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23 1908

Gleanings in Bee Culture



BEE-KEEPING IN SOUTH AFRICA—APIARY OF W. N. SCOTT, QUEENSTOWN.

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Vol. XXXVI

September 15, 1908

No. 18



One-Color Honey-Labels

Gross Weight Lbs. Oz.

Case Weighs Lbs. Oz.

Honey Weighs Lbs. Oz.

No. 60.—250, 25c; 500, 40c; 1000, 75c; gummed.
If wording is changed same price as No. 62.

Take Notice! This honey will candy or become white and hard, as soon as it becomes cool, or cool weather begins, and this candying is, in fact, the best proof of its purity. To restore it to the liquid form, set it in hot water, not hotter than you can bear your hand in. To over-heat or boil the honey spoils the flavor. When melted, remove and cork or cover again. If sealed up while quite hot with a cork dipped in melted wax [or with the inside of the cover waxed], it will usually not candy again. When putting the bottles in hot water place them on strips of wood to prevent breaking.

No. 61.—250, 25c; 500, 40c; 1000, 75c; gummed.
If wording is changed same price as No. 62.

TAKE NOTICE.—As manufactured adulterated honey can not be made to imitate the granulation or "candying" of pure honey, granulation has been found to be the only ready test of pure honey. I therefore do not ship extracted honey before it is thoroughly granulated by cold weather: I WARRANT every pound of honey put up and shipped by me to be absolutely pure honey as collected from the blossoms by the bees. To restore to the liquid form and retain its original honey flavor, set the can in warm water and remove cover, but do not heat honey to boiling point. Let cool before using.
P. W. STOWELL, Otsego, Michigan.

No. 62.—250, 45c; 500, 65c; 1000, 90c; un-gummed; wording changed to suit

PURE HONEY

From the Apiary of
M. A. HENRY
Linesville, Crawford Co., Pa.

No. 63.—250, 45c; 500, 65c; 1000, 90c; un-gummed; wording changed to suit.

Display Cards

for Honey



Printed on cardboard, size 7x9 inches. We can furnish these in packages of 10 for 10 cts. postpaid. Any number additional 1 cent each. Not less than 10 furnished. Put one of these in each store where your honey is sold and see the result.

Wording can not be changed.



PURE EXTRACTED
HONEY
FROM THE APIARY OF
J. D. HORTON
Bloomington, Mich.



No. 64.—Wording changed to suit. 250, 65c; 500, 90c; 1000, \$1.25.

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We do not figure fancy prices, but quote figures that command your patronage. Whether your order is large or small we can save you money on it. Our tremendous business of millions of dollars annually is your best guarantee of complete satisfaction of every purchase made from us. In our enormous stock of new lumber of every kind we have just what you need for every purpose. Don't buy a stick of material until you get our prices. We offer you everything in the lumber and building supply line needed for residences, farm homes, stores, churches, barns, outbuildings of every kind, sidewalks and fencing. In short any kind of a structure requiring lumber, at from 30 to 60 per cent less than your local dealers or lumber yards ask for it.

IMPORTANT! Send Us Your Lumber Bill For Our Estimate

Make up a list of what you need. Send it to us for our price. If you are putting up a building of any kind whatsoever let us figure with you. Our prices talk louder than words. Have your carpenter or contractor send us your list of what is needed if he has charge of your building. Don't pay exorbitant prices to the lumber trust with their long line of lumber yards all over the country. Don't let the local dealer soak you with his heavy profit. Remember: Chicago House Wrecking Company buys millions of feet at a time under circumstances of forced sales which means sacrificed prices and enables us to sell even as low as cost without loss. You take no chances in dealing with the Chicago House Wrecking Company. Whether for 1 or \$10,000 your order will be filled carefully. Our lumber and supplies are guaranteed exactly as represented. If you have no need for a whole carload yourself get your neighbors to club in with you. By buying a carload you can save all kinds of money on freight charges.

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We will relieve you of every detail. That is what our Special Builder Service is for. Be sure and send us your lumber bill for our estimate. Feel free to write for anything you want to know along the line of building supplies, furnishings, etc.

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DOORS 40c WINDOWS 20c



1,000 good doors, various sizes, secured by us in connection with dismantling operations, most of them with hardware. Prices range from 40c up. Fancy front doors, all designs, \$1.50 up. 10,000 window sash, 20c up, all sizes. Complete line of everything in mill work. All brand new, best quality. Barn sash, 6 sizes, 25c up. Cellar sash, 37c up. Clear yellow pine mouldings, 25c per 100 ft. up. Porch columns, 54c up. Stair newels, \$1.78. Stair rail, 10c per ft. Pilaster casing, O. G. base, 1 3/4-4c per ft. Base blocks, 4c each. Quarter round, 25c per 100 ft. Hardwood thresholds, 4c. Porch brackets, 3c. Porch spindles, 4c. We have everything in the Building Supply Line including light and heavy hardware. Send us your lumber bill for our estimate. Ask for our new special mill work catalog. It prices everything needed for building purposes. Sent free.



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\$1.25 per sq. Easy to put on. Requires no previous experience. Can be put on over shingles without removing them. Weather-proof and fire-proof. We furnish with each order sufficient cement to make the laps and large head nails. Price is per sq. of 108 sq. ft. 1 ply, \$1.25. 2 ply, \$1.40. 3 ply, \$1.75.



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35th and Iron Streets, CHICAGO, ILL.**

Chicago House Wrecking Co., Chicago

Honey Markets.

The prices listed below are intended to represent, as nearly as possible, the average market prices at which honey and beeswax are selling at the time of the report in the city mentioned. Unless otherwise stated, this is the price at which sales are being made by commission merchants or by producers direct to the retail merchant. When sales are made by commission merchants, the usual commission (from five to ten per cent), cartage, and freight will be deducted, and in addition there is often a charge for storage by the commission merchant. When sales are made by the producer direct to the retailer, commission and storage, and other charges, are eliminated. Sales made to wholesale houses are usually about ten per cent less than those to retail merchants.

EASTERN GRADING-RULES FOR COMB HONEY.

FANCY.—All sections well filled, combs straight, firmly attached to all four sides, the combs unsoiled by travel-stain or otherwise; all the cells sealed except an occasional one, the outside surface of the wood well scraped of propolis.

A No. 1.—All sections well filled except the row of cells next to the wood; combs straight; one-eighth part of comb surface soiled, or the entire surface slightly soiled; the outside surface of the wood well scraped of propolis.

No. 1.—All sections well filled except the row of cells next to the wood; combs comparatively even; one-eighth part of comb surface soiled, or the entire surface slightly soiled.

No. 2.—Three-fourths of the total surface must be filled and sealed.

No. 3.—Must weigh at least half as much as a full-weight section.

In addition to this the honey is to be classified according to color, using the terms white, amber, and dark; that is, there will be "Fancy White," "No. 1 Dark," etc.

NEW COMB-HONEY GRADING-RULES ADOPTED BY THE COLORADO STATE BEE-KEEPERS' ASSOCIATION.

No. 1 WHITE.—Sections to be well filled and evenly capped except the outside row, next to the wood; honey white or slightly amber, comb and cappings white, and not projecting beyond the wood; wood to be well cleaned; cases of separated honey to average 21 pounds net per case of 24 sections, no section in this grade to weigh less than 13½ ounces.

Cases of half-separated honey to average not less than 22 pounds net per case of 24 sections.

Cases of unseparated honey to average not less than 23 pounds net per case of 24 sections.

No. 1 LIGHT AMBER.—Sections to be well filled and evenly capped, except the outside row, next to the wood; honey white or light amber; comb and cappings from white to off color, but not dark; comb not projecting beyond the wood; wood to be well cleaned.

Cases of separated honey to average 21 pounds net per case of 24 sections; no section in this grade to weigh less than 13½ ounces.

Cases of half-separated honey to average not less than 22 pounds net per case of 24 sections.

Cases of unseparated honey to average not less than 23 pounds net per case of 24 sections.

No. 2.—This includes all white honey, and amber honey not included in the above grades; sections to be fairly well filled and capped, no more than 25 uncapped cells, exclusive of outside row, permitted in this grade; wood to be well cleaned, no section in this grade to weigh less than 12 ounces.

Cases of separated honey to average not less than 19 pounds net.

Cases of half-separated honey to average not less than 20 pounds net per case of 24 sections.

Cases of unseparated honey to average not less than 21 pounds net per case of 24 sections.

ZANESVILLE.—Honey continues to move rather slowly, due to the general business stagnation. Producers seem to be holding for higher prices than the condition of the market warrants. No. 1 fancy comb brings wholesale 17 to 18; extracted, 10. Beeswax brings on arrival 28 cts. cash or 30 in exchange for bee supplies.
EDMUND W. PEIRCE, Zanesville, O.
Sept. 8.

INDIANAPOLIS.—The demand for the best grades of honey is good. Producers are offering fancy white comb honey at 12½; No. 1 white at 12; white-clover extracted, in five-gallon cans, at 7; very little demand for amber at any price. Many bee-keepers seem to be holding their honey for higher prices. Beeswax is steady at 28 cts. cash, or 30 in exchange for merchandise.
WALTER S. POWDER, Indianapolis.
Sept. 5.

SAN FRANCISCO.—Small lots of honey are still coming into the market, and the better grades of comb and extracted find a ready market at former prices. Low grades, while dull, are also well sustained in value. Packers are paying 5¼ to 6½ for extracted, and 11 to 13 for comb, while stock in this market moves at the prices quoted: Water-white comb, 16 to 17; white, 15; Water-white extracted, 8 to 8½; light amber, 7 to 7½; dark amber, 5½ to 5¾; candied, 5¼ to 5½.—*Pacific Rural Press*, Sept. 5.

KANSAS CITY.—The receipts of comb honey are light; in fact, our demands are heavier than our receipts. The receipts of extracted are light—demand fair. We quote No. 1 comb honey, white, 24-section cases, \$3.25; amber, \$2.75 to \$3.00; extracted, white, 7½ to 8; amber, 7 to 7½; beeswax, 28.

C. C. CLEMONS & Co.,
Kansas City, Mo.
Sept. 3.

CHICAGO.—We quote our market to-day on comb and extracted honey as follows: Fancy white-clover comb honey (24-section no-drip flat cases) 16; No. 1 white, same as above, 14 to 15; No. 2 white and light amber, 11 to 13; extracted white clover, in 60-lb. cans, 7½ to 8; the same in barrels, 7 to 7½. Beeswax, choice and pure, 28 to 30.

Certainly you understand that, with heavier arrivals of comb and extracted honey, we do not expect to see the above prices sustained, and it behooves you to get your honey on the market as early as possible, to take advantage of present prices.

Aug. 20. S. T. FISH & Co.

CINCINNATI.—The marked decrease in the demand and consumption of honey this season is not due to an oversupply; but after careful investigation of the conditions we find there are two causes. In the first place there was more white comb honey shipped last year from the West into the Eastern markets than could be sold, and even to-day there are stocks of it still remaining in every market of any importance. On the other hand, the consuming trade has not wanted as much comb honey as was supposed would be the case, and for these reasons that article is going begging. Fancy No. 1 comb honey is selling at 12½ to 16. Lower grades must be sold at a sacrifice. The extracted-honey market is experiencing the same conditions, and is undergoing the same ordeal. Quote amber honey at from 5½ to 7 in barrels, according to the quality and quantity purchased. White clover is selling at from 7½ to 9½, according to the quantity.

For beeswax, from good to choice, we are paying 27 cts. delivered here. This must be free from dirt.

Cincinnati, O., Sept. 12, 1908. THE FRED W. MUTH CO.

NEW YORK.—The new crop of York State comb honey is now beginning to arrive in small quantities, and the quality appears to be very fine, especially choice white stock. While our market has not opened up as yet, and will not before about the first week in September, prices are unsettled and uncertain. We are having some demand for fancy and No. 1 white at prices ranging from 13 to 15, according to quality and style of package. No new buckwheat is on the market as yet, but we are informed that the crop will probably be quite large. A great many bee-keepers seem to think that comb honey ought to sell at the same price as last year and before, not taking into consideration the fact that comb is a luxury and not a necessity, nor do they seem to take into consideration the general depression in business. We do not expect as good a demand as last year, nor do we think that last year's prices can be realized.

Arrivals of extracted honey have been quite free from the West Indies and the South, and the demand is fair. Prices obtained we consider full market value. We quote average grades from 58 to 65 cts. per gallon; fancy grades, 70 to 75. No new crops from near by are on the market yet, nor California. We have several cars now in transit, due here the first of September. We quote California sage at 9; orange, 8 to 8½; light amber, 7½ to 8.

Arrivals of beeswax are quite heavy, and the market shows a downward tendency. Prices are likely to go still lower. We quote 28 to 30.
HILDRETH & SEGELKIN,
New York.
Aug. 22.

SCHENECTADY.—No new comb honey on our market yet, and but little demand, as many dealers carried over some stock which they are anxious to work off before buying the new crop. However, it is well to have some on hand for first customers.

CHAS. MACCULLOCH,
Schenectady, N. Y.
Aug. 25.

DENVER.—The crop in Northern Colorado is almost a failure. There will be but little more than what the home market requires in this section. We quote No. 1 white comb honey, in 24-section cases, at \$3.15 per case; No. 1 light amber, \$3.00 per case; No. 2, \$2.85 per case; strained and amber extracted, 6¼ to 7¼; light amber, 7½ to 8¼; white extracted, 8½. We pay 24 cts. for clean yellow beeswax delivered here.

THE COLORADO HONEY-PRODUCERS' ASS'N.,
Denver, Aug. 25. F. Rauchfuss, Manager.

Extracted Honey Wanted

We are always in the market.

If you have any to sell, mail small average sample to

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Purchasing Department,
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ALBANY, N. Y.

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THE A. I. ROOT COMPANY, : : : MEDINA, OHIO

Reasons for the Price OF MY Raspberry Honey.

I ask ten cents a pound for my raspberry honey. This is slightly above the market price, but there are reasons.

In the first place, very little raspberry honey is produced. It is a novelty—something out of the ordinary—like orange-blossom honey for instance.

In addition, it is of very superior quality; so much so that it was awarded the gold medal, in competition with other honeys, at the Jamestown Exposition. It has a flavor all its own—a flavor that smacks of the wild red raspberry of the woods.

Another most important reason why I should get a good price for my honey is the manner in which it is produced. It is left on the hives for weeks after it is sealed over, and thus acquires that finish, that smooth, oily richness, that thick, rich deliciousness that can be obtained in no other way.

It costs more to produce such honey, there is not so much of it,

and it is worth more than the ordinary honey; just as big Northern Spy apples, streaked with crimson and filled with juicy spiciness, are worth more than ordinary fruit.

As a finishing touch the honey is put up in bright new 60-lb. tin cans, securely boxed, and the boxes bound with iron so that they will bear shipment; in fact, I will guarantee safe arrival in perfect condition.

For a single 60-lb. can the price is \$6.25; for two cans in a case (120 pounds) the price is \$12.00 a case, regardless of the number of cases that are taken.

If you are not acquainted with this honey, send me ten cents and I'll mail you a generous sample, and the ten cents may apply on the first order that you send.

W. Z. HUTCHINSON, Flint, Mich.

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1884 1908

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Wetumpka, : : Alabama

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CONTENTS OF SEPTEMBER 15, 1908

HONEY COLUMN.....	1104	Bee keeping for Invalids.....	1133
STRAY STRAWS.....	1115	Honey-agitator.....	1134
EDITORIAL.....	1116	Plural-queen System.....	1135
Marbach Hive-lifter.....	1119	Getting Rid of Old Bees.....	1135
Size of Larvæ for Grafting.....	1119	HEADS OF GRAIN.....	1136
CONVERSATIONS WITH DOOLITTLE.....	1120	Double Bottom-boards.....	1136
SIFTINGS.....	1121	Bees Lost from Supers.....	1136
BEE-KEEPING IN THE SOUTHWEST.....	1122	Escapes, To Put on.....	1137
POINTERS BY THE JAY.....	1123	Moving Bees.....	1137
GLEANINGS FROM OUR EXCHANGES.....	1123	Queen Balled on Return from Flight.....	1137
Labeling Honey.....	1123	Little Foundation Wanted in Honey.....	1137
Glucose Question.....	1124	Vestibuled Bottom-boards.....	1137
Bees on Heather.....	1124	Shingled Hives.....	1138
Alfalfa King.....	1124	Removing Sections from Shipping-cases.....	1138
Alfalfa in the Tropics.....	1124	Syrup Slow to Crystallize.....	1138
Alfalfa in Virginia.....	1125	Selling Honey at Home.....	1139
GENERAL CORRESPONDENCE.....	1125	Deciding on Presence of Virgin Queen.....	1139
IMPERIAL VALLEY.....	1125	Increase by Somerford Plan.....	1139
Six Months of Winter.....	1125	Increase Late in Summer.....	1139
Uncapping-knives, Hot or Cold.....	1126	Ants in Comb Honey.....	1139
Staying Foundation.....	1127	Automatic Uniting.....	1139
Apiary between Rivers.....	1128	Honey Souring in Hives.....	1139
Truck-farming in Colorado.....	1128	Honey Hauled in Wagon.....	1139
Honeysuckle Arbor for Shade.....	1132	Sage for Honey in Idaho.....	1140
Caucasians and Brace-combs.....	1133	Granulated Comb Honey.....	1140

OUR CLASSIFIED ADVERTISEMENTS.

We have frequent letters like the following:

Enclosed find \$1.50 for our three-line "want" advertisement in your Aug. 15th and Sept. 1st issues. Please discontinue it at once, as the first insertion secured us three cars of honey, and more is offered us by nearly every mail.

Denver, Col., Sept. 4. THE FRISBIE HONEY CO.

If you have honey to buy or sell, no other paper published can put you in touch with interested parties as well as GLEANINGS. Rates, 25 cts. per line per issue.

CALIFORNIA FRUITS FOR ALL.

We all appreciate California fruits. Time was when there existed a prejudice against fruit produced in irrigated regions; but that has passed away for ever, and there are very few of us who do not relish California fruits—fresh, canned, or dried. The amount of fruit from the Golden State which reaches the States east of the Rockies is something stupendous. For example, there were 133,440,000 cans of fruit; 140,000,000 lbs. of raisins; dried fruits, 254,375,000; figs, 6,000,000 lbs.; prunes, 180,000,000 lbs.; oranges, 30,000 carloads; olives, 750,000 gallons; olive oil, 200,000 gallons; walnuts, 14,000,000 lbs.; celery, 3000 carloads; cabbages, 500 carloads; cauliflower, 350 carloads; beet sugar, 163,800,000 lbs.; butter, 5,000,000 lbs., and a number of smaller items, shipped eastward last year from California.

It is the opinion of experts, however, that the trade might be greater. The long haul and the large number of hands the goods pass through cause the prices to be too high in many instances, and in some cases the goods are kept too long and are not fresh. To overcome these two difficulties the California Fruit Products Co., of Colton, Cal., has set itself. The manager of this concern proposes to deal direct with the people who consume California fruits, and thereby eliminate the middleman altogether when dealing with thifty people. Last season was their first, but they were phenomenally successful, and orders poured in on them from every State. This season they will put up dried fruits in 2-lb. cartons with 25 of these in a box, making 50 lbs. in all. The cartons are assorted to suit. They also have assorted boxes of canned fruits (two dozen in a case), of apricots, peaches, peaches, and plums. They also supply pure extracted sage and orange honey. In nuts they supply almonds and walnuts. They prepay the freight. Note the latter point. We imagine such an enterprise is bound to succeed. Doubtless many of our readers will be glad to favor the California Fruit Products Co. with a trial order.

4%	A request	Established 1892
	on a postal will bring you our free booklet	

BANKING BY MAIL

We will pay you 4 per cent—compounded twice a year on your savings account whether large or small—secured by assets of over \$700,000. Managed by prudent and successful business men, and subject to and incorporated under the rigid Ohio State banking law. Under ordinary circumstances all or any part of your deposits may be withdrawn at will.

Send for the booklet to-day.

THE SAVINGS DEPOSIT
BANK COMPANY

MEDINA, OHIO

**"If goods are wanted quick, send to Pouder."
Established 1889**

QUALITY.

By the Bee Crank

I am offering a discount of 7 per cent on bee-supplies sent out this month for next season's use. Next month the discount will be 6 per cent. I am very glad, for several reasons, that many bee-keepers are taking advantage of the liberal discount. I am securing a good share of the business because I have been giving my customers more for their money than many of them have been in the habit of securing elsewhere. The saving will represent an excellent investment for any bee-keeper, and with me it will be a great help by relieving the strain that comes with the tremendous demand for supplies in April, May, and June, when it seems that everybody wants supplies on the first train.

Buying bee-supplies is just like buying any thing else. It is not so much what you pay as what you get for your money. Here you get Root quality and prompt service. If you have not my catalog on your table I wish you would send your name and address, and state the number of colonies you have. I want to place your name on my mailing-list because I want your business. I want your business because I know that I can give you as good service for your money as



you can get anywhere. I will then send you printed matter; am going to write letters to you; and if I could I would call and see you. I have for sale what you are having to buy from time to time, and nothing short of your entire bee-supply business will satisfy me if you are within range of Indianapolis. Send your name and you will confer a mutual favor.

