses ordinary hanging frames spaced with wire nails driven into the sides; and on some accounts he liked them very much, but they were unhandy for extracting. He exhibited a modification of the Hoffman frame which he preferred. This had straight top-bars, and the end-bars were enlarged toward the top. As to deep frames, the bees did not breed up soon enough in the spring. He referred to the fact that he was obliged to use a honey-board on account of burr-combs; but he would like to dispense with it, as he observed that bees did not enter the sections as readily as when they were out.

Several intimated, at the close of this paper, that the reason he had burr-combs was because his bee-space was too large. Mr. Scofield said, "Use a top-bar one inch wide, with a bee-space above  $\frac{3}{8}$  inch, and you will have no burr-combs." Several others put in that they wanted  $\frac{3}{8}$  scant.

As to the matter of deep or shallow frames, a considerable number seemed to prefer the Quinby depth, although there were not wanting those who thought they could do just as well with the L. frame, one of them being prominently Mr. Scofield. Mr. Elwood had been around considerably in the spring of the year. His observation was, that bees were doing their best on the deep frame. They would winter just as well on the L., but they would not breed up quite as well as they would on the Quinby depth. Mr. Coggs shall said the reason was, deep frames have more honey in them; and this honey is directly over the bees, not off at one end. The more honey over the bees the better they will breed.

Mr. Ashmead thought the bees bred equally well in deep and shallow frames, but he preferred the L., for the bees go into sections earlier; and I noticed that several nodded assent to this. As to fixed frames, there did not seem to be very much disagreement on this point. Most of the bee-keepers present seemed to prefer them. Mr. W. L. Coggs shall, an extracted-honey man, and one of the largest bee-keepers in the State, however, does not use them and does not want them, neither does Mr. Thos. Pierce. Quite a number testified in favor of the Hoffman frame, and there were not wanting those who preferred the Quinby. But there was one man in the convention, Mr. A. E. Woodward, of Grooms Corners, N. Y., who had used 2000 Hoffman frames, and had now discarded them all for the plain loose hanging L. frame. Quite a number looked over toward me with a comical twinkle in their eyes, as much as to say, "There, young man, how does that strike

you?" I asked our friend why he discarded them. One reason was, the bees would propolize in between the uprights. Another reason, the brood did not seem to be built out along where the end-bars began to enlarge toward the top. I then called upon several of the closed-end-frame people, and asked them if they had had any trouble about brood being built out the length of the end-bars. They had experienced no such trouble. Another reason why our friend had discarded them was because he could not alternate the frames. Again I called for the testimony of the closed-end and Hoffman men. Neither had they experienced this trouble. But for all this, I am very glad to give this testimony right here, because it shows that not every one will be pleased with the Hoffman frame; and I hope that some of the enthusiastic admirers of them—those who have not yet tried them—will be a little slow in giving them too extensive a trial.

I would say right here, by way of parenthesis that I do not want any of our friends to think I do not welcome adverse testimony to some of my "pet ideas," as some might call them. I am exceedingly anxious that both sides shall come out.

Somehow or other this matter of cellar versus outdoor wintering came up. Mr. Ashmead said, that, with an apiary of 100 colonies, he could save, by wintering in the cellar, from 500 to 700 lbs. of stores. I told Mr. Ashmead, that, if he lived in a locality where the winters are rather more open, he would not notice this difference in results. In cold localities there is quite a saving in wintering in the cellar. In warmer localities, say in about the latitude of our own, the difference is not very great; although I have noticed that there is a slightly less consumption, even in Medina, of stores per colony, in the cellar.

A paper from Dr. Tinker was read, on the subject.

"ARE WE READY TO ADOPT A STANDARD FOR THE AMERICAN ITALIAN BEE? IF SO, WHAT ARE THE DESIRABLE CHARACTERISTICS?"

Taking it all in all, the matter was well considered. The doctor alluded to the fact that, up to the present time, the three yellow bands seemed to be the only standard of purity for Italians. But Cyprians and albinos have come in; and for their crosses we need a little different standard. But little has been said of the color of the *hair*. The doctor thought the best strains have white hair. The white hair shows black blood with the bad weeded out. The yellow hair shows that the pure Italian blood has the predominance. He called attention to the fact that, in making exhibits of choice bees, the judges have no standard from which to make their awards of premiums, and he recommended that the association adopt some standard.

W. E. Clark is one of those dry jokers in conventions, and generally makes a pretty good point. He thought it might be all well enough to make a standard for show; but what he wanted was bees for *business*. He had a cat at home that he would not trade for any ten other cats he ever saw. She is a splendid mouser, and kept the premises clear of the rodents; but a very homely cat was she, and neither had she any distinctive markings or fine pencilings. He also had an old speckled hen that he would not trade for any other hen he ever saw. She was a cross between several other strains; but she would beat any well-marked pure-blood in egg-laying that he ever had. He also had some bees that were splendid workers, but they were not very fancy in color. "This standard

business," said he, "is just for exhibition. These standard hens and standard cats and standard bees, with just so many shades or markings, do not amount to very much for business."

Mr. Knickerbocker agreed, and further said he had carefully tested these golden-yellow bees. The honey that they gathered had a water-soaked appearance, and he thought they were not as good workers as his leather-colored strains. He emphasized the point that he preferred bees for business.

Mr. Elwood and Mr. Hershiser, however, insisted that it was necessary to adopt a standard for *exhibition* purposes, and that Dr. Tinker's point was well taken. Mr. Elwood said that, if he ordered an Italian bee, and got a hybrid, he would be disappointed. He wanted to get just what he ordered, as to markings, no matter whether the hybrid would be a good deal better bee for business than the regulation three-banded Italians or not. Our judges at honey shows he thought should have some standard whereby they can mark the bees. As it is, there is a good deal of complaint in regard to the way bees are awarded premiums by the judges.

#### *Afternoon, Second Day.*

We first listened to a paper by President Elwood. It discussed the poor season, and its causes. A full crop of honey, as a general thing, means a good crop of grain. The fertilization of blossoms by bees is certainly necessary. As to out-aparies, we should be a little cautious about advising everybody to start them. If a small business does not pay, then a larger one will not. There are some who have a capacity for running a series of apiaries, and there are others who have a capacity for running only one small apiary, and sometimes poorly at that. He lamented the fact of raw sugar having been placed on the free list, and a bounty of two cents a pound being paid on all produced at home. He was not certain just what effect this would have on the honey-trade, but he thought it would work injury. Bakers and confectioners had been using cheap honey, but now they would be likely to use sugar. He thought there was a need of bee-keepers adopting some sort of trade-mark, and that the Honey-producers' Exchange should by all means be continued. The Honey Statistics in GLEANINGS had been sent out free, and had rather conflicted with the operations of the Honey-producers' Exchange, whose bulletins were sent out to members only. As to the Columbian Fair, the bee-keepers of New York should make some arrangement to make an exhibit; but if the managers were to open it on Sunday he recommended that the bee-keepers of York State let it severely alone. I was pleased to notice the general assent to this point, shown in the faces of those present. The discussion of the paper was not brought up at that time, but it was considered later in the form of committees.

#### *Evening Session, Second Day.*

The evening session was given over to the commission men, and two papers were read. Both were so valuable and so vital that I am glad to give them entire—not that the other papers in the convention were less valuable, but because the commission men have had but comparatively little to say to the honey-producers. The first paper, by F. B. Thurber himself, was read by a representative of the great firm of Thurber, Whyland & Co., of New York. It is as follows:

THE INFLUENCE OF FREE SUGAR ON THE CONSUMPTION OF HONEY.

After April 1st next, the present duties on



foreign sugar, which average  $2\frac{1}{4}$  cents per pound, will no longer be imposed, and a bounty of 2 cents per pound will be given to domestic producers of sugar, which includes the cane sugar of Louisiana, the sorghum and beet sugar of the Western States, and the maple sugar of the East. This will undoubtedly stimulate production in these lines, increase the supply of sugar, and largely decrease the price, although, with low prices, consumption will be larger, and there will be doubtless more or less fluctuations in price, due to this cause.

Just how much lower sugars will be on the 1st of April than they are at the present time, it is impossible to say; but probably not less than  $1\frac{1}{2}$  cents a pound, or, say, about  $4\frac{1}{2}$  cents a pound for granulated sugar at wholesale.

What influence the cheapness of other sweets will have upon the consumption of honey, is a difficult thing to estimate. Honey is an article distinctive in character, appearance, and flavor. People who are accustomed to using honey want honey and will have it, unless prices should be held at exorbitant figures; but as cheap sugar will undoubtedly stimulate the production and consumption of attractive fruit-preserves in this country, just as it has in England, and the manufacturers of these preserves will undoubtedly continue to advertise and push them, it will have some influence on the consumption of honey.

I would advise a continuance of the same intelligent study of the business that bee-keepers have given it in the past. I know of no line of business that has received more careful or studious attention than your business has during the past few years. Every suggestion made by distributors of your product, tending to make it more attractive and convenient for consumers, has been met, and the little busy bee has been educated to work in a form calculated to extend the consumption of his product.

I have always felt much interest in apiculture; and the Thurber - Whyland Company, of which I am president, will be glad to do all in its power to forward your interests. With regards and best wishes, I remain

Faithfully yours,

New York, Jan. 20, 1891. F. B. THURBER.