Honey.—I find that there is a good demand for honey from bee-keepers who have small apiaries, and where their demand exceeds their supply. In handling honey I have always been careful about the quality, just the same as in handling bee-supplies. Within the last month I have had large shipments from such well-known bee-keepers as S. D. Chapman, Geo. E. Hilton, Geo. H. Kirkpatrick, M. F. Perry, I. C. Lindley, E. A. Doney, Tofield Lehman, Guy Morrison, E. J. & Walter Hemple, and others. I mention these names to give an idea of the quality of honey that I am handling. If interested, let me send you my monthly quotations of the Indianapolis honey market, free.

I can use more beeswax at 28 cents cash or 30 cents in trade.

Walter S. Pouder,

513-515 Massachusetts Avenue, Indianapolis, Ind.

INDEX TO ADVERTISEMENTS.

Agricultural Implements.
 Electric Wheel Co.1143
Banking by Mail
 Savings Deposit Bank.1108
Bee-supplies.
 Blanck & Hauk.1112
 Bondonneau, E.1112
 Falconer, W. T.1158
 Griggs Brothers.1105
 Hilton, George E.1113
 Howkins & Rush.1149
 Hunt & Son, M. H.1113
 Jenkins, J. M.1107
 Jepson, H. H.1107
 Minnesota Bee Supply Co. 1157
 Mondeng, C.1107
 Muth, F. W. Co.1105
 Nebel, J. & Son.1150
 Nysewander, Joseph.1113
 Peirce, E. W.1107
 Poudier, Walter S.1109
 Prothero, John A.1112
 Root Co., Syracuse.1112
 Springham, I. J.1107
 Toppertwein & Mayfield. 1152
 Weber, C. H. W.1114
 Woodman, A. G.1149
Bees and Queens.
 Anderson, Grant.1150
 Barnes, G. W.1150

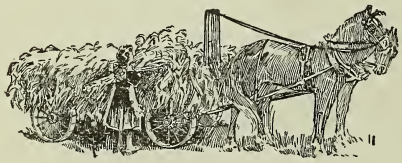
Benton, F.1150
 Case, J. B.1150
 Fajen, J. L.1150
 Moore, J. P.1150
 Parrish, W. M.1150
 Quirin, H. G.1151
 Robey, L. H.1151
 Rutzahn, G.1150
 Shafer, H.1150
 Shuff, Wm. A.1151
 Simmons, E. A.1150
 Taylor, J. W. & Son.1150
 Trego, S. F.1150
 Victor, W. O.1151
 Wardell, F. J.1151
 Wurth, Daniel.1151
Books.
 Franklin-Turner Co.1148
Classified Advertisers.
 Bees and Queens.1154
 Bee-keepers' Directory.1154
 Educational.1155
 For Sale.1154
 Honey and Wax Wanted. 1153
 Honey and Wax for Sale. 1153
 Poultry.1153
 Real Estate for Bee-keepers 1155
 Wants and Exchanges.1153
Fencing.
 Kitzelman Brothers.1089
Honey-dealers.
 Dadant & Sons.1158
 Fred. W. Muth Co.1105
 Griggs Bro's & Nichols. 1105
 National Biscuit Co.1105
 Hildreth & Seigelken.1105
 Hutchinson, W. Z.1107
 Israel, Chas. & Bros.1107
 Wright, H. R.1105
Honey-packages.
 Sackett, H. A.1107
Household Specialties.
 Best Light Company.1148
 Rochester Radiator Co.1148
Land for Sale.
 Thorpe, S. S.—cover.
Mail-order Houses.
 Chicago House-wreck. Co. 1103
Miscellaneous.
 Mugler Engraving Co.1148
Patents.
 Williamson, C. J.1151

Plants and Seeds.
 Storrs & Harrison—cover.
Potato Machinery.
 Potato Implement Co.1148
Publications.
 American Bee Journal.1157
 Farm and Stock.1149
 Farmer's Call.1149
 Fruit Grower—cover.
 Home Instructor.1149
 Inland Poultry Journal.1089
 Practical Farmer.1107
 Up-to-Date Farming. 1149, 1157
Roofing.
 Anderson Mfg. Co.1148
Saws.
 Barnes Co.1148
Schools.
 Simplex School of Music—cov.
Sprayers and Pumps
 Myers, F. E.—cover.
Stoves and Ranges.
 Kalamazoo Stove Co.1147
 Majestic Stove Co.—cover.
 Rochester Radiator Co.1148

PREMIUM LIST UTAH STATE FAIR, TO BE HELD AT SALT LAKE CITY, UTAH, OCT. 5-10, 1908.

Best exhibit Italian bees	\$10.00	5.00
Best 100 pounds comb honey	5.00	3.00
Best 100 pounds extracted honey	5.00	3.00
Best di-plant package honey	5.00	3.00
Best 100 pounds of beeswax	5.00	3.00
Best exhibit high-bred bees in observatory hives	10.00	5.00
Best display in this class, gold medal and	15.00	7.50

SPECIAL.
 The C. M. I. (Thos. G. Webber, Supt.) offers for the best display of Utah honey 20.00
 No premium awards will be made on entries not received at the association office by Wednesday, Sept. 30. Competition open only to bona-fide residents of Utah.



The above illustration shows Miss Phillis Hunt, of Iowa, engaged in loading corn fodder on an Electric Handy Wagon made by The Electric Wheel Co., Quincy, Ill.

This young lady, according to reports, likes nothing better than loading and hauling corn fodder on these low wagons. She is about 16 years old and weighs 110 pounds and thinks she is able to haul as much corn fodder on a Handy Wagon in one day, as a full grown man can haul on the ordinary high wagon in the same length of time.

Miss Hunt, however, according to her letter, is not willing to undertake to haul all the corn fodder and it would be useless for any of our young farmer readers to imagine that they could avoid all this work, by contracting a matrimonial alliance with Miss Hunt.

FIXING THE ROOFS.

This is the time of the year when the prudent husbandman goes around inspecting the roofs of the various buildings of the farm homestead. It would be poor business to leave off such work until winter; and we all realize the value of the old adage, "A stitch in time saves nine." The proverb applies most emphatically to roofs. In this connection it would be advisable for all interested to turn to the advertisement of the Anderson Mfg. Co., Elyria, O., on p. 1148. See what they have to say about guaranteeing the ability of a roof to withstand rain. We believe this firm to be perfectly reliable, and capable of carrying out its contracts or whatever it agrees to do.

KALAMAZOO STOVES.

The famous firm of stove-makers who have made the magic words, "A Kalamazoo direct to you," almost a household phrase throughout the whole United States, is again with us this season, using our columns to herald the fact that they are still to the fore and expect to sell stoves direct from the original makers to the consumers. It takes a great deal of money to do the immense amount of advertising this firm does; but this is not nearly so great an expense as would be the cost of handling the same goods through jobbers and dealers, each of whom would retain a substantial profit. In giving this firm an order you are not working in the dark, for they have a world-wide reputation for doing just what they agree to do. They know they must treat every purchaser fairly, even generously, to hold their immense trade. They are fully alive to that fact. The stoves, ranges, and heaters they send are all ready to set in place, and the freight is prepaid, so that the buyer has little to do except to go to the depot and receive the stove, take it home, and set it up, all of which any ordinary person can do with ease. This is the time of year when families in the North begin to get their household heating-apparatus in order, and doubtless a good many will have to order a new stove in place of the old one which has done its duty. In this case kindly remember the Kalamazoo Stove Co., Kalamazoo, Mich.

SAVING THE HEAT.

Now is the time to study ways and means for getting the rural home snug and warm this coming winter. In this connection it may be well to consider the fact that much of the stove heat goes out at the mouth of the chimney. You would hardly credit the amount of heat lost in this way. It is enormous. Some of it can be utilized by putting in a stovepipe radiator. Write to the Rochester Radiator Co. for particulars, who will show you how to prevent this waste.

An Unsolicited Letter.

We are pleased to publish the following letter lately received from one of our well-known advertisers, whose copy for the coming season will soon begin. The letter below tells the story of splendid results obtained through the advertising columns of GLEANINGS.

STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY

GENERAL OFFICES AND FACTORIES
1050 UNIVERSITY AVENUE
ROCHESTER NEW YORK

MANUFACTURERS OF
TELEPHONE APPARATUS
AERIAL AND UNDERGROUND CABLE

BRANCH SALES OFFICE
70 86 WEST JACKSON BOULEVARD
CHICAGO ILLINOIS

ROCHESTER NEW YORK

August 11, 1908.

Gleanings in Bee Culture,
Medina,
Ohio.

Gentlemen:-

☺ We advise you with pleasure that we have advised the Long-Critchfield Corporation to include your publication in our advertising campaign for the months from October 1908 to May 1909.

☺ Considering the cost for space in your publication, Gleanings in Bee culture is the best producer we have on our list, and comes second in our entire list of agricultural mediums. We hope that we will receive the same efficient service and attention that has been your custom during our past pleasant relations.

Yours very truly,

Stromberg-Carlson Tel. Mfg. Co.

HCS/OB.

H. C. Shuman
Advertising Manager.

What have you to sell to readers of GLEANINGS? If you want our opinion regarding the advisability of advertising in our columns, write us regarding it. We never recommend it unless we are convinced there is a good prospect of fair returns for the money spent, and, further, that you are in position to and will give our readers a square deal. Our circulation is 35,000 copies. Our rates are 25 cents per line. Watch for our next; but, better still, get your inquiry or order for space off to us before you miss another issue. Address all inquiries to

ADVERTISING DEPARTMENT GLEANINGS IN BEE CULTURE, MEDINA, OHIO.

Hammer Free!

With Every Order of Supplies of \$5.00 or Over.



This is the handiest tool for nailing up hives, frames, and all parts, or for opening up hives. Made of steel, nickeled.

Three per cent discount off all prices in catalog.

FULL LINE OF ROOT'S GOODS

NO CHARGE FOR DRAYAGE.

John N. Prothero
Dubois, .. Pennsylvania

Odds *and* Ends Sale on Exhibition Goods While They Last

If you will send us a list of goods that you could use right away, or in the near future, we will quote you prices on such exhibition goods as we may have in stock. Don't wait, because this sale will be over in 30 days

Blanke & Hauk Sup. Co.
ST. LOUIS



Standard the world over

Traps

Veils

Hives

Frames

Smokers

Sections

Foundation

Wax-extractors

Honey-extractors

Shipping-cases

Bee-appliances

Syracuse
The A. I. Root Co.
New York

Syracuse
The A. I. Root Co.
New York

European Bee-keepers!

Save Time and Expense

by sending direct all your orders and correspondence to our exclusive agent for the European continent and its colonies. . .

EMILE BONDONNEAU
142 FAUBOURG - ST. DENIS, PARIS

Prompt Service
and Satisfaction
Guaranteed. . . .

The A. I. Root Company

“Practice Makes Perfect.”

A little girl sat on her father's lap, looking into the mirror, and inquired if God made both her father and herself. Being assured that he did she remarked that he was doing better work than he ever did before.

It is simply the old adage over again, and it is true of *The A. I. Root Co.'s* Bee-keeping Supplies; and while perfection can never be attained they are as near perfection as improved machinery and years of practice can well make them. If you have never seen them, or if you have, and have not a catalog, send at once for my 40-page catalog, illustrated profusely, and giving prices of every thing used in the apiary. *It is free for the asking.* Special price list of shipping-cases, and all kinds of honey-packages—wood, tin, and glass. Send a list of what you will need at any time and let us tell you what they will cost you delivered at your station.

Cash or goods for wax at all times.

George E. Hilton

Fremont, . . . Michigan

WESTERN Bee-keepers

.. will ..

SAVE TIME AND FREIGHT

by ordering **ROOT'S GOODS**
from Des Moines, Iowa.

A FULL LINE OF

Shipping-cases, Honey-extractors,

and all other seasonable goods now
on hand.

We are also prepared to supply goods for next season's use at special discounts.

Estimates cheerfully given. Send us a list of your wants, and get our net prices by letter.

JOS. NYSEWANDER
565-7. W. 7th St., Des Moines, Ia.

We will have an exhibit of “Root Quality” bee-supplies at the **WEST MICHIGAN FAIR** at **GRAND RAPIDS**, Sept. 14th to 18th. We cordially invite Gleanings readers to call on us, and make yourselves known. We are the authorized agents for Gleanings at this fair.

We want to show you our goods and take your 1909 order there, giving you the advantage of the **EARLY-ORDER CASH DISCOUNT.** Ask us about it.



M. H. HUNT & SON
LANSING, :: MICHIGAN

C. H. W. WEBER

HEADQUARTERS FOR

BEE SUPPLIES

DISTRIBUTOR OF

ROOT'S GOODS EXCLUSIVELY
AT ROOT'S FACTORY PRICES

NO CHARGE TO DEPOTS
FOR DRAYAGE.

HONEY WANTED.

Fancy white clover, EXTRACTED HONEY. State how it is put up, and price expected delivered in Cincinnati.

C. H. W. WEBER

Office and Salesroom, 2146-2148 Central Ave.
Warehouse, Freeman and Central Avenue.

CINCINNATI,

..

..

..

OHIO

GLEANINGS IN BEE CULTURE

Published by The A. I. Root Co., Medina, Ohio

H. H. ROOT, Assistant Editor
A. I. ROOT, Editor Home Department

E. R. ROOT, Editor

A. L. BOYDEN, Advertising Manager
J. T. CALVERT, Business Manager

VOL. XXXVI

SEPTEMBER 15, 1908

NO. 18

STRAY STRAWS

DR. C. C. MILLER

YOUNG FELLOW, if you want to get near the head of the procession you'd better read carefully all that J. E. Crane says on page 1058. Then turn back to page 1056, where G. M. Doolittle says, "I would first requeen, with the best stock in the apiary, all colonies whose work had shown during the season that their queen was not of the very best order." A lot of trouble, that; but if you keep it up year after year you will be likely to get somewhere.

VENTILATION at the back of the hive by showing forward the lower section-super certainly helps to prevent swarming. The objection to it is that it retards the finishing of sections nearest to the opening. This year, during the first part of the clover flow, and on through its height, this ventilation seemed to have very little effect on the sections. Later on, the effect was very great. It is probably advisable to close all such ventilation when the season is well advanced.

THIS YEAR, more than ever before, I have watched the matter of worker brood in drone comb. I have seen a number of cases, and always the mouth of the cell was contracted by the addition of wax. I think almost any bee-keeper, if he will look through his hives, especially in nuclei or colonies, with young queens, will find patches of drone cells thus modified. Is there a case on record in which workers were reared in unmodified drone-cells? [We do not know. Has any one else noticed any exception to this rule?—Ed.]

"HEREAFTER any employee caught smoking cigarettes will be dismissed from the service." That's the order issued by Supt. Easley, of the Rock Island R. R., Aug. 26. A clear head and steady nerves are needed by a man who has the lives of others in charge, and cigarettes and whisky are incompatible with a clear head and steady nerves. [This thing is becoming more and more general with the big roads. It is not a case of morals or sentiment, but because it is a matter of economy to employ men with steady nerves.—Ed.]

A QUEEN, after being clipped, if placed on top-bars, is likely to run about in a frightened manner, inducing the workers to take after her, and possibly ball her. Lay a brood-frame flat; and, after you have clipped your queen, drop her on the brood right among the bees, and she acts at home. This applies to those who hold the queen in their fingers while clipping her. [Yes; or

when you clip the queen, let her drop down *between* the frames. It is when she is on top of the top-bars, where there is no brood or comb, that she becomes frightened.—Ed.]

JAMES G. SMITH writes: "What for so much chin-chin about hive-number tags?" and encloses a red and a blue crayon. I don't know whether red or blue would be any more permanent than black. I have used black. On an unpainted hive it becomes dim, and, besides, hives are often shifted, and numbers changed, making movable tags better. [Red and blue pencil-marks on a slate tablet, after standing a time, become almost indelible. We have given up such a pencil because we could not afterward erase the writing. Whether the red or blue crayons would make a fast color we do not know.—Ed.]

THAT PRETTY shipping-case, p. 1060. Each of the front bars has two nails at each end. I use only one—abundantly strong, and I think it looks better. On p. 1061 the instruction is that the two holding cleats and the cover should be put in place and then one of the cleats nailed. I don't believe you do it that way, Mr. Editor. I suspect that you first nail one of the cleats in place without touching the cover at all, and then put on the cover and the other cleat, and nail. [We are inclined to believe that your method is better than ours. But the point we wanted to bring out was, not to nail on the two cleats first, and then expect the cover to fit.—Ed.]

HILDRETH & SEGELKEN speak of opening the case "by simply pulling out the one nail and sliding the cover off." I don't understand how you can get out that one nail without taking off one of the cleats. But, of course, that isn't much trouble. A woman insisted I was wrong, so we tried it. She took a smooth half-inch nail and drove it in; pried up with a knife close to the nail, and then pushed the cover down. That left the nail projecting, to be drawn with a claw-hammer. I gave it up. But you must send a woman with each shipment to show the grocer how. [Almost any grocer is familiar with that little trick of the trade. We hardly believe, however, that, in the majority of cases, it is necessary to use the nail at all. The friction of the cover should be sufficient to hold it in place.—Ed.]

THE BEES of No. 29 were very dark. July 17 I killed their queen. A yellow queen was introduced, and was at large in the hive July 22 or 23. Not until Aug. 22 were yellow bees seen in supers, and then only a few. It seems that the young bees stayed on the brood-combs at first, and (assuming that the queen promptly began laying) did not enter the supers until nine or ten

days old. It looks a little unreasonable, and possibly the case was a little exceptional. At any rate, it is not hard to believe that bees do not enter supers until after they are old enough to have taken a flight. In that case, Mr. Editor, it is easy to see that there should be no loss of young bees when supers are piled up and covered with a Miller escape. My strong point, however, is that, if there is such loss, I ought to have noted something of it in all these years. [We are prepared to believe with evidence now in hand that there will be no very young bees in the supers. In a practical way, this means that when bee-escapes are applied on supers removed from the hives, there will be no loss from the young bees that can not fly back to their hives. If any one knows that this is not orthodox, let him hold up his hand and tell his story.—ED.]

THE LIFE of a worker in the busy season averages six weeks—perhaps less. Suppose we have a colony of best stock and one of the poorest. Swap the queens at the beginning of the honey harvest. It looks reasonable that in six weeks or so the colonies will swap qualities. But the observation of years has forced me to believe that the change of character comes much more slowly than I had believed. What the queen is up to the beginning of the harvest seems to settle almost fully the result of the harvest, even if prolonged. I don't know why, but it seems to be so; and yet sometimes the introduction of a queen seems to change the character of a colony within a few days. [Perhaps you are right; but we do not see any scientific reason why. We can readily see how the introduction of a young queen to replace one that is failing might inspire energy in a colony. But suppose there were two colonies, both queens equally prolific. The workers of one are energetic, and gather twice as much honey as the workers of the other. Now, would taking the queen out of the good colony and putting her into the poor one make the bees that are not her daughters good workers, like those that she left in the other hive that were of her own blood? It is a rather interesting question, and we should like to know if others have observed the same thing.—ED.]

THE OLD-TIME fiction of queens hatching exactly at 16 days has cost more than one bee-keeper dear. Queens (especially hybrids) will hatch out any time from the 14th to the 18th day, *Irish Bee Journal*, page 32. In a full colony, 15 days is probably near the mark; in a nucleus, longer. But no queen should ever be reared in a colony so weak as to lengthen the time of hatching to 18 days. [The *Irish Bee Journal* may not be far out of the way in this statement, although we have not heard of many queens that emerge from the cell in as short a time as 14 days from the time the egg is laid. In our queen-rearing yards we graft the larvæ when they are about 48 hours old. Our Mr. Pritchard* thinks that he can tell very closely by examining the larvæ just how old they are, and he tries to use larvæ which are 48 hours old so far as he is able to judge. As a rule he does not distribute the ripe cells until ten days from the time of grafting, and he finds that

the queens ordinarily emerge the day after. This would make a total elapsed time just 16 days, counting three days before the egg hatches, two days before grafting, and eleven days after. There are times, however, when he is obliged to distribute the ripe cells in only nine days, as the queens begin coming out too soon. This would make the total time fifteen days. We do not now remember a time when queens emerged from the cells in fourteen days from the time the egg was laid; and, although it might happen, we think it would not be at all usual. Then, on the other hand, if the weather conditions are not right we find that the total time is as long as seventeen days, and there might possibly be cases where the queen would not come out until the eighteenth day. We should say, in view of these facts, that the time to be counted on ordinarily is sixteen days, although very often so little time as fifteen days is taken or as long a time as seventeen. See editorial elsewhere.—ED.]

EDITORIAL

By E. R. ROOT.

THE SON-IN-LAW OF REV. L. L. LANGSTROTH AT
THE OHIO STATE FAIR.

THE publishers had an educational exhibit of bees, honey, and bee-appliances at the State Fair. Among the many visitors who came to pay their respects was Mr. John W. Jamison, of Roxabell, Ross Co., O. While Mr. Jamison is a prominent agricultural writer, he will be better known to the bee-keeping world when it is said that he married the youngest daughter of Rev. L. L. Langstroth. Her sister, Mrs. Anna M. Cowan, the eldest daughter, died a few years ago, so that Mrs. Jamison is the only survivor of the Langstroth family.

We are glad to say to her that her father's great invention of a practical movable frame, and his book, "Langstroth on the Honey-bee," have placed almost all the modern bee-keepers of the world under everlasting obligations to him. We are sure we are voicing the sentiment of all of them when we say we wish she may enjoy a long life, and health long enough, at least, to see the full fruition of her father's great work.

THE SUBSCRIPTION-LIST OF THE AMERICAN BEE-KEEPER PURCHASED BY THE AMERICAN BEE JOURNAL.

IN our issue for Aug. 15, page 989, we referred to the fact that the *American Bee-keeper* had suspended publication, and we have since been advised that the *American Bee Journal* has acquired the subscription-list and will fill out all unexpired subscriptions.

In this connection, perhaps we should mention the fact that the *American Bee Journal* has advanced its regular price from 50 cents to 75 cents per year; three years for \$2.00; five years for \$3.00. This change took place September 1, and was made necessary, the publisher states, by the increased cost of every thing that goes into a periodical. A number of the popular dollar magazines have advanced to \$1.50. Some of the

*Mr. P. reared 2000 queens for us the past season, and large numbers of them in previous years. His habit of close observation and his extensive experiments should count for something.

daily papers that formerly sold for a cent are now selling at two. We have not as yet advanced the price of GLEANINGS; and as we do our own work in our own plant with the very latest modern machinery, we hope an advance in price will not be necessary.

HONEY-CROP CONDITIONS—PRICES.

THERE is no material change to report over that given on page 1050 of our last issue. As confirmatory of the shortness of the crop in Colorado we introduce a letter right here from Mr. R. C. Aikin, who is in position to know:

Colorado has little honey this year. Western slope is reported fair; Arkansas Valley, half a crop; northern (Denver, Boulder, Longmont, Loveland, Ft. Collins, Windsor, and Greeley) will not supply the home market. Only once or twice in 20 years have I had so little as this year. R. C. AIKIN.
Loveland, Col., Aug. 29.

This means that the market for Eastern clover should become firm; but by reference to some markets here in the East, we find that prices are unsettled in some sections and good in others. We hope for improvement.

CANE VS. BEET SUGAR.

MR. CRANE calls attention to the controversy in regard to the difference between cane and beet sugar. Theoretically they are the same; but experts note a difference. In London, the chief beet-sugar market of the world, cane sugar, as a general thing, commands a slightly higher price than beet sugar. *The Sugar Beet*, an excellent magazine devoted to the interests of the industry in this country, recently admitted there is a difference, and accounted for it by stating that the particles of carbon lie closer together in cane sugar than in beet sugar. This, of course, would make the cane sugar the sweeter of the two. Be that as it may, the juice of the beet contains a very bitter principle known as *betaine*, and it takes great skill to get rid of it in making the sugar. Sugar cane, on the other hand, has a delightfully sweet juice; and, if sufficient care is used, a sugar almost identical with maple sugar can be made from it. Beet sugar is often colored with ultramarine blue, which is against it for feeding purposes. There is even a difference in cane sugars. The syrups of Florida and Georgia are superior to those of Louisiana, chiefly, I think, on account of the low heavy soil of the latter as compared with the light, warm, friable soils of Georgia and Florida. Porto Rico and Barbados are celebrated for their syrups; and in both of them the soils are light and well drained. I believe bees are better judges of sweets than we are, and we might as well cater to their prejudices.

W. K. M.

THE PURE-FOOD EXHIBIT AT THE OHIO STATE FAIR; WHAT OHIO IS DOING IN THE ENFORCEMENT OF PURE-FOOD LAWS.

ONE of the most striking exhibits—one that attracted a large amount of attention—at the Columbus Fair was one made by the Pure-food Department of the State of Ohio, of which Renick W. Dunlap is Commissioner. The exhibit was under the immediate charge of two of his inspectors, E. J. Riggs and George E. Scott.

It comprised a large collection of food and drug products gathered from all over the State,

showing various examples of adulteration, the use of injurious preservatives and coloring matters, and, in general, some ingenious specimens of misbranding. Thanks to Commissioner Dunlap and his associates, there is not a State in the Union where the pure-food law is better enforced.

A feature of the exhibit showed the attempts of certain manufacturers of foods to get around the law, or to dodge the special clause of the statute having reference to the general subject of misbranding. In some cases the preservative or coloring matter would be indicated in very small type; in other cases the adulterant would be named, but in such an ambiguous way that the average consumer would read the headlines, supposing he was buying a certain definite well-recognized food product, when in fact he was getting only an imitation of it. But the Pure-food Department had traced down a lot of these cases, and compelled strict compliance with the provisions of the law.

Comparatively speaking, there is but little adulteration in Ohio. In the case of vinegars, catsups, jams, and various preserves, there has been some injurious imitations. Candy has been found to contain considerable injurious coloring matter, especially of the coal-tar products; the catsups and meats, an excessive amount of preservative.

A very interesting part of this exhibit were pieces of muslin cloths. Some of them, about half a yard wide and a yard long, were colored from the dyes taken from a single bottle of catsup or from a few candies. The amount of coloring matter used in some cases was enough to give strong rich tones to large pieces of cloth. Think of that amount of stain going into the human stomach, and for no other purpose than to deceive! These dyed cloths were displayed around the exhibit in a way that was very striking. These coal-tar dyes are used because they are cheap, and because they help to bring up the appearance of certain adulterated goods, or of pure food improperly prepared; but Uncle Sam and Ohio say their use shall stop.

The Pure-food Department insists that benzoic acid, and other preservatives of a like character, if strong enough to preserve the food would be likewise strong enough to prevent the digestion of those same foods when taken into the human stomach, and it is right.

But perhaps the most common adulterant of foods was saccharine, used in canned goods. This article is in no sense a food, but a powerful medicine that is produced from coal tar. It is 500 times sweeter than common sugar; and as it is very cheap the temptation is to use it in canned goods, for it certainly imparts to them a sweet flavor. When it is remembered that 4 lbs. of this powerful drug costs \$9.00, and has the same sweetening power as a ton of sugar costing \$120, one can see how unscrupulous canners would use it in spite of its effects on the lives of our people were it not for the national and State pure-food laws and their enforcement.

There is a need of having just such men as Dunlap and his associates, who can not be bought or cajoled, at the head of the Food Department at Columbus to prevent some rascals from sending us prematurely to our graves. The way they are making them come to time should be a

warning to all purveyors of food of any sort. What Ohio is doing, other States are doing more or less thoroughly; but Ohio has set up a high standard that many are not following.

MIGRATORY BEE-KEEPING; HOW O. O. POPPLETON PRACTICES THE SCHEME BY MEANS OF GASOLINE-LAUNCHES ON THE INDIAN RIVER, FLA.; THE "LONG-IDEA" HIVE.

WE have just had the pleasure of a visit from Mr. O. O. Poppleton, the veteran bee-man of Stuart, Fla. He had just attended the G. A. R. reunion at Toledo, and stopped off at Medina for a couple of days before returning. Our old bee-keepers will remember Mr. Poppleton as coming originally from Williamson, Iowa, although a native of Ohio. In Iowa he was a very successful bee-keeper, and was an occasional contributor to the bee-journals. But ill health finally made it necessary for him to go southward, and the next thing we heard of him he was located in Florida, where he has been keeping bees ever since.

Mr. Poppleton has the distinction of being, possibly, the only bee-keeper in the United States who uses what is known as the Long-idea hive—a hive that was much exploited some thirty years ago. Instead of adding extra room or giving surplus combs on top, story by story, the Long-idea principle means an extension on a *horizontal line*. It calls, therefore, for a *long* hive. The one Mr. Poppleton uses may hold 25 twelve-inch-square frames. As the season increases, and more room is required, the frames are put at the side, the division-board being shoved over. This is continued until the entire brood-nest is filled.

Our friend still believes in the hive, and thinks that, for his purpose at least, it is far ahead of the Langstroth tiering-up principle. There are no heavy stories to lift off and on. The hive never becomes top-heavy, and no wind blows it over. When we asked, "Are not these hives awful to lift?" he replied, "That is where you are mistaken. Two men can handle them very easily; and they are never toted around except to put them in and out of the boat in migratory bee-keeping. At all other times there is no lifting of heavy stories—simply pull the frames out of a single brood-nest and replace them." He could not understand how the whole bee-keeping world had gone after the tiering-up principle, when the other plan has so many advantages.

Mr. Poppleton enjoys the distinction also, of being the only migratory bee-keeper probably in the United States, although there are many of them in Europe; and we have read how the bees are transported down the Nile in Egypt.

But since the advent of the gasoline-launch, he has worked out the principle along entirely new lines. He first started with one good-sized launch and a lighter, and now he has put a motor into it so it is also self-propelling.

Up and down the Indian River there are many kinds of flora that come into bloom at different times. When there is nothing doing at one yard and something doing somewhere else, he puts his hives on his launches and then carries them to pastures new. When this locality fails, the hives are put on the water again and moved once more, and so on as long as the season lasts. On this

scheme of migratory bee-keeping he sometimes has yards a hundred miles apart.

Mr. Poppleton has been in that locality long enough to know its peculiarities. Lest some one may get the idea that he has a bonanza all by himself, and then think of moving down there, and working on the migratory plan, it will be proper to say that our friend has been "enjoying" a series of poor seasons. Better stay out.

In past seasons Mr. Poppleton has had some experience with bee-paralysis, for his portion of the State seems to be somewhat favorable to its development; but instead of being driven out of the business he set to work and learned how to cure it. This cure has already been made public through the various bee-journals, and is now incorporated in the A B C and X Y Z of Bee Culture under the general heading of "Diseases of Bees."

While Mr. Poppleton fears bee-paralysis no more he found he would have to quit importing queens from outside localities, and hence was compelled to develop a strain of his own that would be able to stand the inroads of that disease. In this connection we may remark that his experience tallies very closely with that of Mr. F. R. Beuhne, on page 998, Aug. 15.

Mr. Poppleton, besides being one of the old veterans of the war of 1861, is also one of the veterans in the bee business. He was contemporary with Langstroth, Grimm, Hetherington, Quinby, Tupper, King, Gallup, and many others of those early days. He is still very much interested in the general subject of bees, and especially in every new thing that has come up of late. His enthusiasm, although tempered by an experience that every thing that glitters is not gold, is just as keen as that of a beginner who has just arrived at the first stages of the bee-fever. Indeed, we spent several pleasant hours in talking over things new and old.

He has promised to send us some photos showing his launches, his hives, and his manner of keeping bees on the migratory plan. These we hope to present at a later time, and perhaps report a few more ideas that we gleaned from this veteran of many summers.

CAUSE OF SICK BEES ON THE SIDEWALK IN FRONT OF OUR BUILDING DURING THE HEIGHT OF THE HONEY-FLOW.

EVERY year we have noticed during the height of the honey-flow large numbers of bees on the sidewalk and brick pavement unable to fly, and apparently suffering a great deal of pain. With their feet they would tug at their bodies, and sometimes so great would be their contortions that they would crowd the abdomen off from the thorax. We were unable to account for this peculiar phenomenon, and we supposed they were dying in equal numbers everywhere in the vicinity of the yard. We have reported this at various times in these columns, but no one has been able to offer a satisfactory solution.

In visiting Mr. L. A. Aspinwall, of Jackson, Mich., our conversation drifted to the aforesaid suffering bees. Then Mr. Aspinwall remarked:

"I think I can tell you what is the cause. Is it not a fact that you have a good many telephone wires passing over this street?"

"Yes," we said, "they are strung up on both sides; and, what is more, the line of flight is concentrated at this joint by an open passageway between the building and some tall evergreens."

"Now," said he, "you watch some time when the honey-flow is on, and you will see the bees bumping against those wires and dropping down in aimless flight until they tumble on the sidewalk and in the grass. During a dearth of honey there will be very few flying bees, and one that might accidentally hit a wire would escape observation."

It is very clear to us that our friend has struck upon the true source of trouble. There has been no honey-flow on since visiting Mr. Aspinwall, so we can not verify his statements; but the very fact that there are no dead or struggling bees to be seen except at the height of the honey-flow, would seem to support Mr. Aspinwall's theory. We might remark that at our south yard, where there are no telephone wires, we have never noticed these sick and struggling bees. We shall be glad to hear from others.

NOT A BAD IDEA; A SCHEME FOR AVOIDING THE LIFTING OF HIVES AND SUPERS.

OUR Mr. F. G. Marbach, of the machine-shop, has been working on various forms of hive-lifters. He finally inquired why a bee-keeper could not have his hives arranged in nice perfect rows, and at each end of a row set a post solidly into the ground, said post sticking up some six or eight feet above the level of the ground. He would then stretch a wire cable from the top of each post, drawing it up taut, as the telephone people do, with a rope and tackle. Next he would have a block and pulley, supported by a grooved wheel running on the wire or cable.

There, now you see the idea. This tackle could ride on the trolley wire, and be adjusted to any hive, lift up the supers, and hold them suspended, or move them to any one of the hives in a row, or carry them to the end of the row and deposit them on a wheelbarrow. No matter how rough or uneven the ground this arrangement could handle the supers very easily.

You may say that such a trolley line could not hold up a load of filled supers. There you are mistaken. The telephone men work on their lead-covered cable lines supported by a basket or platform which hangs by means of pulleys from the cable that holds lead pipe. They then pull themselves along in midair, supported only by the wire that supports the cable. They are perfectly safe in doing this, because the tensile strength of the wire is amply sufficient to hold them.

There are probably hundreds of our readers who have seen this feat performed, and there is no reason why this same principle could not be applied over a row of hives. The rows might be a hundred feet long, and it is perfectly feasible to to put in 35 or 40 hives to the row. Two or three rows would take all that one could put in one yard. These trolley lines can be easily put up by any one who knows how to string fence wire; but one would have to borrow or get a heavy tackle of the telephone people to produce the necessary tension of the cable or wire so it

would support in the middle a weight of from 50 to 75 lbs.

SIZE OF LARVÆ TO SELECT FOR GRAFTING.

THE advice commonly given in regard to larvæ for grafting is to select the smallest ones in order to be sure of getting the youngest ones. There is a probability, however, that this rule is not a safe one to follow, since larvæ of exactly the same age are not always of the same size. Our Mr. Pritchard, who has charge of one of our queen-rearing yards, has often noticed quite a variation in the size of larvæ, all of which are practically of the same age. In a populous colony he has inserted an empty comb, the cells of which are cleaned and polished, but which as yet contain no eggs. He catches the queen and places her on this comb, and then finds at the end of perhaps an hour that she has laid eggs in cells covering an area as large as his hand. He now carefully marks this area on the comb in order to be able to observe the growth of the larvæ. In this way it is possible to watch larvæ that are of the same age. At the end of four or five days, when the eggs have hatched and the larvæ have begun to grow, he finds that some are much smaller than others, and he believes that it is much the better plan in grafting to select those that have the best start. This conforms to the rules for the breeding of animals generally; for what breeder would not select the largest and finest individuals possible?

Some may ask how it is possible in a large queen-rearing yard to know whether certain larvæ owe their larger size to the fact that they are more vigorous or better fed, or that they are older? This is an important point, for a beginner might not be able to tell the difference. Mr. Pritchard believes, however, that any larva not yet curled up so that the two ends nearly meet is suitable for grafting, and he therefore selects the largest and finest-appearing larvæ that are yet comparatively straight in the bottoms of the cells. Furthermore, whenever he is looking over the combs in the strong colony containing the breeding queen, and finds a small patch of comb in practically every cell of which eggs are just beginning to hatch, he marks this carefully by enclosing the space with large wire staples such as are used to fasten bottom-boards on hive-bodies, etc. Small sticks will not do, for the bees carry them away; but these large wire staples answer the purpose admirably. Two days later, when he is ready to graft, he takes up this comb which he marked, and selects the finest of the larvæ between these staples. He is thus practically sure of obtaining what he wants. Late in the year, or during cool weather, it is not always possible to find a patch of comb containing larvæ of the same age, but earlier in the season this plan can be utilized very easily.

It would seem that the most vigorous larvæ should develop into the most vigorous queens. At any rate, queen-breeders ought to leave no stone unturned in the breeding of queens to develop the best. The best stock should be used to start with that can be obtained, the best larvæ chosen, and strong colonies should be made use of to care for the uncapped queen-cells. A queen that has been handicapped from the start can not become the mother of strong and vigorous bees.

CONVERSATIONS WITH DOOLITTLE

PROFITABLE AND UNPROFITABLE WORK IN THE APIARY.

"Mr. Doolittle, I have been wondering if I have not been doing too much unnecessary work with my bees."

"There is no doubt that a great deal of the work done in many apiaries is not very profitable, Mr. Jones, and would be characterized as 'fussing' by many; still, it often happens that the beginner learns much about the bees by this same fussing, hence the time so spent is not altogether thrown away."

"But is it not as important as any thing in making money out of bees to work so that every stroke counts?"

"Undoubtedly that is correct. It is easy to put a large amount of work on the bees, by the one having the bee fever, that amounts to little or nothing after the first principles have been passed. After the business is well understood, no doubt a greater satisfaction will come to us by making every stroke count, as you say."

"I think that is right, and I should like to have you tell me just what are the really necessary things to do with the bees."

"If you were to ask the farmer bee-keeper this question he would tell you to hive the swarms when you see them and put on the supers. Then the enthusiast who has just read one or more of the bee books and papers would be apt to say, 'Stimulate brood-rearing, equalize stores, make nuclei, raise queens, examine all colonies once a week during the summer, and, as often as it is mild during the winter, extract the honey in early spring and feed it back so as to get the cold solid slabs of honey from the middle of the brood-nest; extract the honey in the fall, and feed sugar syrup for wintering, etc., till you are almost dizzy with the rounds you must make with the bees the whole of the year.'"

"But what do you say?"

"The most practical course is by no means midway between these two extremes, as you probably expect me to say, for from my later years' experience I believe it lies much nearer the farmer's method than the enthusiast's. In other words, my motto now is, the largest possible amount of honey with as little well-directed labor as is possible to secure said amount of honey."

"What do you mean by well-directed labor?"

"The farmer loses much honey by *not* doing a few things at the right time and in the right place. The practical successful apiarist does just those things, but no more. Or, when he has just the necessary work done at *just* the right time and in *just* the right place, he does not hinder the bees in their work by upsetting all their house-keeping in pulling their well-arranged plans inside the hive to pieces, thus causing them to spend much of their precious time during the honey flow at repair work."

"Would you mind naming the things which you consider as paying work in the apiary?"

"Briefly stated, all colonies should be examined rather hurriedly in early spring with as lit-

tle disturbance as possible, to see that they have stores enough to last them till pollen becomes plentiful, when they should be examined more carefully to see that they have good queens and sufficient stores to carry them through to the white-clover harvest, taking advantage of this inspection to do all desirable cleaning of hives, pruning of propolis and burr-combs, and clipping of queens. All hives and supers needed for the season should be in readiness beforehand to be used at a moment's notice when they are needed. Then some simple and uniform plan for swarming should be adopted which will prevent all watching or climbing tall trees for after-swarms, for these have no part in a well-regulated apiary. Some good plan of artificial swarming to control increase is better by far for the busy man's use than natural swarming in any shape. Poor colonies should be requeened, the supers put on at the right time, more added as needed, and *just when they are needed*, and the filled supers should be removed promptly. Next, the honey should be graded and packed in accordance with some definite system as early as possible, to take advantage of the early market, so that any chances for selling it to good advantage may not be lost. The necessary number of queen-cells should be raised from the best stock so as to supersede all failing queens at the end of the honey harvest, and nearly all drone comb as well as irregular or imperfect combs should be replaced by straight worker combs; and the bees should be gotten ready for wintering during September and the first half of October."

"I notice you do not name some of the things neighbor K. insists are essential."

"Probably not. One of the tantalizing things about apiculture is that some apparently good authorities think some things are necessary, not to say vital, and other equally good authorities say they are not."

"How do you account for this?"

"Locality accounts for much of it in my opinion. In some portions of the West the clear dry atmosphere makes it possible for the bee-keepers to adopt a different system of management from that necessary here at the East."

"But when two authorities living near each other put forth different opinions, what am I to think?"

"Both can hardly be right. One may be competent in his practical work, but lacking as a close observer, or in scientific accuracy, and quick to jump at conclusions. Or, as is sometimes the case, he may be one of those who thinks it more virtue to claim knowledge than to admit or say frankly, 'I don't know.'"

"I take it from what you said that you do not think stimulative feeding in the spring would be profitable labor."

"I am sure it is not with me, for I have tried it very many times by feeding a certain number of colonies and leaving the same number of colonies of equal strength without feeding, but with plenty of honey; and I find that those not fed give the best results in honey when an inventory of each lot is taken in the fall. I know some claim this is the only way of having colonies prepared for the harvest. But it does not necessarily mean that stimulation must be profitable because it stimulates brood-rearing. There are

two questions involved in this stimulative feeding. First, which is better—a strong colony of old bees, whose vitality is unimpaired by previous brood-rearing, or a weak colony of young bees 37 days before our honey harvest is to begin, that being the time required to rear laborers for the fields from the egg. Second, when natural pollen (the best kind of stimulant in connection with plenty of honey in the hive) begins, as it does here, more than 37 days before our earliest harvest commences, and continues without a break, is it any additional stimulation to feed thin honey? All of my experience says that colonies which do not begin brood-rearing in earnest till pollen comes in plentifully from the elms and hard maple will excel by far those which are stimulated to brood-rearing earlier, so that the old bees die of exhausted vitality before the honey harvest arrives."