The second one was read by Mr. Segelkin himself, and is as follows:

#### SHIPPING AND GRADING HONEY.

*Mr. President and Gentlemen:*—I welcome this opportunity with great pleasure, and will describe, as definitely as possible, *what our market demands*. It is certainly to the interest of the producer to put his product on the market in the most attractive and salable style; and we, as the sellers and distributors, are naturally in a position to know exactly the wants of our market. Receiving comb honey in large quantities from all the honey-producing centers throughout the country, we get it in all styles and shapes, and, in many instances, we find there is room for vast improvement and changes. In these days of sharp competition in nearly all the branches of industry, it has been found necessary to put the goods on the market in very attractive style. This is mainly the case with all kinds of food products, such as canned goods, preserves, etc., all of which are handsomely labeled; and those which are put up neatest will find the quickest sale. The consumer will always buy that which looks the most appetizing. As these facts can not be denied on staple goods, it is all the more necessary to use the utmost care in putting up comb honey in the most attractive style, because this is regarded as a luxury—if not altogether, certainly to a very large extent.

We give due credit to a large number of our shippers who are up to the times, and who put their honey up in first-class style. Their goods always find ready sale at the highest market prices. If they do not sell their product outright, they are sure of receiving returns within a short time, and need not fear having their honey carried for months or carried over the entire season. We very often receive comb honey which is put up in bulky, awkward crates, not even glass on the side of the crates, the combs built without separators, so that it is almost impossible to take the combs from the crate without injuring them. Such goods do not compare favorably with first-class ones. They find but slow sale, and prices have to be shaded considerably to move it off. Still, these shippers generally expect highest prices, and are very often dissatisfied and disappointed with the returns, when the fault lies with themselves only.

#### SINGLE-TIER CRATES RECOMMENDED; MARKING WEIGHTS.

For one-pound sections we recommend a single-tier crate holding 24 or 25 sections. While we are not opposed to the double-tier crate, we believe the single-tier is the more desirable—at any rate, for unglazed honey. If some of the combs in the upper tier start to leak, they will drip over the combs in the bottom tier and soil the whole crate.

We often receive comb honey which is not weighed at all. Others have only the gross weight marked on the crate. Again, others have gross and tare, but *not* the *net* weight; and, again, some is marked in such small and faint figures that the marks are scarcely legible.

We received one lot this season in paper boxes, which we supposed was not weighed, as it did not bear any marks, nor could we find any marks as to the grade of the honey. To determine which was first and second grade white and buckwheat we started to open up the crates. Under the cover we found a slip of paper, stating the quality and weight. What the shipper's reason was for putting the marks under the cover, we are unable to say. No doubt he thought it the right way to do.

Very often the shippers will figure the weight down to ounces, and mark the crate, for instance, "Gross, 28:06; tare, 4:04; net, 24:02." These two ounces we have to throw off every time; in fact, in some cases we are compelled to throw off quarters in order to effect a sale. All this can be and should be avoided by the shipper by simply changing some of the combs, until the crate will weigh an even pound or half-pound; and by doing so he will receive pay for *every ounce of honey*. We would recommend putting *only* the *net* weight in plain figures on the *end* of the crate.

For glazed or unglazed honey we advise the use of heavy paper in the bottom of the crates, turned up about half an inch on the four sides. If some combs should be broken down, this will prevent the honey from leaking through the crate. In addition to this it would be advisable to lay strips of wood about  $\frac{1}{4}$  inch thick on the paper, from side to side, for the combs to rest on. This will prevent the honey which has leaked down from broken combs from soiling the good combs. Of course, it is not necessary to go to this trouble when the honey is shipped in paper boxes.

#### PAPER BOXES FOR COMB HONEY; FOLDING STYLE NOT RECOMMENDED.

For a paper box we recommend those now used by nearly all the largest producers, who use a paper box called, we believe, the original Scofield box, of which you will find samples on exhibition. It is made of heavy pasteboard, and is strong enough to prevent breakage unless

the honey is handled unusually rough. This box is the best ever adopted, and has the preference in our market. We receive honey in many other styles of paper boxes, but none of them take as well. Take the folding box, for instance, which is also largely used, and made of light paper instead of pasteboard. These boxes are not strong enough, and the majority of them will tear by trying to take the combs out of them. You can convince yourselves by samples on exhibition.

Where honey is put up in paper boxes we would advise using a single-tier crate holding 24 sections 5 by 5. The middle section on each side of the crate should be glassed, to show the quality of the honey. Honey put up in this style, clean white crates, and boxes neatly labeled, will always sell at highest prices.

#### WHAT PROPORTION OF COMB HONEY SHOULD BE GLASSED AND PUT IN PAPER BOXES?

The next important question is, "What part of the honey should be sent to market in paper boxes—glassed or unglassed?" Up to last year we have said, about one-third of each kind, as the demand was about equally divided. We now say, 50 per cent glassed, 30 per cent paper boxes, and 20 per cent unglassed, as nearly as we are able to estimate. During the season of 1889 we had more demand for glassed honey than for unglassed or paper boxes. We thought, that perhaps that year was an exception; but we have had *more* calls for glassed honey this *last* season than the *year before*, and the demand for the same is fast increasing. We could not nearly fill orders this year, and could have sold thousands of crates more. We tried to substitute paper boxes and unglassed honey, but the trade would not have it in place of the glassed honey. We are of the opinion that this demand for glassed honey will be permanent, and we would therefore advise producers to glass more of their honey.

#### GLASSED HONEY RECOMMENDED.

It is certainly more profitable to glass the honey than to ship it unglassed or in paper boxes. The producer receives the price of honey for every ounce of glass; besides, glassed honey will bring better prices than unglassed, and as good a price as paper boxes. The reason why glassed honey has the preference seems to be that the retailer can take every comb from the crate and make a handsome display of it. This, of course, can also be done with the paper boxes, but the glass will show up every comb. The dust can not settle on the honey, and the glass will prevent curious and inquisitive customers from sticking their fingers in the comb.

#### KIND OF SECTIONS TO BE USED FOR GLASSED AND UNGLASSED GOODS.

Next comes the kind of section to be used. For unglassed or paper boxes, it does not matter which one is used—nailed, dovetailed, or one-piece section. For glassed honey we should say the nailed or dovetailed section is the most desirable, as the one-piece section does not seem to be strong enough to be glassed. Some producers will fasten the glass to the section with small tin tags; others with small wire nails; and, again, others will glue them. Any one of the methods will answer the purpose, if properly done. If glued, a glue should be used which will stick and hold the glass to the section. We sometimes receive shipments of glassed honey glued; and, as soon as touched, the glass will fall from the combs, and very often hurt the sale of the honey.

#### PROPER WEIGHT OF SECTIONS.

Another item of great importance is, to have the sections weigh not over one pound each, but

less if possible. Our market demands light weights at all times, be the honey glassed, unglassed, or in paper boxes. The two latter generally weigh a little less than a pound, while glassed sections, in many cases, will weigh over a pound, especially if the standard section is used,  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{4}$ . We would advise producers to cut down the section in width and adopt a narrower one, say  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$  or even  $1\frac{1}{4}$ ; so, when glassed, the section will not weigh over 14 to 16 ounces. Heavy sections are generally rejected, and we find it slow work in moving them off.

#### GRADING HONEY.

We would call your special attention to the grading of the honey, which is as important a question as any of the former, and in which not too much care can be taken. Very often we receive honey which is not properly graded, and off grades mixed in with the first grade, and marked, "Not white honey." The outside combs will appear all right; but inside of the crate will be the poorer grade.

We can not take the trouble to open and examine every crate and comb, but have to rely on the shipper, and go by the mark and the appearance of the crate. We sell and ship the honey; and the first thing we know, the party who bought it will complain about the quality, and hold the honey subject to our order. Here we have the alternative, either to have the honey shipped back to us or make an allowance satisfactory to the buyer. This is certainly not very pleasant. It hurts our reputation, and we are apt to lose that customer. Not only this, but the shipper is also dissatisfied, as generally *he* expects the highest market prices, and often will not admit that the honey was not properly graded, while no one but himself is to blame. All this can be avoided if the honey is properly graded.

#### TWO GRADES OF WHITE HONEY

are sufficient for our market. For a fancy white, select only what is fancy white. For a second grade, or fair white, take combs that are stained, or a trifle off in color, and combs scantily filled around the edges. Any combs mixed with dark or buckwheat honey should not be put in with the second-grade white. Such honey can not be sold for white, and will not sell for more than buckwheat; in fact, a straight buckwheat finds readier sale than mixed honey. It should be crated by itself, and marked accordingly.

#### TWO-POUND SECTIONS.

Our market demands a limited quantity of 2-lb. sections. About 10 per cent of the honey we receive is in 2-lb. sections, which is sufficient to supply the demand. These should be glassed altogether, and put in single-tier crates holding from 12 to 15 combs.

#### KEGS AND BARRELS INSTEAD OF SQUARE TIN CANS.

For extracted honey, basswood, white clover, or buckwheat, we prefer a keg of about 150 lbs.; half-barrels of about 300 lbs., or even barrels of 500 lbs., whichever can be obtained cheapest. We would not advise the use of 60-lb. square tins as used exclusively in California. Our trade is accustomed to the wooden packages for all kinds of northern, eastern, western, and southern honey, and we see no necessity for a change. The cans are more expensive than kegs or half-barrels; the honey in cans will *not* sell for any higher price, consequently nothing can be gained.