SIFTINGS.

By J. E. CRANE

It is a great satisfaction to have such a frank, outspoken report as we find on page 869 on the good and bad qualities of the Caucasian bees. We feel somehow now as though we knew something definite. Thanks.

Dr. Miller inquires, page 927, Aug. 1, if we found any thing in the platforms of the two great political parties about the greatest public question of the day. No, doctor, we didn't, and we were looking too. Too bad.

Mr. F. G. Marbach's suggestion, page 929, of making a honey-board of two sections, is a good one. The only objection I find is that, in practice, one piece is quite apt to be missing, having been used for something else. It is bad business to do so; but with help you can not always find things in place. [See Mr. Brovald's suggestion, page 1137.—Ed.]

I find an error on page 895, first column, a little below the middle. In referring to the variation of cane sugar in honey it says, "It is caused by differences of soil or climate, etc." It should have been, "Is it caused by differences of soil or climate?" I do not presume to know. It is one of those scientific questions we should like to know; but perhaps it is not of great practical value.

W. K. Morrison says, page 875, that a writer in one of the European journals maintains that it is only from the second crop of red clover that bees extract any nectar, while he imagined it was mostly gathered from the mammoth clover. Hereabouts I have seen bees work as freely on both the first and second crops of medium red clover as on any other clover; but it was only when conditions were favorable and only occasionally.

By the way, Mr. Morrison is one of the most cosmopolitan writers that have enriched the pages

of GLEANINGS, and his Gleanings from Foreign Exchanges are full of meat, and well worth the careful thought of every bee-keeper.

And there is Dr. Miller, page 939, with "the smile that won't come off." Good! Surely he is our "grand old man." Old, did I say? No, he is not old. I don't think he ever will be. I have read somewhere in an old-fashioned book that there are those who are made "partakers of the divine nature." Such do not grow old. I believe no other contributor to our American bee-journals has a larger place in the hearts of the bee-keepers of our country than Dr. C. C. Miller.

I believe Dr. Miller's estimate, page 867, July 15, of the amount of wax needed for storing 100 lbs. of honey is rather high. I have two or three times had occasion to melt up section combs, and I succeeded in getting only about four pounds of wax to the hundred of honey. There is, however, quite a variation in the thickness of combs or in the amount of wax used by different colonies in comb-building.

The remarks of J. L. Byer, page 935, are of value as to danger in the use of cyanide of potassium. I have had occasion to use both cyanide and bisulphide of carbon this season, and I find but little difference in cost, and for a small space the bisulphide is much more convenient to use, and on the whole I prefer it. But when a large space is to be filled I am not sure but the cyanide treatment would be preferable.

The article by J. L. Byer, page 887, on wax-rendering, stirs within us a fellow-feeling. I made a press a few years ago something after the Hatch-Gemmil type, and have often been surprised at the amount of wax I have secured. I do not press so hard as formerly; but after pressing a batch fairly, I loosen the screw and remove the follower; pour in hot water, and stir up the slumgum thoroughly; press again, and get at the second pressing about ten per cent as much as at the first pressing.

If all those who can not afford to take a bee journal could only learn "how to make wax" it would pay many times over for all the journals devoted to bees in this country. Further, if all who render wax knew how to do it properly the supply of this useful article would be largely increased, and the wax famine that has seemed imminent for a few years past would be postponed for some time.

On page 928 we find the following: "We notice by the *American Grocer* that the Kansas Board of Health, which has the enforcement of the pure-food laws of that State, says that grocers who sell beet sugar for cane will be subject to prosecution. We wish this ruling might become general all through the United States, as it is impossible now to know what one is buying—cane or beet sugar." Now, we seem to be not a little mixed on this sugar question. I have been accustomed to think of beet sugar as cane sugar, and yet the Kansas Board of Health, as well as the editor of GLEAN-

INGS, thinks there is a marked difference; and I have heard bee-keepers express great fear that, in buying granulated sugar, they might be buying beet sugar unwittingly. I find in Remson's Chemistry, page 668, under the paragraph "Cane Sugar," "This well-known sugar occurs very widely distributed in nature, in sugar-cane, sorghum, the Java palm, the sugar-maple, beets, madder root, coffee, walnuts, hazelnuts, sweet and bitter almonds; in the blossoms of many plants, etc."

The New International Encyclopedia says, "Cane sugar is found in varying quantities in many plants; but sugar-cane, the sugar-beet, the sugar-maple, and various species of palms, are its only commercially important sources." The American Encyclopedia makes substantially the same statement as to the sources of cane sugar. I notice, however, that the Standard Dictionary says that "Sugar is called according to its source; as, cane sugar, beet sugar, maple sugar, etc." I have supposed there was chemically no difference between refined sugar, whether its source was sugar cane or beets or maple-trees. It was all "cane sugar."

It does not necessarily follow that, because two substances are the same chemically, they are in every respect alike. The purest diamond and the blackest carbon may be the same to the chemist. Now, who can tell us just the difference between the refined product of sugar-cane and sugar-beets? Is one less desirable to feed bees for winter than the other, or for any other purpose?

Middlebury, Vt.

BEE-KEEPING IN THE SOUTHWEST

BY LOUIS SCHOLL

A NOTE OF WARNING.

Samples of foul brood have been sent me from various parts of the country for identification, and no objection arises on this score, although it takes a good deal of time, etc., in correspondence. But *when combs simply rotten with foul brood are wrapped in a single sheet of thin paper, and sent to be identified where other bees may be subjected to the dread scourge, it is time to call a halt.* Don't do it. Proper directions have appeared before for sending samples of foul brood for identification; and even then send none until you have received proper instructions for it. These will be gladly given, and then it may be known when it is to be expected.

It is against the law to expose other bees to foul brood, or combs of honey, wax, and even hives and appliances of foul-broody colonies; and there is a fine for it. Copies of the foul-brood law have been published far and wide, and every bee-keeper ought to take enough interest in this matter, if not to know the law by heart to have at least a copy of it handy for reference. If you have none, write the State Entomologist, College Station, Texas, for one. Also address all matters pertaining to information about foul brood to this office. Our reason for being rather particular is largely due to samples received wrapped in thin paper, through which the hatch-

ing bees had gnawed and were escaping, besmeared not only with the honey from these rotten combs, but the juices of the mashed diseased larvae. It is well, therefore, that great care be exercised, and the unnecessary spread of diseases prevented.

AN APPROPRIATION NEEDED FOR FOUL-BROOD INSPECTION.

As a result of a "foul-brood agitation" at the annual meeting of the Texas Bee-keepers' Association, at which a committee was appointed known as the "Legislative Committee," active work has been begun. F. L. Aten, of Round Rock, is chairman, with T. P. Robinson, of Bartlett, and Secretary Louis H. Scholl, of New Braunfels, as the two other members. This committee will come together from time to time until the meeting of the legislature in January, to devise plans for obtaining an annual appropriation of \$3000 for defraying the expenses of thorough inspection work in bee diseases as per the report herewith of the committee appointed during the session of the convention.

REPORT OF COMMITTEE ON FOUL-BROOD LEGISLATION.

We, your committee, beg to report as follows: That we ask for an annual appropriation of \$3000, to be used in the eradication of foul brood and other infectious diseases of bees, to be placed under the direction of the State Entomologist in accordance with sections 1 and 2 of the foul-brood law of Texas.

L. H. SCHOLL,	} Com.
W. O. VICTOR,	
T. P. ROBINSON,	
F. L. ATEN,	
C. E. S'NBORN,	

While this sum may not be necessary for an inspector alone, which, however, here in Texas would necessarily be higher than in many States on account of the greater territory that must be covered, a portion of it might be very profitably used in the Department of Entomology for foul-brood investigation which is not strictly inspection work. Such work, carried on whenever inspection can not be done, can be made to aid the inspectors, and should prove profitable to the bee-keepers of the State.

The real inspection of the bees, wherever necessary, and the proper caring for those that need attention, is, of course, the most important. With this in mind, the following letter has been formulated by the association for circulation:

Brother Bee-keepers:—Foul brood is breaking out in almost every part of our State. I have hundreds of letters from north, central, east, south, and southwest Texas, asking for help. Foul brood has come to these places, and the apiaries are threatened. Nothing can be done for the bee-keepers, as there is no money to do it with. Your bees are threatened. We need a State inspector to look after our interests so that they will be protected and saved from destruction.

We have a foul-brood law, but no money for an inspector. Our association has taken the matter up, and will go before the next legislature to obtain an annual appropriation for carrying out this work. But your help and co-operation will be needed. You need to become stirred up about the matter, and to stir your neighbors up. Every person who has the bee-keeping interests at heart should not fail to do his utmost toward getting this necessary appropriation from the legislature next January.

Begin now. We must combat foul brood or suffer. This is a worse scourge than many suppose, because they have had no experience with it. Find out all you can about it. It may save you hundreds of dollars. It may break out in your neighborhood if not already there, and you know nothing about it until too late. So let us all strive for an appropriation, a good inspector, thorough inspection, and save our bees.

Let me hear from you about this most important matter. Write me if there is or has been any foul brood in your neighborhood. Do not be afraid to do this. It will all be confidential. It will help me to plan ahead and lay out the work for inspecting later, when we get an inspector. Help the association's efforts in this move by being an earnest member and by doing your part by it.

Texas is now the leading honey-producing State, so let us keep her there.

L. H. SCHOLL, Sec'y Legislative Com.

POINTERS FROM THE REAR END OF THE BEE

TOLD BY THE JAY

EVERY THING NEW UNDER THE SUN.

In the years that I have kept bees I began to feel that there were just a few principles of the craft that I was certain of—that I knew a few things; but this spring sprung so many surprises on me that "I don't know" too. In a former article you will remember how I treated new swarms by hiving them with weak ones. Well, this year I expected to try the same thing; but what do you think? Nearly all of the swarms issued before the flow began. I have read how they do that in the South, but this was my first experience. I had only five swarms, and four of them were between apple-blossom and clover. I had 35 colonies in fine order for comb honey; and as all had two stories apiece there was little swarming.

Then the next thing that surprised me was the tremendous amount of pollen gathered during locust blossom. The bees just crammed every place full of pollen, some brood-frames being one solid mass of green, yellow, red, drab, brown, and white pollen. Sometimes they would fill a cell with pollen, and cap it over. Sometimes they would fill a cell half full, and the queen would lay an egg on top of it. I took away one story and put shallow extracting-frames on top with foundation; and as soon as they had the foundation drawn out enough they would pack pollen into it. I put on comb-honey supers, and they put pollen in the sections; but I was ready for them by this time. I put the extracting-frames on the hive and the sections on top of them, and when the bees came in with big loads that looked like walnuts (but some were smaller) they got tuckered out by the time they carried it up one flight of stairs, and stopped before getting to the sections. Now I hear some one say, "I told you so. You use the Danzenbaker hive." All right; how away; and when you get through I have a small howl coming. I had five eight-frame Langstroth hives, and one of them was the worst of any in the bunch. It has been said that bees will not put pollen in drone comb. Mine do. Some of those large drone-cells had a wad of pollen in them big enough for a tumble-bug to play foot-ball with.

No, the Danzenbaker hive has been roasted quite a little by the big guns because of the pollen in the sections. With me it is no worse than the Langstroth hive of same capacity; and every time I go after the bees in the Langstroth hives (I leave them alone all I can) it reminds me of transferring a swarm from a cracker-box or a nail-keg; and then to put the frames back, what a job!—burr-combs galore; bees smashed by the wholesale. I often wonder how any one can use the Hoffman frame when he can get the nice close-fitting Danzenbaker frames and do away with the burr-comb. Then when it comes to taking out the sections from the T super, all stuck up with warm propolis, it strings out and makes you think you are at a lady's-aid taffy-pulling.

Next came the wax-worm problem. I knew the worms would be in the honey on account of

the pollen, so I decided to fumigate. I put the supers in a tight little room and put in about two pounds of sulphur. There were some spiders and roaches in the room, and I wanted to get the whole bunch. My! what a smudge I did make! The next day I could hardly stand it in there with the doors and windows open. It killed two rose bushes on the outside, and made some beautiful autumn leaves on a grapevine ten feet away from the house. In fact, it seemed to kill every thing around except the wax-worms, roaches, and spiders. I could not see that the little smoker they enjoyed was in any way detrimental to their general health and prosperity. Next time I am going to try the carbon-bisulphide cure. They say it is explosive; so if you notice that Southern Indiana has a fit of the ague you will guess that another of my experiments has gone wrong.

It is said that the large wax-worm does not get in comb honey—just the little kind. Some of these were about two inches long, and about as big around as a lead-pencil. I guess I don't know what the large kind is. There has been a kind of thing crawling around my bee-lot that swallowed two of my pet toads. The boys call it a blue-racer. Is that one of the large kind?

Now I want to tell the other side. I had about 600 pounds of the finest white-clover honey you ever saw, that I sold to the grocers at 16 cts. per section. One man said: "That looks too good to be made by bees." He took a case. I also had about 500 lbs. of fine extracted honey that I sold in the new Shram self-sealing glass jar, and it will hold honey without leaks too. I also increased up to 55 colonies, and gave the new ones abundant stores to start with.

GLEANINGS FROM OUR EXCHANGES

By W. K. MORRISON

AN ERROR CORRECTED.

Monsieur Bondonneau writes that I was in error in regard to the restarting of the Algerian bee-paper known as *Nahla*. As it is, one number is still gotten out each year to give the names of members of the bee-keepers' society of Algeria, also the officers and other necessary items of news. *L'Apiculture Nouvelle* is sent to each member in lieu of *Nahla*. As the number I received was the same old *Nahla*, I concluded it had been "playing possum," hence the mistake.

LABELING HONEY.

There seems to be a misapprehension with regard to the intent of the national pure-food law as regards the proper labeling of honey. It is not necessary to state from what source the honey came. If, however, you state on the label "Pure clover honey" it must not be some other kind of honey. It must be clover or very largely from clover. You are not obliged to state what kind of clover the bees worked on to get it—it may be from alsike, white, crimson, sweet, red, mammoth, alfalfa, or any other true clover. You are not obliged to supply all particulars;

but what you do state on the label must be accurate, and not in the least misleading. You must not deceive the consumer.

SETTLERS ARE WANTED.

Uncle Sam wants settlers on irrigation projects. For the Salt River Valley project apply for further information to Louis C. Hill, Supervising Engineer, Phoenix, Arizona. For the Klamath project, in Oregon, apply to William H. Heileman, Engineer, Klamath Falls, Oregon. For the Truckee-Carson project, in Nevada, apply to Thomas H. Means, Engineer, Fallon, Nevada. For the Yuma, Arizona, project, apply to Francis L. Sellew, Engineer, Yuma, Arizona.

THE GLUCOSE QUESTION NOT DEAD.

The pure-food officials have an association of their own which they term Association of State and National Food and Dairy Departments. This year it had its convention at Mackinac Island, Michigan. Among other things which the meeting did was to pass a set of resolutions severely condemning Secretary of Agriculture Wilson for holding up the operation of the national pure-food law in certain cases. They do not blame President Roosevelt at all; in fact, the latter seems to blame Secretary Wilson for lending a too sympathetic ear to the wail of certain corporations. It is pretty plain, from all that has been said, that they had the glucose decision in mind, and they are not at all pleased at the outcome of it. In any case, a paper which is published by the glucose and whisky interests rushes to the defense of Mr. Wilson. It is evident the glucose decision will not be allowed to rest very long. The Association intends to have all the States pass a uniform pure-food law almost simultaneously. It will be more stringent than the national law.

EXPERIMENTS WITH BEES.

Lord Avebury, who presided over the Franco-British Congress of Bee-keepers in London, made a very interesting address on the subject of bees to the assembled bee-keepers. Of course, what he had to say was interesting because it was mostly original. When he was still Sir John Lubbock he issued his famous "Ants, Bees, and Wasps," which gained him much fame as a student of bee habits and life. His address was largely a continuation of that book, recounting his experiences with bees in trying to discover whether or not they hear or can distinguish colors.

On the latter subject his experiment was convincing. He said, "After the bees had returned twice I transposed the papers. She returned to the old spot, and was just going to alight when she observed the change in color, pulled herself up, and without a moment's hesitation darted off to the blue. No one who saw her at that moment could have had the slightest doubt about her perceiving the difference between the two colors." He also related his experiments with regard to bees hearing, but I do not believe his experiments are convincing. I do not doubt that bees hear. Anybody who has paid much attention to the piping of queens must have come to the conclusion that bees do hear. Otherwise

the piping would be useless, which is not likely. Bees do not care for the sounds we make. The sounds we produce are probably too coarse.

BEEES ON THE HEATHER BLOOM.

This is the season of all seasons with many European bee-keepers, for the heath or heather is now in bloom, and thousands of bee-keepers have their apiaries located right in the midst of the bloom, the better to secure a crop of honey. For many of them it must be an arduous undertaking to send their bees quite a distance from home. But there is money in it. Some keep their hives on house-wagons all the year round, ready to move at a moment's notice. The German and Austrian wandering bee-keepers have a powerful organization of their own, protecting their interests.

We too might have something of the kind if we had the heather. No one seems to have the enterprise to introduce it. There are places on the Catskill and Shangk Mountains where it might succeed if given a fair start. Probably in Western Oregon and Washington, in peaty marshes, it would stand a fair chance of succeeding, and possibly at high altitudes in the Rockies—that is to say, at 8000 feet and over, where the soil is peaty and the rainfall sufficient.

THE ALFALFA KING.

Not long ago a number of the agricultural journals of this country announced to the world that Mr. R. E. Smythe, of Sherman, Texas, was the alfalfa king of the world, with a total area of 1400 acres; but Mr. T. J. McKeon, of Argentina, in a letter to *Hoard's Dairyman*, very effectually disposes of that claim. He instances the record of General Julio A. Roca, twice president of the Argentine Republic, who has 192,000 acres in alfalfa, or 300 square miles. Messrs. Salaberry, Labor, and Berceche, of Cordoba, have nearly 100,000 acres more, and La Germania Estancia Land Co. about 110,000. There are also many who own large areas planted in alfalfa far excelling the Texas man. Mr. McKeon himself claims to have ten times as much as Mr. Smythe, and is now putting down 4800 acres additional. This looks like great news for the bee-keepers, for in South America the cattle are allowed to graze on the alfalfa almost the year round. In Chili and Peru there are also vast areas set aside for alfalfa. As a matter of fact, the culture of alfalfa in this country is only in its infancy, and in time we shall see similar areas in this country, notably so in Texas and California.

ALFALFA IN THE TROPICS.

There is an impression abroad that alfalfa will not grow in the tropics; but as a matter of fact it grows to perfection in Peru, a strictly tropical country. It was from Peru the seed was introduced into the United States. But it rather likes a hot, dry, semi-arid country, and would probably succumb in a steaming, moist lowland country. The writer has seen it growing in Grenada, one of the most southern of the West India islands. The editor of the *Journal of the Jamaica Agricultural Society* thinks it would grow in Jamaica, if given a fair chance, and he is prob-

ably right. On a limestone formation it does best, as it has a liking for lime, and there are some places where every thing seems to be to its taste, and possibly there are such places in the Isle of Springs. In some of the "dry" islands of the West Indies it stands a fair chance of succeeding, more particularly at an elevation.

ALFALFA IN VIRGINIA.

The Old Dominion is coming forward to take its place among the alfalfa States. One farmer is putting down 1500 acres to it just as fast as he can get the land in the proper condition. He first plants the clean well-manured land to crimson clover and then to cow peas. After that follows a heavy application of lime. Planted on such a bed the alfalfa comes along at a great rate. In the judgment of experts it will yield as heavily as it does in Colorado or Montana. If this is so, and it seems to be absolutely true, it means a tremendous boost for old Virginia. The Wing brothers, of Mechanicsburg, Ohio, strongly urge all would-be growers of alfalfa in the South to apply lime heavily—as much as eight tons of ground lime per acre if financial circumstances permit. I imagine that, in so warm a climate, alfalfa will yield some honey.

GENERAL CORRESPONDENCE

IMPERIAL VALLEY, OF CALIFORNIA.

A Note of Warning to Those who Believe this a Bee-keeper's Paradise.

BY J. W. GEORGE.

W. K. M., page 894, July 15, has jumped at conclusions without making proper deductions. Perhaps a little write-up from one who is on the spot, and who is fully conversant with the actual conditions, might not be amiss just now.

Imperial Valley is *going* to be one of the great valleys in the United States. I will not take space to describe it minutely; but suffice it to say, it is a large basin below sea level, with a perfectly level surface, and is about fifty miles square, practically all susceptible of cultivation, and a portion of it is now under cultivation. Till a few years ago it was known as the Colorado desert. There is a considerable acreage in alfalfa, which helps the bee-man; but there is a limit to all good things. Let me sound a warning right here, and give a little history.

The real-estate men and the local newspapers have financially ruined many a man in this valley. This year they published and talked of the great profits in raising cantaloupes for the eastern market until people almost believed that dollars grew on cantaloupe-vines. The result was that hundreds of men planted cantaloupes, and harvested failures. Why? There were too many in the business—hundreds of men lost all they had. Now the local papers and real-estate men have taken up the honey cry, and it may bring about

the same result for bee-men. With that in view I will give you the actual facts and conditions as nearly as I can.