#### COMB HONEY ALWAYS BY FREIGHT, AND WHY.

I should like to make a few remarks yet regarding the shipping of honey. Comb honey



should be shipped by freight altogether. Some of the bee-keepers seem still to think that comb honey must be sent by express only, believing it to carry safer. This is entirely wrong. Honey is carried just as safely, if not more so, by freight—at least this has been our experience. Owing to the short crop last season we received a large number of small shipments by freight, ranging from 10 to 50 crates each, and we had but two or three lots which arrived broken down more or less. In one of these cases the shipper wrote us afterward that the honey had already leaked when he took it to the depot. We reship it in lots of all sizes, often in single crates, and very seldom have a complaint. So far as the responsibility is concerned, all of them—the railroad, steamboat, and express companies—will take comb honey only at owner's risk, and will not listen to any claim if the honey has been broken down while in transit. Why, then, pay the express companies three times the rate of freight lines? We would advise bee-keepers to load the honey in the car themselves, properly protected. If this is done they may feel sure that the honey will arrive at destination in good order, under ordinary circumstances.

Another point we should like to call your attention to; namely, comb honey should be shipped in the original crate only. We received one lot of honey from Central New York this season, where the shipper had gone to work and crated six or eight original crates into *one large* crate. This certainly was too heavy a package to be handled with care, and, no doubt, received rather rough handling. What was the result? We received the honey all broken down, and the shipper was out from 4 to 6 cents a pound—a sad lesson indeed.

#### BEST TIME TO GET GOOD PRICES.

Last, but not least, when is the right time to ship comb honey to market? We have always advised early shipping—during September and the first part of October. Our experience teaches us that the early shippers obtain best prices, and get quickest returns, be the crop large or short. In all our experience we have never known the market to advance during November and December; but it usually declines as the season passes.

One word for ourselves. We have now been in the honey business six years, and flatter ourselves that we have the confidence and good will of nearly all bee-keepers throughout the country who have intrusted goods to our care. We always endeavor to obtain as good prices for consigned goods as if they were our own, and make prompt returns, and I think there are many here who will bear me out in the assertion. We wish to tender our thanks to our patrons (many of whom I recognize on this floor) for past favors, and respectfully solicit a continuance of your patronage in the future.

HENRY SEGELKEN.

for Hildreth Bros. & Segelken.

New York, Jan., 1891.

A lively discussion followed the reading of these papers, in which both honey-producers and commission men joined. For my own part I was greatly surprised that there was such a demand in the New York markets for glassed sections of honey; and after the discussion Mr. Elwood arose and said we should be very careful about going to extremes. It would not be best for us, as bee-keepers, to glass all our honey next season. It would make a glut in the market. The wisest thing was to glass a certain amount of it, put a certain amount in paper cartons, and a certain amount in 2-lb. sections. What we bee-keepers need to avoid is a

glut in the market in any one style of package. As an example, several bee-keepers had, at the advice of Mr. Wright, put their buckwheat honey into  $\frac{3}{4}$ -lb. sections—these sections being considerably taller than wide. The result was, they glutted the market with that kind of section; and at this several bee-keepers nodded assent. A couple of years ago the New York market demanded unglassed sections, and all bee-keepers produced and sent to market that kind. The result was, that the glassed brought a higher price. And, furthermore, Mr. Elwood said that the Western market would not use glassed sections, while the New York market would. A great deal of our honey goes west, and we must be careful to put it up in such shape that a part of it will be salable anywhere.

As to the effect of low prices in sugar, Mr. Segelken, like Mr. Thurber, did not anticipate that it was going to affect the honey-trade seriously.

#### Forenoon, Third Day.

##### BEE-ESCAPES—THEIR USE AND BENEFITS.

An essay that should have been sent in on this subject did not appear; but George H. Ashmead said that his bees were near the highway—too near, indeed, to be pleasant to the passers-by. But lately, by the use of bee-escapes, he could take off every pound of honey without any disturbance whatever. He uses them for both comb and extracted honey.

I was not present at all of the morning session, and hence my note-book has not much regarding it. The afternoon session was brief, and simply took up matters of business.

Although there had been heavy rains, I counted at least a hundred in attendance at one of the sessions. For practical discussion on important themes, I do not know that I ever attended a better convention. Outside of California, the State of New York, I believe, has the largest and most extensive bee-keepers in the United States if not in the world; and I tell you it is a great pleasure to take the hand of those who count their colonies by the hundreds, and, I might almost say, by the thousands.

I told the members of the convention that I had a warm spot in my heart for all York State bee-keepers. And now that I have returned home, that spot is a good deal warmer yet. I shall not soon forget my pleasant memories on the bicycle tour, and the renewal of acquaintances at that convention. I am doubly glad now that the North American is to be held in Albany, and that its presiding officer is to be P. H. Elwood. I anticipate that its next meeting is going to be one of the grandest bee-conventions ever held in the United States. The last meeting of the North American was an excellent one; and, unless I am very much deceived by indications, the one yet to take place in Albany will eclipse them all.

#### SOCIAL CUSTOMS, ETC., IN SINGAPORE.

##### ANOTHER GLIMPSE FROM BRO. MUNSON, OF CHRIST'S CAUSE IN HEATHEN LANDS.

Dear Mr. Root:—Many days and months have passed since my last letter. I have long waited for time, but time hasn't waited for me; so if I don't "take time by the fetlock" (since I've not taken him by the forelock) I fear that 1890 will die by without a single letter written to you.

This has been a very busy and important year to this mission; and, having all its interests to attend to, I have had to let many a letter go unanswered, many an interesting book



unread, and many a pleasant acquaintance uncultivated, for the King's business requires haste.

In my last, about the Indian money-lenders, I used an unfortunate expression when I said the Chitty was "soulless, or as near it as he could well be." The meaning I intended to convey was, "merciless, pitiless." He has undoubtedly a soul for which Christ died, that is capable of being transformed into the likeness and image of Jesus Christ.

In the picture I send you this time you behold one of the institutions of the East, and just in front of it a sample of one of the institutions of this world—the former a jinricksha, the latter an almond-eyed inhabitant of the land of Sinim, or in, common parlance, a "heathen Chi-

a considerable revenue to the government. The chief means of public conveyance here is the hackney carriage and the jinricksha. It costs but five cents to go a mile in one of the latter, and you can ride to your own doorstep at that. They are much more comfortable than the hackney carriages, and four times cheaper.

In Hong Kong and other towns in China, they are beautifully finished, and are used by gentlemen of every rank. Here they are patronized chiefly by the native community and Europeans.

Every vehicle is licensed. A ricksha pays one dollar a year, and a hackney carriage one dollar and a half. The municipality registers both the carriage and the driver. You will see a number on the side of the ricksha in the



THE JINRICKSHA, THE COOLY, AND THE MALAY.

nee." This man is one of the "cooly" class, or a common laborer. Let me first tell you what I know about the jinricksha.

One of the early American residents on the China coast lived in a city (Hong Kong it may have been) where there were no wheeled vehicles of any kind, and no horses or ponies. The only means of locomotion was by foot or in sedan chairs. This Yankee verified the old adage, that necessity is the mother of invention. To carry a sedan-chair, two chairmen were necessary; but when a very light little carriage like the one in the picture had been constructed he found that one man was able to make better speed, with greater comfort and greater economy to the traveler, than two in the old way. The result has been tens of thousands of these tiny road-carts in all the towns from Singapore to Peking and Tokio; a lucrative employment for thousands of wheelrights and laborers, and

picture, and one on the arm of the Chinaman. The man in the ricksha is a Malay from the island of Java. His head gear consists of a piece of cloth made expressly for the purpose, and twisted about the head, often leaving the crown entirely exposed. The most singular part of his dress is the garment that supplies the place of pantaloons. It is called sa-rong, and is a piece of figured cotton a yard or more wide, sewed together at the ends. This encircles the waist, and, after being folded over, is held in place by means of a belt of some sort. Most Malays wear under this a pair of short close-fitting drawers. They go barefooted, as all the Chinese coolies do, unless they have a small income, when they sport sandals or European shoes.

By far the most promising race are the Chinese. They are sometimes one thing and sometimes another in religion, but always ancestral



worshippers. This is about the only thing you can be quite sure of. The wealthy Chinese have very fine houses, and there are few poor ones that do not live in good ones. They manage to live very well on a little, because so many live together in a single house. As a race they are very energetic and thrifty. It is plain to be seen that they will ere long crowd out the lazier and less hardy races. The Malays and Indians stand no chance, for they can not and do not even try to compete with the Chinese. Ninety-nine hundredths of the government revenue comes from them. They have been well called the Anglo-Saxons of the East. Sir Garnet Wolseley has expressed the opinion recently, in an important article, that, in the future, there will be but three great powers in the world—England, Russia, and China. The Chinese undoubtedly possess the elements that go to make up a great nation; and, when refined and exalted by Christianity, or, rather, by Christ, there will hardly be a limit to their possibilities of greatness.

But I must tell you about our mission to the Chinese. About two years ago Dr. West, from Crawfordsville, Ind., latterly from Iowa, opened a medical mission in the Chinese quarter, and immediately began to treat the sick bodies and sicker souls of the poorer Chinese, the coolies particularly. Almost the first man who came was an opium smoker who wanted medicine to cure his opium habit. The doctor pointed him to the Great Physician as his only hope. He looked, as did the bitten Israelites upon the brazen serpent, and lived. He gave up opium, found Christ, and is to-day walking in the light of the gospel.