As closely as I can estimate, last year's crop was about two cases of extracted honey per colony. This year, indications are for a little better than one case per colony. Last year there were about three carloads of bees in the valley to gather the honey; this year there were 15 carloads of bees shipped into the valley, which makes a total of 18 carloads. Our crop will probably amount to 12 or 15 carloads of honey. I am not going to say that the increased number of bees is entirely responsible for the average reduction in yield per colony; yet there are some who think it is.

The country here that is sown to alfalfa in sufficient acreage to be profitable to the bee industry is all occupied. I would advise any one contemplating coming here with bees to make haste slowly. You had better come and look the situation over. However, don't think that the bee-keepers of Imperial Valley are hide-bound, and don't want other bee-men to live. Let me give you an instance to prove the contrary:

One of our fellow bee-men had his entire apiary (with the exception of two colonies) burned, fixtures and all. The bee-men of the valley donated from three to ten colonies each, and made for him a new apiary. They actually hauled the colonies to him, some of them coming as far as twelve miles.

We have an incorporated association for the purpose of marketing our honey and purchasing our supplies. Our officers are, D. D. Lawrence, General Manager; Directors, J. B. Whittaker, Henry Perkins, George Jenifer, Thomas Phillip; J. W. George, President. Our secretary is a very busy man, having a large apiary of his own; still I think he would answer any question through the bee-papers that would be of interest to any one contemplating moving bees here.

One thing I did not mention—this is not a paradise to live in.

Imperial, Cal., July 25.

SIX MONTHS OF WINTER.

Bees Confined for so Long a Period Need Good Stores and Good Ventilation; the Value of the Right Combination of Conditions.

BY H. H. ROOT.

In localities where the honey-flow is more or less continuous, or where there is usually a flow of good honey in the fall, it may be unwise to substitute sugar syrup for the winter supply of food. But in some cases the fall honey is not a proper winter food, or the winters may be very long, so that sugar syrup is the safest to use. Mr. C. F. Smith, of Sheboygan, Michigan, finds that the syrup gives him much more uniform results, owing to the length of the cold season, which averages about six months.

At the convention of the Northern Michigan Bee-keepers' Association, Mr. Smith gave some interesting data concerning his locality. The honey-flow begins about the 18th of June, and lasts only about thirty days, there being not

enough honey coming in during July and August to keep up brood-rearing. If no brood is reared after July it is easy to see that the colonies will not winter well, and that feeding must be resorted to soon after the natural flow ceases, in order to give the force of young bees necessary.

By so doing, the winter supply of food is also provided, although for merely keeping up brood-rearing a thinner syrup is fed than would be desirable for winter stores. When colonies of young bees are in hives containing plenty of good sugar syrup, and placed in a well-ventilated, all-underground cellar, they may be kept six months in good condition.

Mr. Smith, after losing a good many colonies, found that it paid him to remove the covers from the hives in the cellar. Two or three thicknesses of budap are placed over the frames about a week before the colonies are put in the cellar, and then when the carrying-in is begun the covers are removed. The idea in this is to leave the bees in such condition that the moisture may have a chance to escape, and then it does not make so much difference whether the cellar is damp or dry.

If other conditions are right, the temperature of the cellar is also of less importance, for the bees are able to control their own temperature by the way they cluster. Bees closely clustered do not lose much heat.

These facts go to show that it is a combination of conditions that produces good results in wintering rather than any one condition alone. Some bee-keepers have found that darkness is essential, while others make no effort to exclude the light. Some have elaborate systems to provide ventilation, while others say that the ventilation is unnecessary. In some cases bottom-boards are removed, and in others they are left on, etc. Locality accounts for much of this difference of opinion, and the condition of the colonies and the quality of the stores account for more.

But it can not be denied that the right combination of conditions must exist in order that the bees be given a chance to take care of themselves. If the atmosphere of the cellar is damp, then the temperature must not go below 40° F., for dampness and cold are two conditions that should not exist at the same time. It is probable, also, that if the temperature is high enough to permit the bees to move about freely, the light should be excluded to keep them from becoming restless. Foul air should never be tolerated; and if the construction of the cellar is such that the air is not naturally changed, then ventilators must be used. A rapid change is not necessary, however, for if the bees are semi-dormant they need but little air. Colonies have been known to winter well in hives the entrances of which, by mistake, were left stuffed with rags. Ordinarily, if the bees become so restless as to require a mid-winter flight, then we should say that the combination of conditions is wrong.

As long as the bees keep quiet, the chances are all in favor of strong colonies in the spring. It is not so important to know how many colonies are still living when warm weather comes as it is to know how many colonies there are that will be in condition to "do business on the old stand" by the time the honey-flow begins.

HOT OR COLD UNCAPPING-KNIVES.

An Argument in Favor of Cold Knives; the Advantage of a Sharp Edge.

BY LESLIE BURR.

Whether an uncapping-knife should be hot or cold is a question that can not be answered by saying that one way is better than the other; but, as a rule, I think that the knife should be cold. This statement, I know, is not in accord with the views of many bee-keepers in the West and some other parts of the country, perhaps. In my mind, I can see the bee-keeper on the Pacific coast as he says, "Well, I should like to see you uncap sage honey with a cold knife;" but I should like to ask such a person when he ground his honey-knives last. His reply probably would be that the knives were ground some time last season.

To uncap honey the knife should be sharp and clean. If it has these two qualities, and is in the hand of a person who knows how, almost any kind of combs can be uncapped as fast as the largest extractor now made can extract them.

The way to uncap honey is to have two knives ground sharp and clean. The knife that is not in use should be placed in a pail of water, and when the knife that is in use becomes dull and gummy, after perhaps from half an hour to three hours' use, the time depending on the kind of combs, it should be changed for the other one. Each time the knives are changed a moment's time should be spent on the blade with a whetstone. Not only should the edge be brushed up, but the whole blade should be gone over to remove the gummy coating that has formed, for it is this gummy coating that causes most of the trouble.

Of course, there is honey that can not be uncapped with a cold knife, but it is not honey that has been recently gathered. I have yet to see honey that has just been gathered that can not be uncapped with a cold knife.

And now as to the way to cut the combs. Only the upper edge of the knife should be sharp; the lower edge should be dull, so that it may be used for trimming the wax off the top-bar. Do not uncap with a sawing motion unless the comb happens to be an old black one that can not be uncapped otherwise. A draw cut is much faster and smoother.

The advantages of working with a cold knife are many. No oil-lamp is needed to heat up the extracting-house, and possibly set fire to it; there is no changing of knives every comb, and, last of all, more work can be done and with much less bother.

Valparaiso, Indiana.

IN FAVOR OF A COLD UNCAPPING-KNIFE.

I have used uncapping-knives for ten years, and I like the cold knife best. The edge, however, must be keen and polished, and the honey warm enough to run freely. Half the trouble comes from a stained and rust-spotted knife.

Marion, N. Y.

J. A. CRANE.

[We should be glad to hear from others on this question of hot and cold knife.—ED.]

STAYING FULL SHEETS OF FOUNDATION.

Both Wires and Splints Used;
Some Cases where Splints
were Not Satisfactory.

BY E. F. ATWATER.

Mr. Editor:—Your request for reports from those who have used a combination of splints and vertical wiring prompts me to give my experience, so I enclose three photos illustrating some of the results of the use of splints to prevent sagging of full sheets of foundation. In Fig. 1 we have two frames, the upper one having the foundation supported by two wires and four splints; the lower frame has three wires and two splints, the latter being a fair representative of several thousand frames which we are putting in use this summer, except that we are using mostly Hoffman frames, while those shown in the cuts are plain, with staples at the bottom, according to the Coggshall plan. We tested a few splints in previous years, but were not fully satisfied with the results. However, since inventing and using our combined wax spoon and brush described on p. 1590, Dec. 15th, last year, we decided to give them a thorough trial this summer, as, with this little implement, we can give the splints an extra coating of wax after they are imbedded in the sheet of foundation. You will note in Fig. 1 that both splints and wires are waxed. Early in June we hived a lot of swarms, mostly shaken or "tubed," on such frames. In perhaps two-thirds of the hives, results were all that could be desired; but in some we found all (or nearly all) of the combs in the condition shown in Fig. 2. The bees are likely to begin gnawing at the splints at or near the lower ends; and when this happens they don't know when or where to stop, short of the actual removal of at least the lower half of the splint. In Fig. 3 we see plainly just where the splints have been gnawed out of the foundation, and how the bees are inclined to fill the vacant spaces with drone and irregular transition cells.

What can we do about it to prevent bad results? First, if we have a bee-space under the lower edge of the sheet of foundation we can use splints only six inches long, putting them in so that they reach within two inches of the bottom of the sheet of foundation. Or we can do as I did with a lot of frames—we can use common wooden toothpicks instead of the long splints. But I hope to solve the problem in another way, namely, to coat the splints with some substance (possibly shellac) that will

render them hard and smooth, so that the bees will have no chance to pull and cut at the fiber of the wood. Mr. Thos. Chantry has used stiff wire, like knitting-needles, but these

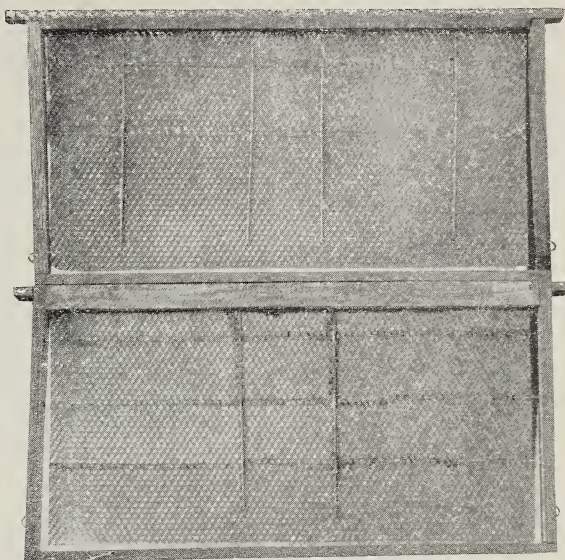


FIG. 1.—ATWATER'S METHOD OF USING BOTH WIRES AND SPLINTS.

In the upper frame there are two wires and four splints; in the lower, three wires and two splints.

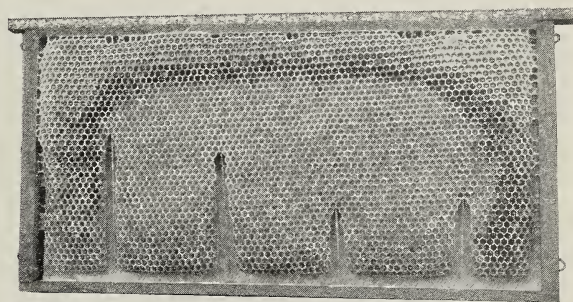


FIG. 2.—IN SOME CASES WOODEN SPLINTS ARE GNAWED BY THE BEES.

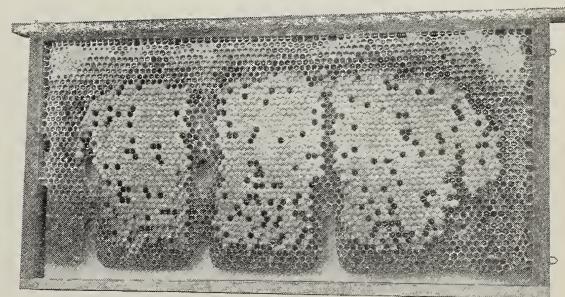


FIG. 3.—SPLINTS GNAWED AWAY, MAKING THE COMB DEFECTIVE.



APIARY OF E. H. JAMES, CAIRO, ILL.

This yard is located in the suburbs of a city which is between two large rivers. A crop of honey is secured each year.

are too expensive. Let's improve the details of the splint method until it gives good results all the time.

Meridian, Idaho.

[Figs. 2 and 3 do not give one a favorable impression of wood splints; but we are prepared to say in this connection that we saw nothing of this kind at Dr. C. C. Miller's apiary. He showed us comb after comb built from foundation stayed with wood splints, and these combs were as flat as a board, without any suggestion of wooden stays in the midrib; and, what is more, they were filled out to and in contact with the bottom-bar. One strong claim made by Dr. Miller for splints is that, by means of them, one can use sheets of foundation reaching clear down to the bottom-bar. Here, evidently, we have a case where locality affects results or else Mr. Atwater does not work the plan right. Dr. Miller is respectfully called upon to show why a third of the combs look like Figs. 2 and 3.]

Years ago we used folded tinned bars to stay our combs, and we had many that looked like Figs. 2 and 3, with this difference, that we had only one stay or bar.—ED.]

AN APIARY BETWEEN TWO RIVERS.

BY E. H. JAMES.

Ten years ago I started with two stands of bees—one box and one frame hive, with the intention of increasing the number if the location would permit. I am in the suburbs of the city, between two broad rivers which almost surround the town, thus making the territory for bees comparatively small. To my surprise the increase in my apiary has been steady, and I have never failed to have an excellent surplus of honey.

My apiary at present consists of 48 colonies,

and this season, up to July 25, I took 1000 pounds of comb honey, which has been sold readily at 15 cts. per pound in the city.

My hive-stands are pine pieces, 4 inches square and 3 feet long, there being two hives on a stand. For shade-boards I use any kind of broad planks, weighting them down with rocks.

The high board fence has prevented people from being annoyed by the bees, thus avoiding trouble with neighbors.

The time given to the bees has been after working hours, my occupation being an engineer. I get two crops of honey a year, the fall flow being the larger.

Cairo, Ill.

[We desire to call attention to the importance of a high tight-board fence to inclose a bee-yard in or near town. A good hedge fence of willow or osage orange would do just as well. At all events, the bees should be made to fly high before they leave the premises. In this way they avoid coming in contact with pedestrians or horses.—ED.]

BEE-KEEPING AND TRUCK-FARMING IN COLORADO.

Snap-shots from Grand Valley.

BY R. D. TAIT.

I don't remember ever seeing in GLEANINGS a picture of an apiary in this valley. I send two views, one of our small yard of bees and the other showing how we dispose of our honey. Our farm consists of five acres, all of which is in truck, and one can get some idea of the productiveness of our soil by the picture, showing the onions, cauliflower, etc., which are raised among asparagus, set out this year—onions and cauliflower coming off in time to give the young

asparagus time to develop thoroughly, and harden before cold weather.

The truck-growers in the East can hardly realize the possibilities of an acre of our soil in this valley, with plenty of water and sunshine; but they can get some idea of it from the picture of our market-wagon, which goes into Grand Junction three to five times a week with honey and vegetables, etc. My wife drives the horse while I go in and sell the goods. We carry a first-class article, and get a first-class retail price.

We run for comb honey only, but have some extracted or chunk for certain customers. We try to have just what they want, and have no trouble in disposing of all the honey and vegetables we can produce.

Grand Junction, Colorado.

[The great majority of our bee-keepers (perhaps 90 per cent) run their bees in connection with some other business, and it is well that they do. In some localities the seasons for many are very uncertain. When it is good, there is a rich harvest.



TAIT'S HONEY AND VEGETABLE MARKET-WAGON.

On the principle that it is not wise to put all the eggs in one basket, we advise the majority of producers to run their bees in connection with some profession or business. Bee culture on a small scale works admirably with any one of the professions. It goes well with fruit-growing, truck-growing, or poultry-keeping. Our corre-



AN APIARY IN COLORADO, RUN IN CONNECTION WITH A TRUCK-FARM.



EBRITO'S HONEYSUCKLE ARBOR FOR SHADING THE APIARY.



EBRITO'S HONEYSUCKLE ARBOR FOR SHADING THE APIARY. THE HIVES FACE OUT, LEAVING AN AISLE PRACTICALLY FREE FROM BEES.

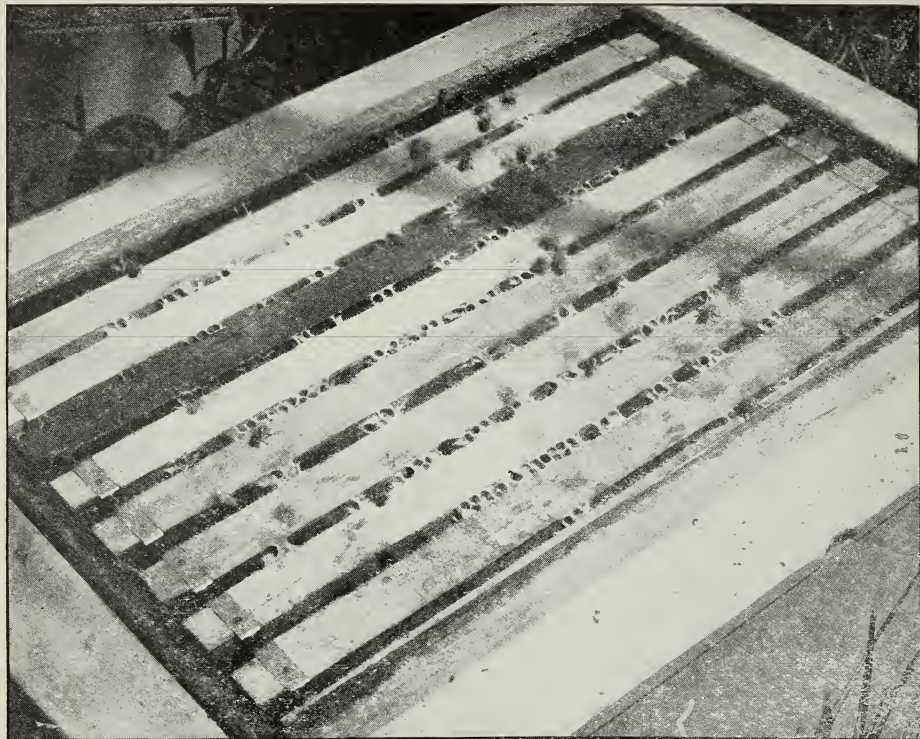


FIG. 1.—A FAIR SAMPLE OF HOW CAUCASIANS BUILT BRACE-COMBS BETWEEN THE TOP-BARS DURING A GOOD HONEY-FLOW.

spondent, Mr. Tait, is sure of making something every year.

He is one of the bee-keepers we feel like commending, because he sells his honey and his vegetables direct to the consumer, thus relieving the congestion at our great market centers.—Ed.]

A HONEYSUCKLE ARBOR FOR SHADE.

BY L. C. EBRITO.

I am sending you a picture of a model Texas apiary. Some bee-men in the North object to a dense shade; but I think it is all right in the South. My bee-arbor is 8×88 ft., and is covered with honeysuckle. At the front end the rafters are hipped, and extend about 12 ft. high. On these I have four monthly running roses, two of them being Marshal Neils. The peach-tree hides that part of the arbor to some extent.

There is plenty of room under my arbor for 72 colonies, but I have only 57. The little house at the extreme right is my shop. It is connected with the arbor with frame work covered with vines, so I have shade going to and from my bees. My hives face the north and south.

I never used full sheets of foundation until this summer. I made a tool for imbedding the wire,

which I think does the work well. I took a large crooked sewing-awl, and with a very fine three-cornered file I cut a groove from near the point back, some $\frac{5}{8}$ of an inch. I draw the awl along with the wire in the groove, making, in my judgment, a good job of imbedding. Mesquite, Tex.

[It is the almost universal custom for the bee-keepers of Arizona to arrange their hives in two parallel rows on 2 by 4's with an east-and-west shed over them as shown here. As Mr. Ebrito says, it is almost a necessity to use some sort of shade in a hot climate, and something of this kind is ideal. By having a shed of rank-growing vines as here shown, running east and west, the sun can not get to the hives as the day advances. It can strike them only in front. The further south the apiary, the more nearly the sun will be overhead, and the less it will strike the hive-fronts. In the morning it will strike the east end of the shed, and in the evening the west end. But at neither time of the day is the heat intense.

In Arizona, where the bee-keepers have a shed on this principle, it is of simpler design, with a sort of dry brush, grass, or weeds, piled on top and held there by wires drawn over the whole.

There will be nothing to prevent one in the North Central States from adopting a similar shed. By this arrangement one can have an apiary that will enable him to work with comfort

out of the flight of bees and under cover where cross bees are not likely to go.

We have had an enlarged view made of this bee-yard because we respectfully commend the general plan of it to our readers as a whole, in either the North or South.

We wish to suggest in this connection that a sort of trolley wire or cable could be drawn taut on a central line over each row of hives, and secured by posts at each end. A grooved pulley with a small tackle would then enable one to lift the supers off the hives, hold them in midair, or push them anywhere on the trolley, clear up to the extreme end, where they may be deposited on a wheelbarrow.

The arrangement of hive-stands, also, is very simple, and has the further advantage that it permits the apiarist to push his toes or insteps clear under the hive. This allows him to get near his work.—Ed.]

CAUCASIANS, AND THEIR DISPOSITION TO BUILD BRACE-COMBS.

BY E. R. ROOT.

On page 870, July 1, we referred to the tendency for Caucasians to build brace-combs excessively. We promised to furnish a photo, and here are two of them, showing the tops of two of the hives that were fair samples. While we occasionally find Italian colonies that build comb almost as bad as this, they are the exception.

As our readers will recall, we had 35 Caucasian and 25 Italian colonies at this yard. When

we opened the hives of the dark bees we were almost sure to find brace-combs like those shown here. Of course, there were exceptions, both among the Italians and the Caucasians. But we are speaking only of the characteristics of the two races as we found them at this yard during a good flow of honey.

But not only were there brace-combs between the *top-bars* of the Caucasian colonies, but they were built through the center of the brood-nest to an extent that in some cases made it difficult to spread the combs, because they were so tightly stayed by means of these spurs.

THE GROWTH OF A BEE-KEEPER.

How a Sickly Boy Battled with Disease and Finally Became an Extensive Producer of Comb Honey.

BY ALLEN S. HOWDEN, HIS FATHER.

[The following account of how a sickly boy, pronounced incurable by eminent doctors and surgeons, began to mend after he started to keep bees, so that he is now a strong hearty man able to produce a carload of comb honey in a season, is exceedingly interesting. His pluck and ambition to get well and become one of the most extensive bee-keepers of his State will prove encouraging and helpful to some other boy or girl, perhaps handicapped by a frail body. The hero of this sketch has our hearty congratulations.—Ed.]

It may be of interest to some of the readers of GLEANINGS to hear something of the progress of one bee-man, and of the growth of his business, which is now the largest in Allegany Co., N. Y. As his early history has never appeared in print

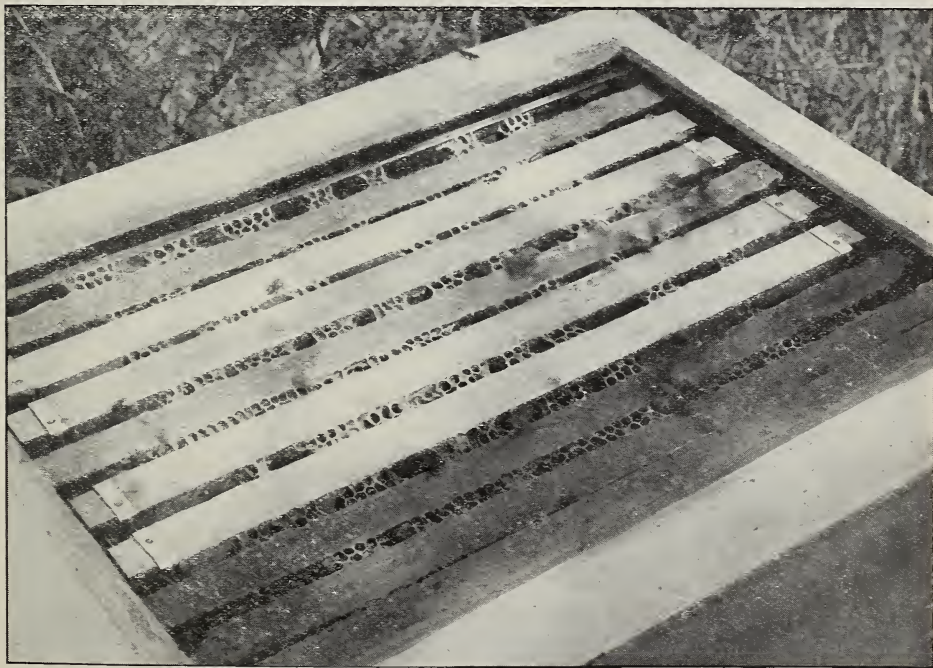


FIG. 2.—ANOTHER SAMPLE OF THE SAME THING SHOWN IN FIG. 1.

I feel as though my letter would be more complete if I were to go back a little.

When Leon F. Howden was four years of age he fell from a chair on a hard floor and sustained a bruise on the hip which caused blood-poisoning and a psoas abscess, and, later, diseased bone beneath it. When he was taken down with this trouble he was a fat, rugged boy, and weighed 50 pounds. The abscess was not properly drained at the start, and the blood soon conveyed puss to other parts of his body until other abscesses of like nature appeared one at a time for a period of

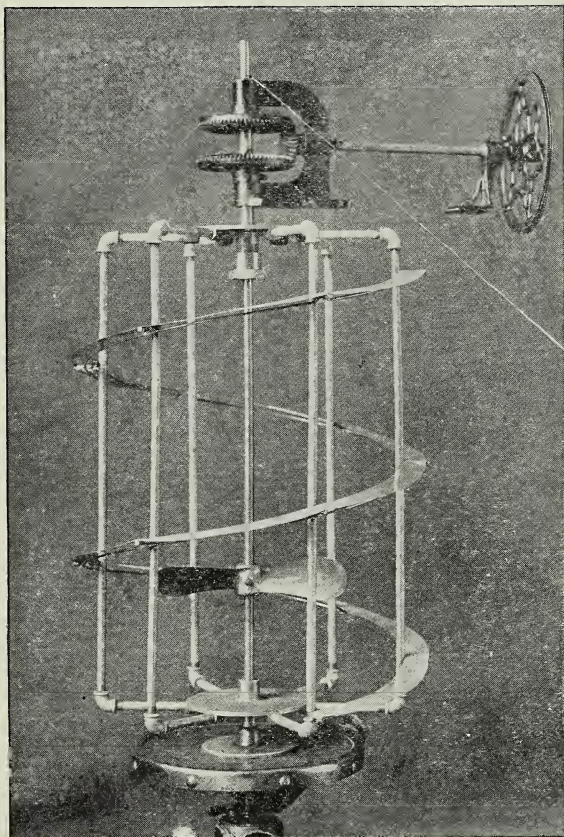
again, his parents took him in their arms and went by train to Rochester to consult Dr. E. M. Moore, at that time an old, white-haired, feeble man, but one who had been one of the greatest surgeons known in Western New York. At that time Dr. Moore said the only thing to do was to get that dead bone out of the boy's hip. If it couldn't be done at one operation, another trial should be made. He was brought back home without the operation at that time, but was later operated upon by a son of the former surgeon. At this time Leon was away from home, and was in the hospital bed two weeks. He was in the General Hospital in Buffalo two weeks at a time, two different times, and each time was operated on. He took chloroform twelve times in all.

When he commenced to gain, his weight was 25 pounds; and at 15 years of age he was sickly and far from being able to work on the farm with his father and brothers. It happened, however, that a near relative was about to go out of the bee business, having 24 colonies of bees in good double walled hives. These were bought by his father, with 50 good empty hives, for \$40.00. Because of Leon's condition they were brought home and turned over to him for his own. In a short time he showed an unmistakable interest in the bees, and his parents were sure that he would be successful with them if he had the strength to take care of them. He soon had a copy of the ABC of Bee Culture, and a little later subscribed for GLEANINGS. His mother says that it always brings a smile to Leon's face when he comes in and finds on the stand a new GLEANINGS.

Well, he kept improving in health until the last thing to do was to have a piece of skin the size of a silver dollar taken from one of his limbs and grafted on to a sore that would not heal, which was on the other limb, just above the ankle. Now he is 20 years of age, standing by his bench near his oil-stove in his honey-room folding sections and putting in foundation at the rate of over a thousand a day. In one day recently he put together 40 honey-boards of 33 pieces each, driving 90 nails in each

board. From the little fever-burned boy of 25 pounds he now tips the scales at 160, weighing the most of any one person in the whole Howden families. He is hearty and strong, and always wants a good big chunk of candied honey near his plate at meal time. Last season he sold nearly a full carload of good to fancy comb honey; besides that, he extracted and sold to his friends and neighbors 12,000 pounds. He has 250 colonies of bees. Leon aspires to be the greatest producer of fancy comb honey in the State.

Fillmore, N. Y.



COVEYOU'S AGITATOR FOR HONEY-HEATING TANKS; SEE PAGE 1067, SEPT. 1.

The movement of the parts in opposite directions causes the honey to circulate freely, so that the whole mass is kept at the same temperature.

two years, until he had had twelve of them in all. Several of them were so deep-seated that, while they were gathering, they caused an unusually high temperature, and some even started on the bone, not healing for months, and then only when pieces of bone had been discharged through the openings.

Many noted doctors and surgeons of the country pronounced the boy incurable. He underwent seven operations at his home, some of which were of two hours' duration. When he had improved a little, but before he was able to walk

THE PLURAL-QUEEN SYSTEM.

Is it Profitable for Bee-keepers to Practice it?

BY E. W. ALEXANDER.

[The following article was written last March; but as we had already decided to suspend further discussion on the plural-queen subject for the time being, or until the following fall, we have held it until now. It is not our purpose to reopen the discussion if it is not desirable; but as Mr. Alexander will probably never be able to write another article, on account of his health, we are placing this before our readers at this time. We suggest that it be given a careful and unprejudiced reading by those who may be opposed to the practice. Observe he does not urge it for all seasons and all conditions.—ED.]

It is now about 18 months since this new method of bee-keeping dropped into our camp like a bombshell. During this time I have had but little to say as to its merits or demerits. Some endorsed it at once as another forward step, while others were ready to condemn it from the first. It is now of a proper age to bear some fruits whereby it will be known. It is only natural that I should be anxious to hear from others in regard to the results derived from this system. Like many other improvements it has come to stay, and will be adopted in some ways by intelligent bee-keepers as long as bees are kept by man.

In making our increase it has, in connection with the nuclei system, enabled us to make more increase with less expense and trouble than has ever been made before. In forming nuclei heretofore, we have taken two or three frames of brood and honey with adhering bees, and, after putting them into an empty hive, set them off to one side, shut the bees up two or three days, and then given them a queen-cell, a virgin queen, or a laying one, and left them to build up into a colony of proper weight and strength for winter, not expecting and seldom securing any surplus from them.

But how different now! All that is necessary is to form our nucleus over a queen-excluder on any colony of medium strength, and the next day introduce a laying queen to the nucleus; then in about 25 days the hives can be separated. Each hive will be full of bees and maturing brood; then move the lower hive a little to one side, and set the upper hive alongside so about an equal number of the working force will enter each hive.

Here you now have two good strong colonies in the place of one. Each has its laying queen, its hive filled with brood, and a good working force of bees. There has been no chilled or starved brood.

This, you will find, is the surest and best method that has ever been practiced in order to make a large increase in time for our early harvest. This one advantage of itself, which is easily secured by a plurality of queens in a colony is worth hundreds of colonies and tons of honey to the extensive honey-producer.

I am sorry to see men of experience in our business condemn new methods before they have given them due consideration. There are certain seasons of the year and certain conditions a colony can be in when a plurality of queens is of no particular benefit; but because this is so, it is no proof but that at other seasons, and under other conditions, a plurality of queens in a colony is a great help. There seems to be a tendency on the

part of some bee-keepers to belittle this idea, and make it appear of little value. This we must expect. It has always been so—one class trying to pull down every thing of an advanced nature, while others are trying to build up. This whole question, like many others connected with our business, must turn entirely on this one point—does it pay? If it pays to check the desire to swarm in very strong colonies, then on that point it does pay. If it is to our advantage to have unusually strong colonies just before our main harvest for surplus, then it pays on that point. If there is any gain in superseding our undesirable queens without an hour of lost time in egg-laying, then on that point it pays. If it pays to have strong full colonies to put away into their winter quarters, then it pays to have a plurality of queens in your hives during the latter part of brood-rearing. If it is worth any thing to have a surplus of laying queens four months of the season, so it one is accidentally killed, or you find a queenless colony, you have a plenty to take her place, then it pays to have a plurality of queens in some of your colonies. If it pays to rear your queens instead of buying them, then certainly it pays to rear several in one colony instead of only one. If it pays to double the number of our colonies before our early harvest, and have each one full and as strong in working force as one-half the number would have been had we not practiced this new system, then surely on that point it pays.

Yes, my friends, this idea has come to stay; and as the years go by there will be many advantages derived from it that we little dream of now. I think this new departure from the old rut of the past has already borne some very good fruit considering its age, and the fact that it was an unwelcome visitor from the first with some. I hope that many of our most experienced honey-producers will give this subject a fair trial the coming season, and then when we have heard their verdict we will let this subject rest.

Delanson, N. Y.

GETTING RID OF OLD BEES FOR WINTER.

BY F. H. CYRENIUS.

For a number of years I have wintered only young bees in many hives, with satisfying results. The plan is, to move the hive to a new stand at the close of the honey harvest in the fall, which with me is about Sept. 20.

The first experiment, more than ten years ago, was made by removing one of two hives, standing side by side, to a new place in the bee-yard. The remaining hive received all the old bees from the hive removed. In January I made an examination and found 22 dead bees on the bottom-board of the removed hive, and about a quart on the bottom-board of the hive that gave shelter to the *old* bees of both hives.

I have tried the experiment many times with about the same results. I reason this way—that those old bees are needed no longer, and are only a detriment. They can be of no use until next spring, and they are all dead before that time. The time we want bees is about two weeks after they begin to breed up in the spring;

and it is easily seen that a few times flying at that time will take them all.

Then, again, those old bees become more or less restless; and dying, as they do, they must disturb the colony more or less. Is it cruel thus to treat them after their days of usefulness are past? I have always furnished them shelter, only to find them soon with the great majority.

TIME TO MOVE.

This will depend on locality and conditions. I should say, as soon as they are no longer needed at this season. Do not wait until too late, because you might lose some that would be of use in very early spring; but every bee-keeper knows his bees are at the weakest point just before the spring brood begins to hatch, and it is safe to say every bee that gathered honey the season previous has long been dead.

Oswego, N. Y., Aug. 7.

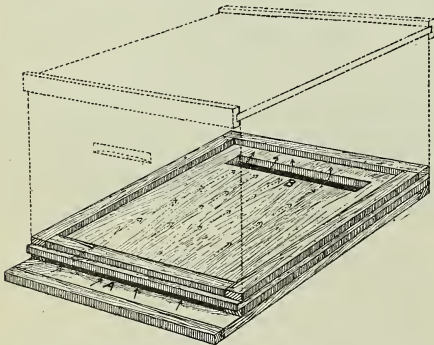
[At first thought this may seem like rank heresy, but we are not sure but there may be something in it. We do know that, if a hive has nothing but old bees, it will be numbered among the dead next spring.—Ed.]

HEADS OF GRAIN

FROM DIFFERENT FIELDS

PROTECTION OF BOTTOM-BOARDS IN COLD WEATHER.

After having read the article on page 98, Jan. 15, by Joseph Rose, on double bottom-boards, I wish to show the board (see illustration) I used under fourteen stands in the winter of 1906. I had to take my hives off all these boards in the latter part of January to save the bees, as fully one-third of each colony were dead, the dead bees being mostly on the upper bottom-board, and at the sides of the hive inside.



A DOUBLE BOTTOM-BOARD TRIED AND FOUND WANTING.

I used three-story alternating hives, top story chaff, and hives all well protected outside with excelsior and outer casing. When they quit work at the close of the season they had arranged their winter brood-nests to their own liking.

When I placed this bottom-board with an open-

ing clear to the back of the hive I simply disarranged the whole work the bees had been weeks in planning; and had I left it till spring I should have lost most of the colonies. The cold air passing through under the bottom-board had kept the upper board cold, and driven the bees up into the cold combs of honey. It served me right for interfering with their plans.

But the past winter of 1907 I left the summer bottom-board sealed just as the bees had fixed it, and slipped an extra board under, making a dead-air space between the two. I then placed the hives in some large thin cracker-boxes and set them on about four inches of dry hay, leaving the front of the boxes all open, facing the east. I crowded excelsior in between the sides of the boxes and the hives, and placed supers on the hives partly filled with leaves.

I have never had bees come through in finer condition. In the middle of January I tried to clean out the bottom of the hives with a wire; and as it was a very cold day I was sure I would have no trouble. But I had trouble just the same. Every hive I looked into had the bottom-board covered solid with live warm bees, and not a dead bee could I find. The bottom-boards covered with warm lively bees in mid-winter, and plenty of honey above, looked good to me, and convinced me that we should be sure that the bottom is well protected and warm, as well as the top of the hive. I did not find a moldy or damp frame this spring, but all were dry, with plenty of honey and bees. C. B. PALMER.

Bradshaw, Neb.

[We may explain to our readers that on p. 98, Jan. 15, we illustrated a bottom-board made on very much the same principle as the one here shown, and which proved to be so unsatisfactory in the hands of Mr. Palmer.

It will be remembered that the final results of our obstructing all the sunlight from the entrances of our hives by a lean-to board, storm-door, or other device, were somewhat in doubt. Apparently, early in the fall it prevented bees from flying out on cool days and thus becoming chilled, never to return. We are not sure but that colonies without the storm-doors were in almost as good condition as those with them.

We believe our correspondent is right, however, in urging the importance of a warm bottom-board, against which the bees may cluster and not get chilled.—Ed.]

BEEES LOST FROM SUPERS THAT ARE TAKEN AWAY BEFORE THE BEES ARE OUT.

Referring to your request, page 701, June 1, I will say that, in 1907, I took one super off with all the bees on the extracting-combs, as advised in a book on bees, and for experiment I took them to my laboratory, nearly 700 feet away, where I brushed all the frames, one by one, clean of bees, and placed them where bees could not gain access to them. The bees flew around as if lost. Some strangers or robbers came in and out; but the bulk of them settled down in little bunches, of which I carried back to the hive a great many, and those left in or out of the laboratory died.

JOAQUIN PEREZ Y PEREZ.

Monovar, Spain, Aug. 11.

USING A ROOFING PAPER FOR A QUILT.

After reading the article on page 936, Aug. 1, on hive cloth, I concluded to tell your readers of a cheap and substantial cloth or cover. I have always used a cloth, the main reason for doing so being that it is a protection against robbing, for it makes an additional cover, and a good thing where the top cover is warped.

I have used the glazed oilcloth, and have used floor-cloth; but in removing them the paint would peel off, and the bees soon gnaw holes in them. Last spring, having a roofing-paper called "Buckskin rubber roofing," which contained no tar, I concluded to try it. I find it does well. The bees won't touch it. It can be removed easily, and it will last for years.

The Buckskin rubber roofing comes in three grades. I use the two-ply, which costs \$1.80 per roll in St. Louis. It is 32 inches wide, and will make 48 covers for ten-frame hives, making the cost 4 cts. each. A READER.

HOW TO PUT ON BEE-ESCAPES.

Mr. F. G. Marbach's suggestion, p. 929, Aug. 1, is good; but why saw off the honey-board? Just use a stick $\frac{1}{2}$ inch by the thickness of the honey-board under one end of the hive. It does not matter if the escape-board sticks out $\frac{1}{2}$ inch, as it is not on the hive very long.

ANDREW C. BROVALD.

Babcock, Wis., Aug. 11.

[Yes; and by prying up the rear end of the hive after the escape-board is in place, the stick could be removed, to be used at the next hive.—ED.]

MOVING BEES; USING AN EMPTY SMOKER TO INCREASE THE CIRCULATION; UNITING COLONIES.

When moving bees I use a wire screen in place of the cover. I make the frame for these of 1×1-inch material, 14 inches wide, and 20 long, for eight-frame L. hives. On this I tack the wire screen. Four six-penny nails hold it to the hive. I never drive them to the head, but leave room for the claw of the hammer.

For the entrance I use a piece of pine, $\frac{3}{8}$ ×2, and 14 long. In one edge I cut a notch $\frac{1}{2}$ ×3, over which I tack a strip of wire cloth, one side having the selvage. This is readily adjusted to the hive, and held by a small nail in each end.

In loading I leave room for the hand, at least between the entrances of every two hives, although enough room for the smoker would be better. When my hives are loaded on the vehicle I clean out the smoker—even the dust; for on the road I use it without fire to give the bees pure air. When a hive begins to get hot I blow out the heated air. A little watersprinkled on them with a brush is good; but very little of it should be used. With all of this precaution, and even if the bees do not warm up, some combs will break down. New combs full of brood are difficult to handle. If you put on a super you may save the bees, even if the combs break below. When uniting colonies I take this wire screen and turn it bottom upward. I cut a notch for an entrance, under which I tack on something for an alighting-board. I take the cover off one of the hives

to be united, and put the screen on. Over this I put a super, and then transfer the bees from the other hive into this super. In two days I draw out the screen. T. ARCHIBALD.

Los Angeles, Cal.

BEES BALL A QUEEN RETURNING FROM MATING-FLIGHT.

On a frame of my own make I placed a lot of cells dipped on the Doolittle plan, and grafted them with larvæ from my best queen. I then gave the frame to a colony that was building swarm-cells, after cutting out all these swarming-cells found in the hive. The bees finished 18 good cells out of the lot. Ten days after I grafted the cells I formed nuclei by taking a frame of brood with adhering bees. I placed the queen-cells in cell-protectors and stuck one protector on each comb of brood. Then I put each frame in a hive and kept the hive closed for two days. From every cell a nice large queen hatched, which mated all right, and all are now at the head of fast-increasing families. I watched the queens very closely from the fourth to the seventh day after the cells hatched, especially for about two hours right after dinner. In two cases the bees balled the queen as soon as she came back in the hive after mating. They tore the front leg from one queen before I got her away. I put the ball of bees in a tub of water, and fished the queen out after they had separated, put her in an introducing-cage, and let the bees eat her out. Both queens have turned out well.

I wonder if trouble of this kind is not one of the principal reasons why a good many queens are lost in mating. P. W. HAMILTON.

Meadville, Pa.

[Yes, sometimes.—ED.]

CUSTOMERS DEMAND THE SMALLEST AMOUNT OF FOUNDATION.