Not many weeks ago I baptized several Chinamen, and organized our first Chinese church. It numbers eight, and ten baptized who will, in a few months, be received into full membership.

In our Anglo-Chinese school we have not a few true disciples of Jesus. Some of our brightest and most promising boys are firm believers, and, so far as we can judge, truly converted to God.

There is great joy in this work. It must make the angels' harp-strings ring again as they behold the sight. Native lands and all earthly ties are nothing if they would keep a true missionary from this grand service for our God.

A year ago Dr. West went to China to study the language. So many dialects of Chinese are spoken here along with the Malay, Tamil, and English, that a man must go to the district in China where a particular dialect is spoken in order to learn it in its purity. When the doctor returns in March, and gets well settled down to his work, we expect great things. There are 100,000 Chinamen here, and surely the Lord has some hundreds of people among them who will be gathered out very soon, we hope, and united into Christian churches. Pray for us.

R. W. MUXSON.

Singapore, S. S., Malaysia, Nov. 30, 1890.

[Friend M., you can not tell how interesting the picture you send us is to me. But I must confess that, were it not for the places occupied, I do not think I should be able to tell by the dress which is the rich man and which is the poor one. When you spoke about carrying passengers for five cents a mile, it occurred to me that we might possibly bring the jinrickshas into our own country, thus furnishing employment for some of those who beg so hard for something to do. But I am afraid that our American people would make a protest. It is true, we have poor men, and we have millionaires; but for all that, it would be hard to find

men in America who would submit to the position of the coolies. A man might peddle milk, possibly, with a cart, and not mind it; but he would not draw his rich neighbor; neither would the rich neighbor submit to be drawn by his poorer neighbor, and I thank God for it. I am looking for and praying for the time when there shall be still more neighborly feelings between the rich and the poor; and I am praying with a pretty bright faith too. The answer is to come just where you are looking for answers to your troubles, dear brother—through Christ Jesus.]

### WOULD THE TRUTH INJURE THE FOUNDATION TRADE?

FRIEND HASTY EXPLAINS HIS POSITION.

I see that, on page 94, friend Rice desires that I should explain. The state of the case is, that I have no quarrel with foundation in the hands of those who use it and know why. My combat is with the musty old untruth, that a pound of wax costs the bees twenty pounds of honey to make it. This misstatement makes a multitude of beginners in our art think they must use foundation, whether they can see any profit in its use or not. Many of these beginners are in localities where apiculture can not be pursued with profit, except in the most economical ways. Foundation costs money, and very fair brood-combs can be secured with only the expense of a little time and care. Moreover, in many lean locations, my own included, it is plain that full sheets of foundation in the sections very seldom pay for themselves. Where the bee-keeper can see plainly that they do pay for themselves, let him use them; but let there be no assuming that it *must be so*, on account of a big story about wax secretion. Let there be no hiding of our faces from the facts. I rejoice to see that Langstroth's work, as at present edited, comes down "several cats" from the old wild statement. In the last edition, bees are credited with being able to make a pound of wax from seven pounds of honey. I am pretty well convinced that there is room to come down considerably more; but I can be thankful for the concessions we already have. Both brood-combs and super combs for extracting, in the hands of careful keepers, are permanent fixtures, or nearly so; and thus the trade demand for heavy foundation is quite largely to supply the wants of beginners. As for those careless folks who let their combs be eaten up, and then buy sheets of foundation to replace them, I guess they are *always* beginners—beginners who seldom know whether the material they buy pays for itself or not. I did not mean that a bee-keeper in a good location in Southwestern Wisconsin would necessarily use less foundation if he knew the facts. I meant that the total amount used, the country over, would be much less if the stimulant to its use, which an absurd statement furnishes, were withdrawn. You see, I am very free to retract what I didn't say; but as to this last assertion, I think I shall be hit by a good many stale cabbages and turnips first before I take it back.

Richards, O., Feb. 3.

E. E. HASTY.

[It now becomes *our* duty to make a little apology. Over a month ago, friend Hasty sent us the short item which appears below; but instead of going into the journal promptly, it got laid away somewhere and was not used.]

FRIEND HASTY MAKES THE "AMENDE HONORABLE."

*Friend Root:*—It seems to be a proper time for me to eat a little "humble pie." I do not

think that GLEANINGS (or either of the other leading journals) would suppress evidence on the honey-wax question, or wantonly falsify to bolster the foundation trade. If my article which is complained of amounted to such a charge, I retract it to that extent. I think, however, that a public journal can do more mischief by keeping silence and letting a profitable error have full swing, when it has gained that advantage once, than it can by the grosser forms of ill doing. But, hold on! if I keep on saying what I think, this will be another kettle of hasty-pudding, and not a humble pie at all.

Richards, O., Jan. 5.

All right, friend H. There will not be any trouble with the "pudding" so long as you talk or write in the above spirit. And, by the way, the best remedy I have ever known for uncharitableness is a good bee-keepers' convention. Those who were present at the recent Detroit convention will, I am sure, bear me out in this: for each and every one felt as if we were under bonds not to judge hastily nor uncharitably of any absent brethren, especially if such have been unfortunate.

E. E. HASTY.

I do not know. Under some conditions I think it might be, although I never practiced it.  
Michigan. S. W. JAMES HEDDON.

Now, that's one of the things I think I know. It's *not* a good plan. I'd a good deal rather have them on the cellar bottom than on the bottom-board.

Illinois. N.

C. C. MILLER.

I should say no. When bees find that they are prisoners they want to get out, and will worry and work to do so. Bees should be quiet, to do well.

Wisconsin. S. W.

E. FRANCE.

I do not like to do this. If the cellar gets a little warmed up, the bees become active; and if shut in they will be much injured if not destroyed.

Michigan. C.

A. J. COOK.

No, emphatically. Keep them in the dark; but if any bees become so restless that they will not stay in the hive it would only cause them to disturb the others if they were shut in.

Illinois. N. W.

DADANT & SON.

Bees should never be fastened in their hives by wire cloth or other means, excepting on a journey. The knowledge of their captivity creates a great alarm among bees, and is a dangerous experiment at any time of year.

Ohio. S. W.

C. F. MUTH.

## OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

QUESTION 178. *Is it a good plan to fasten bees in their hives by means of wire cloth, while in the cellar?*

No.  
Illinois. N. C.

J. A. GREEN.

I think not.  
California. S.

R. WILKIN.

I don't think it a safe plan.  
Ohio. N. W.

H. R. BOARDMAN.

No. It is worse than useless.  
Ohio. N. W.

A. B. MASON.

No, sir. It is done at great risk.  
New York. C.

P. H. ELWOOD.

No, and there is no need of it in a dark cellar.  
Vermont. N. W.

A. E. MANUM.

No, never, according to the opinion of Doolittle.  
New York. C.

G. M. DOOLITTLE.

It is not necessary unless you have too much light in your cellar.  
Louisiana. E. C.

P. L. VIALLOX.

No. The old must die, and it is their nature to leave the hive when the end draws near.  
Illinois. N. W. C.

MRS. L. HARRISON.

No, not if they find it out. If you can fasten them in, and not let them find it out, it may work all right.

Wisconsin. S. W.

S. I. FREEBORN.

It is not, unless the fastening is in the shape of a cage of, say, two quarts' capacity. Close confinement with wire cloth causes uneasiness.

New York. E.

RAMBLER.

I should say both yes and no. Sometimes, yes; usually, no. If you choose to cover the whole front of the hive with a big wire-cloth ante-room, in which uneasy bees can come out and promenade, I think there would seldom be any ill results.

Ohio. N. W.

E. E. HASTY.

[I admit, friends, that it looks a little "cheeky" in me to disagree with such a respectable body of men when they say "no, no," with such emphasis. I think a good many of you, however, say no, because you have got that idea in your heads without having ever tried it very much. In moving bees, or in shipping them, we always shut them in a hive by means of a wire cloth, and sometimes they are weeks shut up in this way, without very much detriment; and it is certainly much worse to confine bees to their hives when they are bundled off in *warm* weather than it would be to thus confine them in a *cool, quiet* cellar. While I would not advise the average beginner to fasten his bees in the hives with wire cloth, I want to tell you that I wintered fifty or sixty colonies very successfully, and had them all fastened in their hives. The cover was removed, however, and the whole top of the hive covered with wire cloth. They were in a sawdust-packed beehouse. Part of them, instead of having wire cloth over the whole *top*, had it over the whole *bottom*. It was low enough down so the dead bees could be a couple of inches below the combs. In some of them there were no dead bees of any account on the wire cloth when they were set out toward the last of March. I do not know of any reason why my experience should have been so much different from that of others, unless it was at a period when I kept most of my stocks rather weak in numbers. A nucleus would get along much better when fastened in a hive than will a rousing colony. I rather think I hadn't a real good rousing colony in the whole lot.]



## TOBACCO COLUMN.

### CONDITIONS UNDER WHICH WE GIVE SMOKERS TO PERSONS WHO STOP USING TOBACCO.

First, the candidate must be one of those who have given up tobacco in consequence of what he has seen and read in this department. Second, he promises to pay for the smoker should he ever resume the use of tobacco in any form, after receiving the smoker. Third, he must be a subscriber to GLEANINGS. Any subscriber may, however, have smokers sent to neighbors or personal acquaintances whom he has labored with on the matter of tobacco-using, providing he give us his pledge that, if the one who receives the smoker ever uses tobacco again, he (the subscriber) will pay for the smoker. The one who receives the smoker in this case need not be a subscriber to GLEANINGS, though we greatly prefer that he be one, because we think he would be strengthened by reading the testimonials from time to time in regard to this matter. The full name and address of every one who makes the promise must be furnished for publication.