On page 934, Aug. 1, we notice the communication from Mr. Hand in which he states that it is "the appearance that makes quick sales." We wish we had his customers to deal with. We have to use as little foundation as possible.

H. G. ALLEN.

San Andreas, Cal., Aug. 22.

VESTIBULED BOTTOM-BOARDS.

On page 98, Jan. 15, Mr. Rose describes his double-bottom-board arrangement, and you ask your readers to test it and report. I would say that I have tested the principle on about 20 colonies, both summer and winter, for we used chaff hives.

I had about fifty ten-frame Quinby chaff hives that I wanted to change to Langstroth dimensions. The Quinby frame is $\frac{7}{8}$ inch longer than the Langstroth, so a $\frac{3}{8}$ -inch board was nailed across the back end of the hive, shortening it to the right length for the L. frames. But the hive was still about two inches too deep; and to overcome this, two $\frac{3}{8}$ -inch-square sticks were nailed lengthwise of the hive on the bottom, and on each side. Across these, commencing at the front, were nailed $\frac{3}{8}$ -inch boards which covered the bottom of the hive except at the back end, where enough was left open to provide an

entrance from the lower part, or vestibule, up into the hive proper. These were used two seasons, both winter and summer, with good success; but as we were then transferring all our bees from chaff hives, they were not used any longer. I am sure it is a very good idea, especially for chaff hives and outdoor wintering.

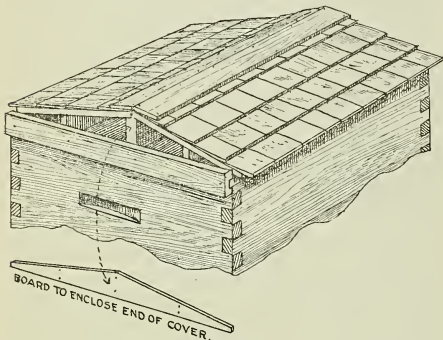
Remus, Mich.

E. D. TOWNSEND.

SHINGLES ON TOP OF ORDINARY COVER.

On page 551, May 1, Doolittle says that single-walled hives in the sun need a shade-board. I agree with him; but the shade-board I use is a shingled roof. If one uses them one summer and winter, he will never do without them. In the first place I nail a 3-inch board on top of my cover in the center, then I nail another piece 1½ inches wide, on each side of the center board, about half way between the center and outside. Before I shingle I nail a board across the end, the same slant as the roof, to keep the snow and the storms from blowing in. After the cover is about finished I nail a board on top of the roof, one on each side, letting it come down low enough to cover up the shingle-nails.

This cover never blows off, always keeps the hive dry, cool in the hot sun, and warm in win-



ter. The shingles should project 1½ inches, and 2 inches over the sides.

Drygoods-boxes at 5 cts. each furnish enough half-inch boards to finish eight or ten hives.

Albion, Pa.

JOHN W. KIDDER.

[The shingle roof here shown would be very good; but we may here point out that our artist got too many shingles for the size of the hive-cover, which, on top of an eight-frame hive, is 20 × 13½. This would call for only one row of shingles on each side, the shingles, of course, to overlap and break joints.

It would be our opinion that this would be a very expensive roof unless shingles are cheaper than in most localities. Material that one can get out of a drygoods-box cover, with cheap roofing-paper, would give just as good results, and be almost as durable.—ED.]

HOW TO REMOVE SECTIONS FROM SHIPPING-CASES; A SUGGESTION TO RETAILERS.

The proper way to take sections or combs of honey out of cases is to remove part of the back side of the cover and all of the back side of the case, and tip off the sections from the back side,

leaving the front or glass side intact, and making a good show. In this way you don't have to pull the sections any, which, if pulled, are often broken and the honey lost, especially if the bottom of the section has the least drainage or is at all stuck to the bottom of the case. By leaving the front or glass side intact it shows up well until the last row is sold, while if the sections are pulled or lifted out of the front or center, many sections are broken, and the case of honey looks ragged and unsightly. I have seen careless grocery boys nearly ruin a case of honey by pulling sections promiscuously from cases, tearing off several tops of sections before releasing one. This suggestion, placed in every case of honey, would instruct grocers and retail dealers to their profit, to the better satisfaction in dealing in honey.

There should always be a glass front to every case of honey, for two reasons: First, to show freight-handlers that it is glass, and fragile; second, to show the honey in the grocery, and yet protect it from dust and vermin.

Albany, N. Y.

H. R. WRIGHT.

TWO QUESTIONS.

1. In the December issue, page 1586, Mr. J. E. Hand says, "Until time to put on supers, when she is promptly killed." Does this mean that the young queen will naturally kill the old queen, or that the apiarist will kill the old queen?

2. On page 1582 Mr. J. E. Chambers speaks of removing the board, so that "the colony, now grown very powerful, is all together." Does this mean to remove the board without any excluder of any kind between two queens to separate them or not?

S. D. GARABEDIAN.

Defender, Cal., June 13.

[1. In this case Mr. Hand evidently means that the apiarist should kill the old queen. If the queens were left, and if they fought, it might not always be the old queen that would be killed.

2. We believe that Mr. Chambers does not leave even an excluder to keep the two queens apart. He explained, in a part of his article not published, that when he desires to save both queens he divides the colony later, putting a part of the bees and one queen on a new stand.—ED.]

SYRUP THAT CRYSTALLIZES SLOWLY.

If labels are put on with thick syrup they will not come off from glass, tin, or other smooth surfaces. We often use it to put labels on ointment-boxes in the drugstore.

I have often wondered why I do not see mention made of the way druggists make syrup by percolation. They fill a funnel, can, or barrel nearly full of sugar, then pour water on it, and the finest kind of syrup runs off, which is slow to crystallize at the temperature at which it is made, and, if thinned a little with water, it will stay fluid indefinitely.

A. F. BONNEY.

Buck Grove, Iowa, March 24.

[Some years ago there was considerable said about syrup made by the percolating process, and many experiments were made; but it was finally decided that syrup made by mixing sugar and water cold, in equal proportions, and stirring well, was just as good as that made by the percolating process.—ED.]

SELLING HONEY AROUND HOME; A SURPLUS OF
QUEENS SAFELY WINTERED WHEN SEPARATED
BY QUEEN-EXCLUDING ZINC.

I never need to leave the house to sell the honey that I get from my 38 colonies. People come and get it in pails, churns, kegs, and any thing that will hold it. I keep pure Italian bees of the red-clover strain, and they appear to work red clover as well as white, except when there has been a very wet spell, when I get the bulk of my honey from goldenrod. This honey is very light, almost like that from white clover.

I winter two and three queens in a hive with excluders to keep them separate, and have had no trouble so far; but, of course, I have done this on only a small scale.

D. L. ANDERSON.

Flandreau, N. D.

DECIDING WHETHER A VIRGIN QUEEN IS PRESENT
BY GIVING YOUNG BROOD TO THE NUCLEUS.

If we should follow the advice given on page 867, July 15, we should lose all our virgin queens. When we give unsealed brood to a nucleus with a virgin queen, in every case the queen is killed and cells are started at once. Our advice is to give nothing but sealed brood to a nucleus with a virgin queen.

F. W. DEAN.

New Milford, Pa.

[If you will refer again to page 867 you will see that the giving of unsealed brood was for the purpose of determining whether the nucleus that was supposed to have a virgin was queenless or not.

But the giving of such unsealed brood *might*, in rare cases, be the death of an introduced virgin. But our queen-breeder, Mr. Pritchard, who will rear two thousand queens this season, says he often gives unsealed brood to colonies with virgin queens and has no trouble.—ED.]

MAKING INCREASE ON THE SOMERFORD PLAN; A
GOOD SUGGESTION.

Mr. E. D. Townsend, in his description of the Somerford plan of making increase, p. 577, tells us to prepare a hive by nailing a lath over the entrance and boring a $\frac{3}{8}$ -inch hole in the lath, which is stopped with a cork which is removed three days after the swarm is formed.

I find that, by making a small notch on one edge of the lath, and taking a plug of newspaper to stop it up, the bees liberate themselves in about the right time (usually $3\frac{1}{2}$ days) by gnawing away the paper.

Porous newspaper should be used, and not glazed wrapping-paper, as it takes too long for the bees to gnaw through the latter. By using the paper, increase can be made at outyards, the bees left to free themselves, thus saving one trip.

Georgiana, Fla.

L. E. BALDWIN.

MAKING INCREASE LATE IN THE SUMMER; ANTS IN
COMB HONEY.

Would it be practicable to make increase now at the end of the white-clover season? I would have made it before, but wanted a full crop of honey. Could I feed sugar syrup and build up for fall crop to advantage? Can you suggest a method of keeping ants, etc., from honey in sections? I have honey which should be taken from

the bees, and I wish to keep it awhile. I have shipping-cases, but, of course, these are not ant-proof.

F. B. LAMBERT.

Barbersville, W. Va.

[It would be perfectly practicable to make increase by dividing right after the honey-flow; but all nuclei should be given continuous stimulative feeding up till September, or later if the requisite strength is not obtained. Of course, if one has any kind of late summer or fall flow, no feeding during the time will be required. It should be understood that no brood will be reared unless there is a supply of food coming in constantly. To make this increase properly, one should carefully follow some of the well-known methods. The Alexander plan, as given in GLEANINGS, p. 423, 1906, and again in the last edition of the A B C and X Y Z of Bee Culture, p. 279, will be found as good as any. If the shipping-cases can not be made ant-tight, keep the honey in a room that can be made tight.—ED.]

AUTOMATIC UNITING; A GOOD SCHEME.

In place of using wire screen, as has sometimes been recommended when following the Alexander plan of building up weak colonies, I simply place a sheet of paper over the queen-excluder and leave three or four perforations uncovered at the front of the hive by tearing a piece out of the edge of the paper. The uniting in this way is done at one manipulation, as we mentioned in *Canadian Bee Journal* for March, 1908; and if I were asked when I remove the paper I would say that the bees will attend to that; for when we have occasion to open these hives again we find the paper is not there.

WM. BEUGLAS.

Plattsville, Ont.

[The plan here proposed seems feasible—at least we see no reason why it can not work.—ED.]

HONEY SOURING IN COMBS WHILE IN THE HIVE.

I am troubled by honey souring in the combs in the hives, and can find nothing in the A B C regarding it. The honey gathered is very watery alfalfa honey, and in about a tenth of the hives it begins souring before it is sealed, and sometimes after it is sealed. The souring commences by small air-bubbles forming in the cells; the bees quit work, and the souring spreads all over the hive, even into the brood-chamber. It occurred to me that there might be some acid antidote for it.

HENRY PERKINS.

Callexico, Cal., July 31.

[Will some one who knows please answer? There must be something that the bees gather that causes the trouble.—ED.]

COMB HONEY HAULED IN LUMBER WAGON.

Can comb honey be hauled safely on a lumber wagon without springs, provided six or eight cases of honey (about 200 lbs.) are put in each carrier—of course with hay or excelsior under the bottom cases?

JOHN H. JOHNSON.

Bangor, Pa.

[We should suppose that the roads would have a great bearing on this question, and also the distance the honey is hauled. We should be glad to hear from any who have had experience.—ED.]

SAGE YIELDS HONEY IN IDAHO.

In answer to Mr. Fr. Holmes, Aug. 1, p. 952, as to whether sage yields honey in Idaho and Utah, I will say my neighbor, Mr. Garfield, experimented with one colony of bees by taking it eight or nine miles away from alfalfa or any other cultivated fields, and setting it among the white sage. He went out to look after it every week, and took fresh water. We do not know the exact amount of honey the bees gathered, but they did fully as well as those left at home near the alfalfa. The honey was of that water-white color peculiar to the California sage honey. Mr. Garfield sent samples to California, and it was pronounced A 1 white sage; so we are convinced that the white sage of South Idaho does yield just as much and just as good honey as that of any other State.

Caldwell, Idaho.

J. E. MILLER.

WHAT TO DO WITH GRANULATED COMB HONEY.

I have granulated comb honey which I wish to feed to the bees for winter. Could I let the bees rob it? or if I took the trouble to melt it over the fire would it again granulate in the hive next winter?

M. P. LEGGETT.

Malvern, Pa.

[We would advise melting the granulated comb honey, thus liquefying the honey and separating it from the wax. If you keep it at a warm temperature for several hours it will not be so likely to granulate during the winter, although some kinds of honey granulate so quickly that it is next to impossible to keep it, even in the hives. Ordinarily, in such a case, we should think it would be better to feed back syrup in the fall rather than to risk using such honey. Your results would then be entirely satisfactory so far as the winter food is concerned, and you would not run the risk that you would if you used this honey which you mention.—ED.]

HOW TO INTRODUCE A QUEEN IN A LAYING-WORKER COLONY.

I notice on page 948 of the Aug. 1st issue that Mr. Edward Lester thinks it strange that his queen was not killed when introduced on two frames of bees taken from another colony. Now, we have introduced many queens into laying-worker colonies by simply taking a comb of brood with adhering bees and the queen from a normal colony, and exchanging it for the comb in the laying-worker colony that contained the most brood, always leaving all the bees on each comb. By so doing I think we usually get the laying workers, or part of them, on the comb we take out. Any way, this plan works eight out of ten times, and, of course, it is easy to put a queen into the dequeened colony.

Longmont, Col.

G. C. MATTHEWS.

WHO CAN BEAT IT?

Friend Root:—You remember my writing you a year ago last winter about ten swarms of bees I was wintering, that I took from trees that fall as late as November—the last one the day before Thanksgiving. Well, last season was a total failure, and I fed over a ton of sugar to carry my

bees through the winter. Of this bunch of ten I pulled all through the winter, but lost two from spring dwindling. I increased the eight to fifteen, and extracted 1500 lbs. of honey from them. One of these was my champion. They gave me a surplus of 425 lbs. of white extracted honey. Who can beat it? My crop this season is 15,000 lbs.

ELIAS FOX.

Hillsboro, Wis.

FEEDING LOAF SUGAR TO BEES IN CELLAR.

I have fed my bees in the cellar cube sugar in this way: I covered the bees with a board having two holes that would allow the neck of a Mason jar to fit in snug. I fill the jar with the cube sugar, not wetting it. I place my fingers over the mouth of the jar and invert, placing my hand over the hole and withdrawing quickly. The moisture from the bees will make it so they can use it. I have tried it and it works well.

Massillon, O.

E. A. NEWELL.

SWARMS WITH VIRGINS LEAVE THE PARENT COLONY QUEENLESS.

Replying to *Stray Straws*, page 988, in regard to swarms with virgin queens leaving the parent colony queenless, I can give positive information. Previous to the past season we never had a swarm with a virgin queen go off and leave the parent colony queenless. The bees would always go back, although sometimes not until the next day.

We have the following to report: Our bees were very strong last spring, and commenced to swarm on apple-bloom about May 20 to 25. At our out-yards we shook them as we usually do from May 20 to June 10, to see how strong they were. We took the brood and made ten-frame nuclei (about 50 of them), giving (to each) ten frames of brood and one sealed queen-cell. Only a few young bees were left on this brood to keep it from starving.

The results were, that about a third of these made colonies swarmed, and ran away and left the parent nuclei hopelessly queenless, and they had to be requeened later on. We were surprised. We caught some of them at it, and missed the bees from others. We had several queenless colonies in the spring. We filled them up with ten frames of brood, and gave a sealed queen-cell, and they all swarmed and ran away, as I was at each yard only once a week.

It was the greatest honey year in forty years; but our crop is short of last year by quite a lot—say half a crop, all on account of this swarming fever. Some swarms came out, and, without clustering, went for the hills. We never saw the like before, and hope never to again.

New Milford, Pa.

F. W. DEAN.

I had a colony that swarmed out with a virgin queen, leaving no cells nor any thing whereby the colony might again become "queenright." After leaving the colony a week, to be absolutely sure they were queenless, I gave them a frame of brood, when they started queen-cells and reared another queen. I regard this as a proven fact, that they will, in some cases at least, leave when the parent colony has no means of rearing another queen.

CHAS. E. SWEET.

Fulton, Mich.

OUR HOMES

By A. I. ROOT

Behold, the bridegroom cometh.—MATT. 25:6.
The king's business required haste.—1. SAM. 21:8.

The words of the texts above have been on my mind a good deal the past few days, and they have become very precious to me. Before I finish my talk this morning I hope to make them very precious to you.

Something over a year ago I asked the question here in these pages, "What great event is coming next in the way of invention and discovery?" and a good brother from California, as you may remember, informed us that the next great event that would stir our nation from coast to coast, and, in fact, *all* nations of the earth, would be the coming of the Lord Jesus Christ; and since then I think I have told you that he *has* come, yet most of us knew it not. I presume there are none of you who have not been astonished—and I hope happily so—to note the way in which the temperance work has gone forward in the last few months. It would seem, indeed, as if some mighty power had taken hold of the people—the common every-day people—and that a wave of reform were just before us; for not only the intemperance, gambling, and graft, but *every thing* that is low and bad is meeting such a rebuke on all sides as was never seen before. Let me repeat what appeared in GLEANINGS for March 1, page 298.

A religion that leaves the saloon undisturbed, unattacked, is not worthy to be called after the name of Jesus Christ. Again have we reached a time in the march of Christ down the centuries when, if these should hold their peace, the very stones will immediately cry out. This ethical wave against the saloon has come like a hurricane upon the deck of a pirate ship. There is but one explanation—Jesus Christ is walking across the American continent. Every place where his holy foot is lifted leaves a dry spot; and the meaning is, *the liquor-traffic must and shall be destroyed*. Christ is the source. The saloon must die.—Clinton N. Howard, before Rochester, N. Y., ministers' meeting, January, 1908.

Now let me quote from a letter that I received some little time ago:

Mr. Root.—On Wednesday, August 19, we are to have a great Anti-saloon League rally at the Lancaster Assembly grounds. Governor J. Frank Hanly, Hon. Seaborn Wright, Bishop Wilson, Governor Harris, and others will be present. It has seemed best to the Headquarters Committee to call a meeting of the Board of Trustees at that time. While the annual reports and regular annual business of the League will not come up for consideration, vastly more important business will be before us.

The coming county-option elections will present to the League the greatest amount of work and opportunity for victory which we have ever faced. The bitter attack upon Governor Harris by the brewers and the Personal Liberty League, because he recommended the county-option bill, will need to be considered, and the policy of the League in the campaign definitely outlined.

On the 17th and 18th we are going to have a workers' conference on methods for county-option work. If you can come a day or so earlier and join this conference I am sure it will help us, and you will doubtless get some inspiration for the county-option work this fall.

W. B. WHEELER, Supt.

Columbus, Ohio, July 11.

Perhaps I should explain to you that Wayne B. Wheeler is superintendent and attorney of the Anti-saloon League of Ohio, and he is, perhaps, one of the most able men that we have at the present day. I felt it to be a great honor to get such an invitation from friend Wheeler; but I mentally thanked God as I read it that I was also honored by being asked to be present at a meeting where the governors of three States were ex-

pected to stand up and indorse the Anti-saloon League of America.

Before making any report of the doings at the Lancaster Chautauqua, let me give you a little explanation. This is a Methodist assembly ground, and I think there have been gatherings for some twenty-five years in the same place. It is located on a beautiful hill along the Scioto River, in Fairfield Co., not far from Columbus. There are between four and five hundred pretty little cottages there. These make a miniature town, but it is not laid off into regular streets. The fanciful little cottages are all different from each other—located on paths that run around through the woods—in fact, we might almost call them cow-paths. The Methodist people come there every summer and stay three or four weeks. They bring their carpets, rugs, easy-chairs, and a sufficient equipment for light house-keeping. Every house has a pretty little porch in front, and the people live mostly outdoors in God's open air. On the top of a hill, right in the center of the village, is a beautiful auditorium large enough to seat five thousand people comfortably. Great speakers are secured—many of them, perhaps, as good as the world can furnish, and this large auditorium is generally filled. As electric cars run every half-hour from both Columbus and Lancaster, it is an easy matter for the people to reach this great educational gathering. Besides the main auditorium there are two smaller ones for committee meetings or any thing else that may be needed at a time when the large room is occupied. Just before the work of our conference, the "Temple," as this auditorium is called, was occupied by a gathering of school-teachers. There is always something going on day time and evening on this assembly ground. There are a great many nice people there—men, women, and children; and during my stay there of two days looking around among the people right and left, I not only never caught sight of a cigar, cigarette, pipe, nor any thing in the shape of tobacco, but did not hear any thing approaching an oath, nor even an unkind or uncivil word. If there were differences or misunderstandings at any of the meetings or anywhere else, the people had grace enough and Christianity enough to keep them out of sight. In fact, my stay at that Methodist Chautauqua induced me to go home and hunt up the following passage from the book of Revelation:

And there shall in no wise enter into it any thing that defileth, neither whatsoever worketh abomination, or maketh a lie.