### NEVER TO USE TOBACCO AGAIN.

I have concluded not to use tobacco in any way or form for life; and as you offer a smoker, I should like one; and if I ever use tobacco again I will pay you the price of the smoker.  
Mt. Horeb, Wis., July 30, 1890. M. T. LOWE.

### KEPT FROM IT FOR 6 MONTHS TO START WITH.

I have quit smoking tobacco for six months. Will you please send me a smoker? If I smoke again I will pay you for the smoker.

T. C. BROWN.

Burnside, Mich., Nov. 19, 1890.

### A BOY OF 15 BREAKS OFF.

I have been using tobacco, but have concluded to quit. Please send me a smoker, and if I ever use it again I will pay you for the smoker. I am 15 years old, and have 5 nice stands of bees.

FRED BUNDY.

Birdseye, Ind., Aug. 21, 1890.

### COULDN'T BREAK THE FETTERS.

Find inclosed 75 cents in stamps to pay for the smoker you sent me. I have commenced using tobacco again, and, according to agreement, must pay for the smoker you sent me.

ELMER E. SHARP.

South Greece, N. Y., Sept. 26, 1890.

### FOR TWO YEARS A FREE MAN.

I have received GLEANINGS for about two years, and through the influence of the Tobacco Column I have made up my mind to quit chewing the filthy weed. You can send me a smoker; and if I should break my pledge I will pay for the smoker.

N. A. KREMER.

Canaan, Ind., July 29.

### A YOUNG CHRISTIAN'S CONCLUSION.

I am now 21 years old, and have been in the habit of using tobacco some, but am trying to be a Christian. I have concluded to do without it, and that I can put my money to better use, and feel better over it. Please send me the smoker; and if I should use tobacco any more I will pay you for the smoker.

PETER W. SMITH.

Ephratah, N. Y., Sept., 1890.

### A WIFE GOES SECURITY FOR HER HUSBAND.

My husband has been an inveterate smoker for many years, but for some time he has resolved to discontinue its use. These good resolutions have as often been broken. The last three months he has been reading the Tobacco Column, and I think his resolutions have been greatly strengthened thereby, as he has not touched the vile weed in that time. Please send me a smoker; and if he should again break over I will pay you for it.

JENNIE CHERRINGTON.

Pine Grove, Ohio, Sept. 9, 1890.

### STILL "HOLDING THE FORT."

Through the influence of the Tobacco Column I made up my mind some 18 months ago to quit the use of tobacco. I have used it the greater part of my life. You can please send me a smoker; and if I should ever chew or smoke again I will pay you for the smoker. It has been 18 months since I have used tobacco in any shape.

W. S. FESSENDEN.

Mountain Home, Texas, June 29, 1890.

### A DOUBLE PLEDGE.

I see that you give a smoker to any one that quits the weed. Please send me one. If I ever commence the use of the weed again I will pay you \$1.00 for the smoker. Will Lane is a friend of mine, and he has quit using tobacco also. I pledge myself to pay for them if we ever commence the weed, and will pay you \$2.00 for them.

JOHN J. ELLIOT.

Holden, Mo., Sept. 18, 1890.

### "BRINGING IN THE SHEAVES."

*Friend Root*:—I always speak a word in regard to tobacco and temperance, and I got a new convert to the cause, friend August Roesler, an energetic man, who has for ever laid aside the filthy weed. If you will send him a smoker I will see that he gets it, and will also watch him close; but he says he will pay for the smoker if he uses the weed again. But no danger; he is settled.

STEPHEN ROESE.

Maiden Rock, Wis., Sept. 30, 1890.

### OUT OF BONDAGE FOR 21 MONTHS.

I have been a reader of GLEANINGS for a long time, and have admired your manly, earnest, and liberal efforts to induce people to quit the filthy use of tobacco. I think it is due your influence, at least in part, that I have been able to leave off the quid. If you see fit to send me a smoker, I shall endeavor to keep it as a testimony against the filthy habit. I have not tasted tobacco for 21 months, and hope, by divine favor, never to use it again, unless as a doctor prescribes; but should I, in weakness, take to it again, I here agree to pay you full value for the smoker.

S. L. GREER.

Disco, Tenn., Dec., 1890.

## OUR HOMES.

And as Moses lifted up the serpent, even so must the Son of man be lifted up; that whosoever believeth in him should not perish, but have eternal life.—JOHN 3: 14, 15.

Toward the close of the article from Bro. Munson, in another column, he mentions a poor opium smoker who came to the missionary doctor for something to cure his opium habit. I wonder whether there are any among the readers of GLEANINGS who have had experience in fighting this terrible thing. Physicians tell us that, when one has once become a slave to opium, the tobacco habit and even whisky habit are as nothing compared to it. A good many of them say that the opium eater or opium smoker can not be cured unless his friends take him in hand and keep him from it by main force. Opium so paralyzes the will power that the victim is, in one sense, powerless. A friend of mine who was given opium by his physician has told me something of the terrible struggle. And, by the way, this physician administered it without the patient or his friends knowing what it was that he gave. Is it wise or is it right to take medicine of any sort without knowing what you are doing? Our physicians are bound by the laws of the land to tell hon-

estly and truthfully to the best of their knowledge what it is they are giving their patients; and I for one believe that a good many valuable lives would be saved if the number were larger who absolutely refuse to take *opium* under any circumstances. Do as a neighbor of mine did when the doctor told him he would die if he did not take whisky. "All right," said he: "then I will die; but I am going to die a sober man." Did he die? Not a bit of it. A man who has grit enough to tell his physician, "All right, then I will die," generally gets well. And I think instances are quite plentiful in most neighborhoods where people die because of the *medicines* and not because of the disease. Our most intelligent and soundest-thinking people are coming strongly to this conclusion. Our good friend Prof. Cook leads us, as you may remember. The last time I met him he told me to go on preaching and teaching to let medicine alone. He said I could not very well overdo the matter just now.

Well, now, about this opium habit. The missionary doctor told the poor heathen, crippled and stupefied as he was by the opium habit, that no man in the wide world could cure him. All the doctors and all the remedies known to the present age are helpless. They can fuss and experiment some with the patient, no doubt; they can, may be, substitute one stimulant for another; but the satanic demand is not satisfied. The inexorable craving will swiftly drag the patient down to a grave that is much the same as the grave of the drunkard. This missionary doctor, mind you, had other remedies besides those known to the *materia medica*. When the patient needed spiritual help he was ready to give it in place of medicine. "He pointed him to the Great Physician as his only hope." Perhaps he did it with little faith. The poor heathen Chinese, however, had faith, even if the doctor had not. He followed directions as best he knew how.

And as Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up; that whosoever believeth in him should not perish, but have eternal life.—JOHN 3: 14, 15.

He looked to the Lamb of God who taketh away the sin of the world, and was healed. Was he then able to give up opium? Why, to be sure he was. The Great Physician does not make any half-way work about it; and our poor besotted heathen brother that was, is to-day walking in the light of the gospel. Is it any thing strange or wonderful? Not at all. Evidences of such wonderful healing are lying all round about us. Those who are only partly healed, or have afterward gone back, have surely forgotten or neglected to look constantly up to the Great Physician. The figure of Moses lifting up the serpent in the wilderness is perhaps the plainest that can be placed before us. It shows us by a picture, or by an object-lesson, how exceedingly plain and simple is the remedy for *all* sin. Of course, we must look in faith believing—there must be no half-way work about it; and we must keep our eyes constantly on Christ Jesus.

A good deal is said nowadays about tobacco substitutes. I should be very glad indeed to know that there is a substitute that is not just as bad as the tobacco itself. But, bless you, friends, he who is looking to Christ Jesus needs no tobacco substitute nor substitute of any kind. Besides, when we come to Jesus to be cleansed from *all* sin, the Great Physician does in reality cleanse us from *all* sin. A man with evil and vicious propensities is not very much better off when he gives up tobacco—that is, if he holds on to those evil propensities and passions just the same. We need to be cleansed from *all* sin. The use of stimulants is only a small part of

what goes to make up a sinful heart; and if we lay all the blame to stimulants or intemperance we are making a mistake. Although, as a rule, we find the inmates of our penitentiaries and jails using tobacco and liquors (when they can get them), there are quite a few of these who practice *total abstinence* so far as stimulants are concerned.

A few days ago I was talking with a friend who is fighting against the tobacco appetite. He said, "I would give a hundred dollars this minute if I were clear of it." A bystander said, "Oh! I would give more money than that." I assured them that the terrible fight against the old habit would not last always, and that it would by degrees grow less and less. I told them that these *fierce* temptations occur only occasionally, and that very soon they would discover that, a great part of the time, it would not torment them at all. The first speaker then mentioned a man by name—a mutual friend of all present—who tried for two years to shake off this habit, and he said he wanted tobacco just as bad the last day as he did the first.

"Mr. Root, it is asking a man to shoulder a pretty big task, if this thing has got to continue right straight along for two years without respite."

Very likely he did not use exactly the above words, but it amounted to that, as nearly as I can remember. As our friend is a Christian—a member of the church—I exhorted him to bear it for *Christ's* sake. Said I:

"Look here, my friends; there are boys all around you. They are influenced more or less by you. You are expert mechanics, each in his own line. These boys have good reason to look up to you with admiration and respect for your separate abilities; and they will also, *in spite of all you can do*, be inclined more or less to do as you do in regard to this matter of using tobacco. When you think of them, and think that it is something that will follow them through life, can you not for *their sakes*, or, as I said before, for *Christ's sake*, undertake to bear this burden? When it becomes too heavy for you to carry, go down on bended knee and ask help of Him who said, 'Come unto me, all ye that labor and are heavy laden.'"

Then I tried to tell them that Christ Jesus bore far heavier burdens than any of us are called upon to bear. For our sakes he said, "Nevertheless, not my will, but thine, be done." And as the Father did not see fit to let the cup pass from him, he bowed his head in meekness and submission. He extended his arms, and meekly bore the anguish and torture of being nailed to the cross. The first speaker remarked right here, "Mr. Root, that is something I never could understand nor comprehend. I can not see why God should demand of his only Son that he should undergo this awful torture for *anybody's* sake."

Now, my friends, I want to tell you that, in attempting to answer this, I unconsciously brought new light into my own soul; and I want to confess to you to-day that, through all my life while I was a skeptic, and since I have become a Christian, there has been something dreadful to me in regard to this spectacle of the cross. It has seemed as if some mistake had been made in bringing such a horrible spectacle into the Holy Scriptures. It has seemed to me like a relic of heathen savagery. Can human imagination picture any thing more revolting to sensitive and tender feelings than the spectacle of driving great nails through living flesh and blood, and of such a scene of slow and horrible torture? God is *love*, so the Bible tells us. What good can come by holding up before our gaze constantly and frequently this picture of a meek, innocent, inoffensive char-



acter like that of Christ Jesus, going meekly and humbly to an ordeal like this? My friends, mind you, had just been telling of the crosses they had to bear. One of them said, that, if he gave up tobacco, he could not sleep nights—he would be unfit for business; but notwithstanding, I urged that it was the thing for him to do. All at once it burst upon me that God had chosen, for good and wise reasons, to hold up before a sinful and struggling world a picture of the *hardest* trial and most *severe* ordeal that any human being could think of. In short, this whole thing was arranged with the express idea that no poor struggling soul should ever say, "My burden is greater than *even the Son of God* was called upon to bear." Men are often called upon to meet sudden death, and, in some cases, a death of torture; but I can not remember that civilization or Christianity ever demanded that one should take up *voluntarily* a slow, lingering torture, such as that of the cross. We are told by history that the victims frequently lived, unless sooner killed with clubs, for several days in a kind of anguish and torture which we sincerely hope are unknown at the present time. Our Savior suffered about six hours; and while he suffered the bodily pain, he suffered in anguish of soul in seeing the whole world, comparatively speaking, choosing wickedness, sin, falsehood, injustice, corruption, and crime. In this present state of affairs he could realize that nothing but his death and the shedding of his blood would answer. He died, that humanity might evermore look up to him as a model, not only in life, but as a model in death—a sacrifice for us. He died, that we might live. Now, then, my friend, when your burden seems heavy—when you are tempted to think you can not stand it any longer, or when you feel like saying, "I won't stand it any longer," remember the example of the Master. It was as hard for him as it is hard for us. He shuddered and shrank at the very thought of it. He looked in vain for some outlet—for some other way—just as you and I have been doing. He prayed even for God to spare him; yes, we are told until the sweat like great drops of blood stood upon his forehead. But when God decided that the sacrifice and the atonement *must* be made, he bowed his head in submission. We, as a rule, suffer because of our *sins*: Jesus was without sin. The thief on the cross hit it exactly when he said, "We receive the due reward of our deeds; but this man hath done nothing amiss." A young friend told me, not long ago, that his struggle against a certain kind of temptation was just about all he could stand. I knew of his former trials and difficulties; and I noticed, too, that for some time back he had apparently risen above them all. His record has been for some time almost faultless. He attends our meeting, testifies for Christ, and presents a cheerful and pleasant face to all his friends. He is apparently "holding the fort nobly;" yet when I came to get a glimpse behind this fair exterior he said something like this:

"Mr. Root, if this thing does not soon let up, it seems as if the strings would break."

Do you ever feel so, dear reader? Don't be lacking in faith. The *strings* will not break. An all-wise Father has given his promise to the contrary (see text in our previous Home paper). "There hath no temptation taken you but such as is common to man."

Be not weary, dear friend, in fighting life's battles, and in fighting hard for the cause of Christ Jesus, even though you have suffered long and have been kind, without any special blessing coming from it. Be steady, and hold on; the reward will come soon. Ye shall reap if ye faint not. Remember the words in Reve-

lation—"These are they which came up out of great tribulation, and have washed their robes, and made them white in the blood of the Lamb." Your old friend A. I. Root has had some experience in this line; and I tell you there are no truer words in the Holy Scriptures than these: "Eye hath not seen, nor ear heard, neither hath entered into the heart of man the things which God hath prepared for those that love him." It is the overcoming that does the business. "To him that overcometh will I grant to sit with me in my throne." I had been unconsciously holding up to these friends of mine the cross; and I want to tell you of the reward that came to me for my poor feeble exhortation right in that line. I too, as you may know, have been fighting against temptations. It has seemed many times to me as if, as my young friend expressed it, the "strings" would break. But I held on and kept on praying. Now and then deliverance would come, as I have told you. But when I had climbed over one temptation, another was sure to come. Well, the greatest deliverance I have ever known in my life came after that talking about the cross. The temptations that I had been battling with so long and so fiercely on that morning seemed to fall away and go away off in the dim distance. In trying to describe it, these words came to mind: "So far as the east is from the west, so far hath he removed our transgressions from us." I have told you how I have for years avoided temptation as the intemperate man did in going home by a longer route so as not to take the street where the saloons were. It just occurred to me that day, that I need not take the longer route any more. I met old temptations face to face, without a waver. It has all my life been hard for me to take people to task, even when it is my duty to do so. Yes, I usually dread for hours, sometimes, to talk with even the boys when they need talking to. I have many times prayed that God would help me to overcome this diffidence in doing duty. I have wished and prayed that I might be able to reprove, without a shaking tremor in my voice, and an embarrassment that made it seem as if I were the guilty one; but God had not seen fit to answer the prayer, and so I had come to regard it as a thorn in the flesh. Once in defending myself a man said to me something like this:

"If you are honest and sincere, what makes your voice tremble so, and why do you get so excited? Why don't you talk coolly and quietly as I do?"

I replied, "My voice trembles because I *am* excited and stirred up. I wish I *could* talk coolly and quietly at times like this. God has not seen fit, as yet, to give me coolness and calmness, therefore I am doing the best I can."

Well, since I have got my mental vision fixed on a crucified Savior, it has seemed as if that prayer of these long years has been suddenly answered. I have been through our whole establishment, and talked with our boys about the tobacco habit as coolly as I would talk with my wife about it. I have met with provoking things, and have passed through many trying places; but I have not once since that time spoken a word hastily or that I would recall. I have read over the words of our text, perhaps hundreds of times, yet it never was plain to me until just now that it is *our* privilege to look and be healed, just as it was when Moses lifted up the serpent in the wilderness. Instead of looking at the brazen serpent, however, it is our privilege now, since Christ has come and suffered, to turn our eyes toward the figure of the cross. And there is no mistake in the words of the last of our text: "Whosoever believeth in him shall *not* perish, but have *everlasting* life."

## EDITORIAL.

Let us run with patience the race that is set before us, looking unto Jesus the author and finisher of our faith; who for the joy that was set before him endured the cross, despising the shame, and is set down at the right hand of the throne of God.—HEB. 12:1, 2.

We see by the papers that Dr. A. B. Mason has been appointed postmaster for Anburndale, Ohio.

### A NEW DESIGN.

OUR engravers have just finished a new design for the title page of our journal. Turn over the leaves and see how it sets off Stray Straws.

### IMPLEMENTS FOR BEE-KEEPING.

PRACTICAL bee-keeping is resolving itself into fewer and fewer implements. The price at which honey sells will not warrant us in purchasing a lot of paraphernalia not absolutely necessary for honey-production.

### GLASSED SECTIONS.

THE above seem to have taken the first place in the markets of New York city. A few years ago we supposed, in fact truly, that glassed sections had gone out of market everywhere; but now they are starting up again in the East.

### THE AMERICAN BEE-KEEPER.

THE second number comes out, like the first, with the vigor of age. On page 30 there is an illustrative article describing the Rhode Island Nellis hive. This uses the Hoffman frame, section-holders, etc. It appears to be a first-class hive.

### STRAY STRAWS.

It seems to please, as it is being copied in other periodicals. By the way, we might as well acknowledge the corn. We first saw the scheme in the *Apiculturist* and in the *Bee-Hive*. It is a good department, but you want a good man to manage it.

### FIVE NEW BEE-PERIODICALS.

THE editor of the *American Bee Journal* says, "Five new bee-periodicals have been launched upon the sea of bee literature since Jan. 1. It must have taken considerable enthusiasm in the publishers to do this, after the failure of the honey crop the last season."

### FOUR-PIECE AND NAILED SECTIONS IN YORK STATE.

FOUR-PIECE and nailed sections seem to be used considerably among the bee-keepers of New York and Vermont. The former are generally glued; and many of the bee-keepers whom we visited had some sort of gluing-machine whereby the putting-together and gluing could be accomplished expeditiously and neatly.

### THE BEE-KEEPERS' UNION.

WE learn from the *American Bee Journal*, by the returns up to Jan. 31, that the following officers were elected:

General Manager, T. G. Newman.

President, James Heddon.

Vice-presidents, Prof. A. J. Cook, G. M. Doolittle, A. I. Root, Dr. C. C. Miller, G. W. Demaree.

We are glad that the officers were re-elected, especially the General Manager.

### UNGLASSED SHIPPING-CASES.

OCCASIONALLY somebody will send us honey in shipping-cases without glass. The fragile nature of the contents can not be seen by the freight-handlers, and the result is that it usu-

ally does not arrive in good condition. Again, it does not show off in the markets. If bee-keepers could only see it, it is money in their pockets to glass their shipping-cases. A lot of unglassed cases we have been fixing over. We bored three 2½-inch holes directly in front of each row of sections, and tacked a piece of glass inside so as to cover the three holes. The honey in being sorted over was put back in said cases, and the appearance is decidedly improved.

### WHAT DOOLITTLE THINKS OF GLEANINGS.

THE following is a kind word from G. M. Doolittle:

I am glad to see the subscription list of GLEANINGS gradually increasing year by year; and it is nothing but what I expected, for you are making GLEANINGS so valuable that no one can afford to do without it.

Borodino, N. Y., Jan. 30.

G. M. DOOLITTLE.

That our efforts are appreciated, is attested by many letters like the above from some of the best and most successful bee-keepers. Such testimony is valued.

### ENLARGEMENT OF THE EDITORIAL DEPARTMENT.

SOME of our subscribers have doubtless noticed that we have increased this department from three to four times its former size, and we find it is beginning to be appreciated already. E. L. Pratt says: "I hope you will continue your good editorial department to the same extent as in the Jan. 15th issue." Thanks, friend P. It is a great deal of work, but we will endeavor to keep it up. While on the train, going to a bee-convention, we said to Dr. Mason once, "What department do you like best in a bee-journal?" "I always go for the editorials," said he. By a little inquiry we found that others do likewise. We will endeavor to give the latest and best information from all sources.

### WHO IS TO BLAME—THE COMMISSION MERCHANT OR THE PRODUCER?

A FEW days ago we received a consignment of several thousand pounds of comb honey. The shipper called it first quality. When it arrived we found that the combs had not been sorted, and the sections had not been scraped; in fact, the eggs and remnants of moth-worm were present on a number of the combs. The honey had been stored without separators. It was bulged in a good many instances beyond the sides of the section. If bee-keepers send out honey of this kind, and call it first quality, and then complain to the commission men about low returns, who is to blame? Not the commission man.

### STAPLES AND THE BLUEBERRY SWINDLE.

FROM a private letter we extract the following:

L. D. Staples was convicted on the second and third counts of indictment; viz. for dewberry and blueberry scheme, and the fraudulent-advertising scheme. Sentence yesterday, 14 months at Detroit House of Correction.

J. McQUEWAN, Clerk.

Grand Rapids, Mich., Jan. 28.

Truly, the way of the transgressor is hard; but we may rejoice to know that the laws of our land do reach such as he. For years he has been shown up through the agricultural papers since we first exposed him in GLEANINGS; but by some means he has managed to find new fields for his work, and new victims for his swindles. He is, however, now stopped, for some little time at least.

### YELLOW CARNIOLANS.

IN response to our editorial in our issue for Jan. 15, E. L. Pratt writes: "You ask how to tell yellow Carniolans from Italians. By their



disposition and color. Do the Cyprians look much like Italians?" Yes, Bro. Pratt, Cyprians do look a good deal like the bees from Italy; and we have found, usually, that it is only those who are expert in such matters that are able to tell the difference. We have no difficulty here at the Home of the Honey-bees, nor has any one who has closely observed the matter. But the average customer does not. Now, while you are about it, can't you make the abdomens of your Carniolans *all* yellow—that is, without any yellow bands?

WHO MADE THAT PHOTOGRAPH OF THE  
SOUTHWEST WISCONSIN BEE-KEEPERS'  
ASSOCIATION?

THE beautiful photograph which we reproduced on page 886, last year, and which has been admired so much, and has since been copied in two other papers, did not bear the name of the photographer, otherwise we should have been glad to give the name in the first place. The photograph was an unusually fine one, and for a group almost remarkable. We have since learned it was executed by Mr. and Mrs. Geo. H. Perry, Platteville, Wis. They will doubtless be glad to furnish other copies.

DISCARDING THINGS PREMATURELY.

We often hear it urged, as an objection against a device, that it was invented, used, and discarded, long ago. In spite of this fact, in some instances the discarded invention seems bound to assert its merits, and up it bobs, as serenely as it did at first. The second time, we begin to see the point; and bee-keepers west, east, north, and south, become enthusiastic in its praise. An example of this is fixed distances in frames. We can not conclude, therefore, that, because a thing was once used and discarded, it is therefore valueless after all. The lesson that comes to us here is, we should be careful about discarding things prematurely. It is almost as bad to do this as it is never to accept or recognize a new thing of merit.

ADDING INSULT TO INJURY.

Of late, quite a few have been reported who purchased honey, and then made an excuse for not paying for it by claiming that it was adulterated. We have one or two such customers ourselves, and three or four more have been reported. It is bad enough to raise honey and not get any pay for it; but when it comes to accusing the honest bee-keeper of being a *swindler* besides, it seems to us that forbearance ceases to be a virtue; and we hereby give warning that we shall give name and full address of every such person who introduces this sort of excuse, or tries to come this game upon us. It is true, there may be adulterated honey found in our land; but you don't buy it of *bee-keepers* and *honey-raisers*. Before any man's name is thus put in print, this slip will be sent him; and if he has any defense to make, we will give him ample time to do so.

NEW ADVERTISING RATES.

We have prepared a new schedule of advertising rates. While in some cases it is stiffer and in some a little more liberal than the old rates, its application is much simpler, and almost anybody can tell with very little figuring what his advertisement will cost. See rates on first page, inside of cover. This, of course, in no way alters existing contracts for advertising for the current year; but all *new* contracts and new estimates will be made from the new schedule. We also give, for the convenience of the few, what are called "space rates;" that is, you can buy so many lines and use them up

in large or small advertisements, just as you choose, in every number, in every other number, or in every three or four numbers. Send for our "Hints to Advertisers," mailed free on application. It tells when and how to advertise apiarian supplies, nuclei, bees, queens, etc., how to write an advertisement, and also how to make a little money go as far as possible.

PROSPECTS FOR NEXT SEASON.

IF the number of bee-keepers' catalogues of bee-supplies which we are printing (to say nothing of those done at other houses, noticed elsewhere), and if the large amount of hive and section making machinery we are sending out means any thing, it means there is going to be an extra good season next year. We have never before had such a run for machinery. Our machine-shop is having a big rush; and it is somewhat behind in consequence. This does not necessarily signify that competition is going to be any stronger on account of new supply-dealers or the increased facilities of old ones, but that the bee-keeping industry is growing and spreading, the world over. We wish all every measure of success. We have a *big* country, or, if you please, a big world, and there is *plenty* of room for all, even for the bee-journals, though the rule of the survival of the fittest will rather crowd some of them before the year is up, we fear. Competition! so much the merrier. We shall get better supplies and better journals; in fact, they begin to sparkle already in their new dresses and innovations.

WINTER WEATHER IN ENGLAND AND SPAIN.

We notice by the *British Bee Journal* that they are having unusually severe weather. They have had it as low as 27 degrees below the freezing-point, or, as we would term it in this country, five above zero. In the south and southeast of England they have had sixty days of frost, and during the whole of that time in many parts of the kingdom the bees have never seen the outside of their hives. This is not an unusual thing for the United States—at least the northern part of it; but when bee-keepers are prepared for a warmer climate, it makes the prospects for successful wintering rather dubious in England. But if such weather has prevailed in the latitude of London (51½ degrees), which is considerably north of the United States, the unusual severity of the last month is realized when we read in friend Andreu's Spanish bee-journal of the unusual prevalence of snowstorms, cyclones, and zero weather in the south of "Spain, sunny Spain." The orange-trees and kindred semi-tropical fruits are all killed. Wolves have roamed the villages, and even destroyed human life, as we learn from other sources. Friend Andreu asks, philosophically, "Is it possible for us to struggle against the north pole?"

TRADE-MARKS FOR HONEY-PRODUCERS.

THERE is considerable discussion going on in the bee-journals in reference to a trade-mark; and it has been suggested that the National Bee-keepers' Union take hold of the matter. The idea struck us as being a pretty good one. But here is a note taken from a private letter, which Bro. Newman very properly gives to the bee-keeping world, although he has withheld, of course, the name of the writer:

In the matter of trade-marks, Bro. Heddon is enthusiastic—yea, eloquent—in his idea of "whipping the d—l around the stump," as they say; but he does not quite hit the nail on the head. A "mark" of some kind may be taken (a label if you please) to prove membership in the Union; but will the Union warrant that every member sells nothing but pure honey? Would not one sale of poor honey spoil the

whole? Now, I do not see, first, how a trade-mark can be obtained from the Patent Office for the Union. I can not see how a private trade-mark can be a Union mark; and, again, I can not see how the Union can "back up" or warrant any member. We know there are black sheep, and there may be some in the Union. In fact, Bro. Newman, I do not see how a trade-mark can help us as a Union; but I can see how it may hurt us awfully. My idea, then, is, to let the Union stand as it is—a bulwark of defense for its persecuted members, but not as an advertising scheme for any of them. Let each honey-producer stand on his own reputation, which he can make good or bad; for by his fruits we shall know him.

These are things that we should consider; and some of the points made by the writer above are well taken.

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

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#### OUR OHIO EXPERIMENT STATION AT COLUMBUS.

My good friend E. C. Green gave me a notice that they had two greenhouses full of very nice lettuce, which they were going to cut on the 29th of January. On the afternoon of that day it was my pleasure to look over their work. One of these greenhouses is warmed by pipes underneath the beds, and the other by an equal number of pipes overhead, hot water being used in each. The plan was to decide which gave the best results for vegetables under glass. So far as crops were concerned, there seemed to be but little difference; but from the fact that the overhead pipes kept the frost off from the glass, thus giving the plants more sunshine, and, in consequence, requiring less fuel, this plan is preferred. Both houses showed a degree of thrift that does much credit to the young men who have it in charge. Friend Green is a Medina Co. boy, and has taken up this work with no practical experience, and with but little instruction from any one. The work is under the charge of Prof. Thorne; and I must say that I never saw a prettier-looking greenhouse for garden-stuff in any of the large cities in any of my travels. Of course, the work is principally devoted to testing many things connected with this kind of work under glass. One bed of lettuce, for instance, is watered entirely by sub-irrigation, something on father Cole's plan. Another, right by its side, is watered by sprinkling overhead. At present, sub-irrigation has given the better crop. Various experiments were performed to determine the value of chemical manures—prominently, the nitrate of soda; and although these experiments were made with the utmost care, there was nothing in the greenhouse to indicate that the nitrate of soda had been of any advantage whatever. In fact, some beds seemed to indicate that its effect had been detrimental. Prof. Thorne said its effect on the wheat in the open air had been wonderful, without question; and he said that, if he could show the Ohio farmers the difference in the appearance where nitrate of soda had been used, he could give the sale of it one of the biggest booms that a fertilizer ever had, provided he did not at the same time tell them that the increase of crop was not sufficient to pay the cost of the fertilizer. As the nitrate of soda is being advocated through the agricultural papers in pretty strong terms, I think these experiments must prove valuable. Although we have used it to a considerable extent on our grounds here in Medina, I have not been able to see that it produced any effect whatever, unless it was on a crop of spinach outdoors; but in that case, as I put it all over

the whole patch, I can not be sure that the spinach would not have been as well off without it. In raising vegetables under glass, it would, of course, pay us to use very expensive manures that we could not think of using for ordinary crops outdoors; and at the present writing I know of nothing that equals guano and lime for greenhouse work. I shall have more to say in regard to this visit in some of my future garden talks.

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## SPECIAL NOTICES.

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ENOUGH OF FEB. 1, 1882.

Our offer in last number brought us an abundant supply of the above number, so please don't send any more.

#### SPECIAL 5 PER CENT DISCOUNT ON WIRE NETTING.

All orders for wire netting, either job-lot pieces or regular stock, received here not later than the 25th of this month, will be subject to a special 5 per cent discount. This is with a view of getting as many orders as possible filled and out of the way before the rush of spring trade begins. If in need of any thing in this line, send on your orders and secure the discount.

#### REDUCED PRICES ON THE TWO NEW BOOKS ON GARDENING.

By buying in large quantities we have obtained special rates, so that we can sell "The New Onion Culture" for only 35 cts. instead of 50, and the new "How to Make the Garden Pay," for \$1.50 instead of \$2.00. The above prices include postage. If ordered by express or freight with other goods, the price will be 30 cts. and \$1.40 respectively. It seems to me it will pay those who are to any extent engaged in market-gardening to have both of these new books. The larger one is the most complete work on gardening under glass that has ever been published.

#### THE OLD BACK NUMBERS AT ONE CENT EACH.

A good many who have ordered these have almost entirely misunderstood our offer, and have specified the numbers they wanted at this rate, instead of taking just what we chose to send. The fact is, we have a wagonload or more of old numbers, mostly 8 or 10 years old, but we haven't much of a surplus of late years. We could sell these old numbers as paper-rags, but they contain very valuable matter; and by asking a cent apiece for them we should have about enough to pay for our trouble in wrapping and for the postage, and you would get a lot of good reading for almost nothing. Now, we will put the proposition this way. Old numbers of which we have a surplus will be one cent each, postpaid, in lots of 10 or more, *if you take what we choose to send*. We will send the numbers you specify, at 2 cents each, *provided* we have an abundance of them, so they can be spared without reducing our files so as to make it necessary to buy them back again. Remember, the old back numbers, *our choice*, will be one cent each; *your choice*, 2 cents each, provided we have a surplus of what you choose.

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## BUY YOUR EARLY QUEENS SOUTH

I will have on hand a stock of  
CHOICE \* ITALIAN \* QUEENS

as early as they can be raised down here. Write for prices and particulars.

OTTO J. E. URBAN, Thorndale, Milan Co., Tex.  
In responding to this advertisement mention GLEANINGS.





"I tell you what, Jones, Levering Bros. sell the best goods and at the lowest prices of any one I've struck yet."

## The LARGEST and BEST EQUIPPED BEE-HIVE FACTORY IN THE WEST.

THE NEW DOVETAILED HIVE A SPECIALTY.

Every thing used by practical bee-keepers by wholesale and retail. Send for our '91 illustrated price list and save money. Address

**LEVERING BROS.,** Wiota, Cass Co., Ia.

In responding to this advertisement mention GLEANINGS.

**LOOK HERE!** Do you want a grocery with good business, in good location?  
3tfdb **BOX 40, German, Darke Co., O.**

### Wants or Exchange Department.

**WANTED.**—To exchange 7 volumes of the American Bee Journal, from 1884 to 1891, bound with Emerson's patent binder, and Gleanings from Apr., 1885, to 1891 (all are clean and bright), for a good amateur photo. outfit, Kodak preferred, nursery stock, or offers. Differences paid. **CHAS. SOLVERSON,**  
4d Nashotah, Wis.

**WANTED.**—For 1891, as learners, two brisk young men desirous of perfecting themselves in modern apiculture. Must be strictly temperate, and give good reference. **S. I. FREEBORN,** Ithaca, Wis.  
4-5-6d

**WANTED.**—Situation by a woman who desires to learn apiculture, in *small* family of first-class apiarist; or could do light housework. Must have references. Address **M. BRADLEY,**  
45d Walton, Cass Co., Ind.

**WANTED.**—Situation in an apiary in any State. I can give good reference, and I understand a little about bees. **JAMES M. SMITH,**  
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**WANTED.**—A second-hand 10-inch foundation machine, also a 6-inch machine for thin foundation. Parties having either for sale will please write particulars, and state price. **S. RAY HOLBERT,**  
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**SEND** 10c and the names and addresses of 10 beekeepers and we will send you a monthly paper, "Buckeye Farmer" for one year.  
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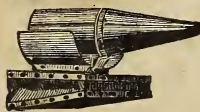
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Sent promptly on receipt of price. To sell again, send for dozen and half-dozen rates.

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SIRS:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do your trade will boom. Truly, **F. A. SNELL.**

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SIRS:—I consider your smokers the best made for any purpose. I have had 15 years' experience with 300 or 400 swarms of bees, and know whereof I speak. Very truly, **R. A. MORGAN.**

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SIRS:—The smoker I have has done good service since 1883. Yours truly, **DANIEL BROTHERS.**

Send for descriptive circular and testimonials to 1tfdb **BINGHAM & HETHERINGTON, Abronia, Mich.**

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P. S.—Send 10-cent stamp for "Practical Hints to Bee-keepers." Mention Gleanings. 1tfdb

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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.

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- 3 | *John Ploughman's Talks and Pictures*, by Rev. C. H. Spurgeon\* ..... 10
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- 10 | Langstroth on the Hive and Honey-Bee\* ..... 1 40
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- Bee-keeping for Profit, by Dr. G. L. Tinker ..... 25
- The Apiary; or, Bees, Bee-Hives, and Bee Culture, by Geo. Neighbour & Sons, England's ..... 1 75
- British Bee-keeper's Guide - Book, by Thos. Wm. Cowan, Esq., England's ..... 40
- 3 | Merrybanks and His Neighbor, by A. I. Root

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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 166 pages.

- 10 | Gardening for Pleasure, Henderson\* ..... 1 40

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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.

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- 10 | Garden and Farm Topics, Henderson\*\* ..... 75
- Gray's School and Field Book of Botany ..... 1 80
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- 3 | Maple Sugar and the Sugar-Bush,\*\* ..... 35

By Prof. A. J. Cook. This was written in the spring of 1867, 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.

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- 10 | The New Agriculture, or the Waters Led

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- 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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We can furnish, at wholesale, or retail, **Everything** of practical construction needed in the apiary, and at **Lowest Prices**. Satisfaction guaranteed. Send for our **New Catalogue**, 51 illustrated pages, free to all.

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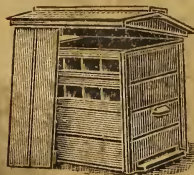
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**SEND \$1.75**

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21-20db

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Our 1891 Illustrated Catalogue of Apian Supplies. Dovetailed Hive, Snow-white Sections, Golden-colored Italian Bees and Queens, etc. Every thing needed in an apiary we can furnish you. Address

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