Before I go further I want to say a word about open-air meetings. This great auditorium has broad shutters or doors so arranged that they can be put down in stormy weather, but ordinarily they are raised, so that the meetings are practically in the open air. You know there is much said just now about *sleeping* in the open air. Well, I think we need to apply the same kind of reasoning to our meetings—especially our religious assemblies. It used to be almost proverbial that the tired farmer and sometimes even the old deacons would go to sleep regularly (?) in meeting. Mrs. Root has often asked the question why she should be unable to sleep nights, when she *ought* to sleep, and yet have a desire to sleep promptly the next day right in the midst of an interesting sermon. But it just begins to dawn on me that

the poor woman (God bless her) and the tired old farmer and the aged deacon went to sleep just because of a *lack of ventilation*. Opening the windows just a little is not enough to accommodate a great lot of people. If, like Terry, we could take the windows out entirely, during church time, in summer, that would be better; but it does not *begin* to compare with having all the walls of the building so that they can be thrown out so as to make a porch, keeping out the sun in hot weather, and letting the air circulate freely. I repeatedly looked over that audience of five thousand people at that gathering, without finding any one who even *looked* sleepy. The great speakers may have had *something* to do with it; but I think God's free open air had still more to do with it.

There were something like 150 to 200 representatives of the Anti-saloon League from the different counties of this State. They were mostly ministers of the gospel—*God-fearing* ministers who did not hesitate to stand up bravely and squarely for the abolishment of the saloon.*

While we were holding a committee meeting—in fact, while somebody was speaking—a bright little woman came in from the outside. She came in so quietly, walking on the sawdust floor, that nobody, not even the chairman or the speaker, seemed to notice her. She walked up with a pleasant smile on her face, and this smile was rendered more attractive, it may be, because of the slightly heightened color on her face. I began wondering what she wanted, and looked toward the chairman as he rose. Finally she said in a quiet voice, "May I be excused for having the 'cheek' to presume to interrupt your meeting for just a moment in this unusual way?"

Of course, the speaker stopped and the chairman smilingly gave her permission to speak.

"Well, friends, Governor Harris is coming, as you know, this afternoon, and we want each one in the Boys' Brigade to carry a little flag. We have no flags, and we must get the order off on the next car if we get them here in time. We want a little money, and the women told me if I would have the courage to come down and interrupt your meeting I could get it without question."

"How much money would you like?"

"I think two dollars would do."

In a twinkling a hat was passed around, and the money was poured out on a bench; and while she was counting it the speaker resumed. She rose to thank us, and as she did so I noticed a sort of roguish smile on her face, especially when she informed us that she had something over *six dollars*. I began thinking that she did not need that amount to get a few little flags for the Boys' Brigade, and thought that perhaps the proper thing to do would be to give back a part of it; but as soon as the criticism came into my mind something (was it not the Holy Spirit?) suggested the incident about Judas complaining because

the woman wasted a box of precious ointment. Dear friends, I have all my life been somewhat backward about encouraging display, or, if you choose, in using so much money for political or other campaigns. Perhaps I have been making a mistake. It surely is right and proper that we should go to considerable pains to give reverence and welcome to the chosen Governor of our State of Ohio. We should honor his position, even if it should happen to be true that we could not also honor the man. But may the Lord be praised that at *this time* we have a Governor who is a rugged, honest old farmer, a veteran soldier of war time, and, more than that, a Christian man who dares to come out in the open and in-dorse and back up the Anti-saloon League of Ohio. I will not repeat here the speech he gave us, for most of you have probably seen it in the papers. But I happened to be near when the Governor got off the train; and not only did each one in the Boys' Brigade have a little flag, but a like number of little girls dressed in white also had flags, and back of them were some larger girls with flags. By the way, it may not be out of place here to say that I not only love little boys of the State of Ohio, but I love the little *girls* too, and I do not know but I might almost say, as somebody else has said, that, the bigger they get, the more we love them. Yes, I am going further than he did. After the little girls with the flags, and the bigger ones, came the grown-up mothers, also dressed in white, and each one had a little flag, and then came the old grandmothers, perhaps a hundred of them, and *they* had flags; and they were not only dressed in white, but they had *white hair*, and I felt glad and *happy* to find that, *away* down in my heart, I loved and *admired* the white-haired old ladies more than I did *any* of the rest. May God bless the mothers and grandmothers of our land.

Now, friends, that bright little woman with that pleasant smile on her face (enhanced by the slight color because of the nature of her undertaking) was right. She was doing God's work. She was right in line with the second one of our texts where it says "the king's business required haste." We were all glad to see her come, and we were perfectly willing to be interrupted. I think I omitted to state that she announced at first she was a W. C. T. U. woman, and *such* a woman can never interrupt or hinder the *Anti-saloon League*. They have been our greatest aid and our greatest help. In fact, the Anti-saloon League would perhaps never have existed had not the W. C. T. U. "started the ball rolling."

Let me tell you something else that rejoiced my heart. When the so-called Personal Liberty League holds its meetings the members of it desire secrecy, for all liquor people keep closed doors. They do not want any spies to get in. But it is not so with temperance workers. We can say as Jesus did, "In secret have I done nothing." Our deliberations are all wide open. The W. C. T. U. women or anybody else on the face of the earth can come right in. We should be glad to have even the *saloon-keepers* with us to listen to our reasoning. Some speaker at one of the committee meetings said something like this: "If you turn a strong searchlight down into a rat-hole, that hole is *spoiled* for rat purposes." The rats can not bear the strong light.

* When Senator Rose, the author of the county local-option bill, was introduced to that great audience, the applause was almost deafening. They could not make any noise by stamping with their feet on the sawdust floor, and so they clapped their hands, and shouted until they were tired. Then somebody started the waving of handkerchiefs, and the outstretched hands of fully 5000 people made a flutter such as I for one never saw before. Senator Rose is not only a great reformer, but he is a great orator.

"Men love darkness rather than light because their deeds are evil." *Our* deeds are not evil. They are right, in the sight of God; and the more light there is thrown on them the better it suits us. The enemy has just been saying that the Anti-saloon League people dare not tell how much money they have received nor what they did with it. That is a vile falsehood. Our receipts and expenditures have been fully given, in print, in black and white, ever since the League was started. It may be true that the names of the donors have not always been given to people who have no right to them, for the saloon sympathizers might boycott these donors or do them harm, and every one has a right to have his name kept out of print if he so desires.

Bishop Luther B. Wilson, President of the American Anti-saloon League, is a great orator. His subject was "The American Flag, and the American Saloon." He put in a tremendous protest against having the American flag float over our saloons and breweries exactly as it does over our schoolhouses. The first time I visited the city of Indianapolis I inquired what massive brick building it was that overtopped every thing else in the city. I was told it was a *brewery*; and floating over this brewery was perhaps the finest and largest American flag I ever saw. If I remember correctly, the flagstaff was held up by a huge statue of Gambrinus. I hope and pray that Governor Frank Hanly will have that flag hauled down before he ceases to be Governor of Indiana. May be he has had it pulled down already. Bishop Wilson said he was one day waiting for a street-car in one of the large cities of the East. A man whose business it was to take care of a little station was sweeping up around his post. The bishop noticed that the man had an American flag tacked up on his little booth. Then he began asking some questions something as follows:

"My friend, why do you love this American flag more than you do that of your own nation where you came from?"

The man replied something like this:

"I love the American flag more than any other flag in the world because it means a square deal to every citizen, no matter whether he is rich or poor, white or black, educated or uneducated. My girl here in America goes to school. She has just the same chance and the same care as the girls of the millionaires. She goes to the library and gets books, and the librarian takes just as much pains to find what she wants as if she were rich or educated, or held some high position. If they do not have the book she wants, the librarian tries just as hard to get it for her as he would for any one else. That is why I love America, and why I love the flag that has stars and stripes on it. It means a square deal to all this country's people."

I will take space to relate two incidents in the bishop's talk. He remarked that, in the natural order of things, crime is of gradual growth. The criminal usually goes along step by step; but by the aid of whisky and the American saloon, criminals are sometimes made in an hour. An incident that most of you doubtless read in the papers some two years ago was related, with some sidelights that the papers did not contain. A young man of good family and pretty good hab-

its married a nice young girl, I think in New Jersey. It is true he had been with some questionable companions; but his friends hoped that, after his marriage he would turn over a new leaf—and he did, at least for a time. He had been sowing some wild oats, but not very many. Not long after his marriage some visitors came to see them, and the young wife asked him to go down town and get some needed things for dinner. Before he made his purchases, however, a couple of his old boon companions said to him, "John, we were just wanting you. Come in and have a drink."

John replied, "You will have to excuse me today, boys. Some company has come, and I must hurry back with the things my wife wants for dinner."

Please note he did not tell his old friends that, since his marriage, he had not used any drink, or, better still, that he had joined the Anti-saloon League, and was on a different track. He only asked them to excuse him that day. I wonder if some boy or man will not make a mark right here and learn a lesson from this. But these old chums were not to be so easily put off. One of them said, "Well, John, you will certainly come and have a cigar? You can smoke that while buying your stuff;" and as there was no good reason (as it looked to him) why he should not have a cigar he went along with them. We shall have to draw the curtain now for the time being, for the saloon has screens over its doors and windows. It would be like the searchlight and its effect on rat-holes if people could see inside. Let me digress enough to tell you there was a very pretty girl in that neighborhood who had a widowed mother. John, before his marriage, had been on rather intimate terms with this girl—at least she was well acquainted with him and trusted him. These two fellows who invited John to drink had got an eye on her. They knew she would not speak to them nor have any thing to do with them; but if they could make a catspaw of John they thought they could get hold of the girl. The next morning the whole city of Paterson was startled by the information that this beautiful young girl was found on the banks of a river, among the stones and bushes, *dead*. She had no father nor big brothers to protect her, and these two devils in human form had planned to get John drunk, and then persuade him to get that girl into their hands. The long trial that ensued showed that John had been seen to invite the girl to go into some place and have a glass of lemonade that afternoon. Of course, it made a stir in the papers, and we all felt glad when those three men were sent to the penitentiary for a long term. Not very long ago, however, my blood was made to boil by seeing a notice in the papers to the effect that a petition was being circulated to get those fellows out of the penitentiary. The excuse was that they did not *intend* to *kill* the girl. It was only an unfortunate accident. Now, that may be true—that they did not *deliberately* plan to take the girl's life. That could have been no object. But I want to ask you all, *in Heaven's name*, how much *better* was it than *death* that they did plan to do? Now, friends, it is not at all unlikely that the stars and stripes are just now floating over the saloon that furnished the liquor—yes, the *drugged* liquor—that took the life of that

girl Is it not high time that our flag that floats proudly over our schoolhouses and other places of learning should be hauled down and kept down when seen floating over dens of infamy like the American saloon?

Governor Frank Hanly is one of the greatest speakers, and one of the most fearless speakers, in my opinion, that the world contains; and if there should ever be a chance to vote for him as President of the United States, I would vote for him and work for him as I never worked for any other candidate or anybody else in my life. I hope the papers will give a report of his wonderful talk on that occasion.

I will close with one more incident from Bishop Wilson. It seems he has recently been sent to Porto Rico. When nearly back to New York the officers of the vessel blundered in their reckoning. The bishop did not tell us the crew had been drinking, but I can not understand what else should cause the pilot and officers of a great vessel to lose their reckoning. The bishop heard the breakers, indicating that they were nearing danger, and informed the officers of it. They laughed to think that a landsman should presume to tell them where they were. While he was insisting that he was right, and that they were off the track, the vessel struck the ground. They signaled a life-saving station near by, and got all the machinery they could muster to get the vessel off. By wireless telegraphy they finally got a powerful tug, with a tremendous rope, from the city of New York; but for quite a time all their efforts were unavailing. When a great ship, from stupid management, runs at full speed into a sandbar it is not an easy matter to get it off. After the steam-tug and all the appliances for such work had exhausted every resource without avail, they were quietly told by some one to keep on and not give up yet, for the *tide was rising*. And the tide kept on rising, and soon they got off. Do you see the point, friends? The Anti-saloon League has been working for some fifteen years trying to wake the people up, and trying to get our good and righteous laws enforced—Sunday-closing laws, for instance. But the great vessel of state was too strongly foundered on the sandbanks. The enemy was almost too much for us, and at least *some* of us were almost ready to give up; but for the sake of the mothers and little children we kept on. Meanwhile the tide of public indignation was rising, and we did not know it. When the good brother away off in California told us that the Lord Jesus Christ was coming to shake the earth we did not believe it.* One of the first indications we had of his "foot-steps" was away down in Georgia; and then other southern friends fell into line and declared that the saloon must go. We who were pulling on the rope did not know any thing about the great agency that was *bound to envelop and engulf and sweep the whole earth*. We were surprised when the news came about the *unexpected* help. Of

course, the enemy is making resistance. The brewers are massing their millions. The riots in Springfield and Chicago, Ill., are waking the people up as they never were awakened before.

The W. C. T. U., the Anti-saloon League, the Prohibition party, and all the other temperance agencies and leagues and organizations, have been working and praying, and perhaps wondering, many of us, why our prayers were not answered. We were like the big cable and the steam-tug, together with the people at the life-saving station, and just when the job seemed too much for us, a new and unexpected agency—a great tidal wave, in fact—started up, unbeknown to us, and the enemies of righteousness were as much astonished as we were to find the work done before we knew it.

The churches of our land are massing together; and there are some indications that the political parties are going in a like manner to mass together. The farmers, and their wives and mothers who have stayed at home and attended to their own business, are waking up and massing together, and a mighty tide that bids fair to sweep the whole world is chained to this one thing—*the saloon must go*. SATAN IS BEING DRIVEN OUT, AND THE LORD JESUS CHRIST IS COMING IN. "BEHOLD, THE BRIDEGROOM COMETH."

HIGH-PRESSURE GARDENING

By A. I. Root

I notice in GLEANINGS, page 1084, an account of a new variety of wheat, also statement of seven-headed wheat, or Egyptian wheat. In 1856 I was farming on Trinity River, 15 miles from Weaverville, the county-seat of Trinity County. My brother was in Salt Lake City, and sent me by mail a small package of seven-headed wheat which I planted and got several quarts of wheat, which I planted the next year and got at the rate of 80 bushels to the acre. I took some of it to the mill and got it ground to flour. It would make sticky dough like hulled barley, but would not make bread that could be eaten. I could not sell the flour or wheat as people were afraid to feed it to their horses, so I quit raising it. Some of it had the seven heads all right. I wish I had it now for chicken feed. Encourage this 277-bushel humbug, as it may grow 80 bushels per acre for chicken feed, and be profitable for that alone. O. S. LOOMIS.

Fountain, Col., Sept. 4.

Many thanks, friend L.; but please remember that you can get a much larger yield per acre from a little piece of ground than you can where you prepare and sow a whole acre. Perhaps it is not easy to explain why this is so; but our experiment stations will tell you that small plots, as a rule, give a much greater yield than where you sow an acre or several acres, even with the best care that you can give the larger plot. If it is good for chick feed, by all means let us have it. Who can tell us where to get the seed?

SWEET CLOVER—HOW LATE IN THE FALL CAN THE SEED BE SOWN AND STILL WINTER OVER?

We are desirous of planting sweet clover for bee pasture. Our land is in Mount Lebanon, Columbia Co., N. Y. The land is high and our winters rigorous. We are uncertain as to the best time to plant—this fall or wait until spring. If planted soon, would the clover gain growth enough to live through the winter? If so, would it blossom next summer? Your answer would greatly oblige two bee sisters who have had wonderful success in their three years of bee culture. Our knowledge has

* As an indication of what is going on right here in Ohio, see the following, just received from Wayne B. Wheeler:

Mr. Root:—Tell your people that between forty and fifty counties are already organized to vote the county dry. In some countries, like Meigs, over one hundred public meetings have been held. S. Ioto Co. has had the campaign on for over six weeks, and has held between one hundred and two hundred meetings. Every thing is redhot in that county.

Columbus, O., Aug. 21.

W. B. WHEELER, Supt.

been gained from the A B C book and GLEANINGS, which later always comes to the rescue in every emergency. A healthier and more beautiful apiary could not be desired. Thanks to all our bee friends who so generously give their experiments and experience from which we profit. Any suggestion will be most graciously received.

ALICE S. CRANE.

Mt. Lebanon, N. Y., Aug. 15.

My impression is that if the seed is worked well into the ground, and there is plenty of rain, the seed, if sown any time during September, will probably make root enough to stand the winter. The roots of sweet clover go away down into the ground, as most of you will admit who have tried to pull up the plant, and especially on hard dry ground; and it takes an unusual amount of freezing to throw it out. Now, I wish the others who have had experience in this line would tell us about how late the seed can be put in and still winter over. I will sow some seed at different times and report.

MIRACLE WHEAT; THE SATURDAY EVENING POST SENDS A MAN TO INTERVIEW ABRAHAM ADAMS.

We are glad to know that the *Saturday Evening Post* has had enterprise enough to get down to the real facts in the matter. We clip the following from their issue for Sept. 12:

The *Saturday Evening Post* dispatched a thoroughly reliable man to Idaho to examine the wheat on the ground, and his wired report, which follows, pretty thoroughly disposes of this agricultural marvel:

"Assertions of huge crops or good flour-making qualities not justified. Adams' only claim of proportion of two hundred bushels an acre is with an eighth-of-an-acre patch two years ago. For last year, admits farm average only thirty bushels. So far this year only twenty-five to thirty-five an acre. Offers excuses such as weeds and undersowing. Not true that wheat has been successfully grown elsewhere. Misleading to say frost-proof, for admits some injury by snow. Flour-making qualities unknown. Adams was given experiment-station analysis last year, and told with it that milling test was necessary to show the quality with certainty. Has not had the test. The wheat in appearance is much like certain large coarse wheats; not valuable for flour."

The *Indiana Farmer* suggests that this person should be punished under the United States postal laws for using the mails for fraudulent purposes. We heartily second the suggestion. The Department of Agriculture sent a special agent to Idaho, and here is his report:

Alaska yielding twenty-five bushels an acre. Badly mixed. Grain inferior. Quality soft and white. Ordinary wheat yielding fully as much. Best varieties, more.

THOMAS W. LAWSON.

When this man first came out with his *expose* I commenced to read carefully every word of his writings. I continued until I was satisfied the man was but little if any better than the *other* men he claimed to be exposing; and just recently I have been reading his paid-for advertising in the daily papers. Now, I hope it is not true that money has been pouring into his coffers at the rate he tells us it has. Farmers, gardeners, and fruit-growers generally are prospering; and I am glad to know that some of them have a little money ahead, and perhaps most of them have. But God forbid that their hard earnings should ever go to support and encourage men of the Thomas W. Lawson type. Just now I am rejoicing to see such a grand home paper as the *Ohio Farmer* come out boldly as they do in the following:

This man is again spending thousands of dollars, advertising in papers all over the land. Now he booms or bulls a certain stock or line of stocks, advises all his "customers" to send him their checks and orders for "margin investment," and the mails

and telegraph offices (he declares) are choked with buying orders. Of course, the stock rises for a time, and he reaps his percentages. Or, now, he "bears" the market—advertises that certain stocks are sure to fall, and selling orders crowd the mails and the stocks fall and he gets his percentages on all the sales. Let him and similar men alone. Speculating on margins of grain or railway or other stocks is one of the most dangerous, delusive, and harmful kinds of gambling, and the "lamb" usually "get shorn." Gambling is exactly what it is. Let us call a spade a spade. It is the business of the farmer to grow wheat, corn, and oats—not to gamble on them, and he is foolish, not to say morally wrong, when ever he "bets on the other fellow's game."

HEALTH NOTES

SHREDDED-WHEAT BISCUIT.

Mr. A. I. Root.—I have been reading what you say about the use of shredded-wheat biscuit. I had a severe fit of sickness last spring, which lasted about six weeks. Since then I have used largely of the biscuit as an article of diet. My practice is to soften the biscuit well with hot water, then flatten it and cover with butter, then pour on a liberal quantity of best extracted granulated honey, and eat with a spoon. I have made a larger use of eggs than ever before, but use no meat. I am now 77, and have taken care of 100 colonies of bees this season. I have used no tea nor coffee for years.

EDWARD BEVINS.

Leon, Ia., Sept. 6.

Here is a newspaper clipping sent me by a friend. I do not know what paper it came from.

SECRET OF LONGEVITY.

Wu Ting-fang, the famous Chinese diplomat, recently said he had discovered the secret of long-vity, and averred that by his system of diet he could live 200 years—a term greatly exceeding the longest possible period as fixed by Prof. Metchnikoff, of the Paris Pasteur Institute. Naturally the Chinese minister's statement excited much curiosity, and a Boston man wrote to him for particulars, receiving the following plan as adopted and put in practice:

"In answer to your letter requesting my plan of diet I have to say: 1. I have given up my breakfast, taking two meals a day, lunch and dinner. 2. Abstain from all flesh food. My diet is rice, or, when I go out to dinner, whole-wheat bread, fresh vegetables, nuts, and fruit. 3. I avoid all coffee, co. oa, tea, liquors, condiments, and all rich foods. 4. I have given up salt also, because it is found that salt makes the bones stiff. 5. I masticate every mouthful thoroughly before it is swallowed. 6. I do not drink at meals, but between meals or one hour after meals. 7. I practice deep breathing. 8. I take moderate exercise."

Minister Wu Ting-fang's fifth rule aligns him with the followers of Fletcherism, though in other particulars he is a law to himself. Mr. Fletcher eats only when he is hungry, and does not eat meat, though not making this a rule for others.

The plan of the Chinese minister will commend itself to many practical experimenters in dietetics. It is sensible, and combines exercise and deep breathing with frugality—a wholesome scheme of living.

You will notice from the above that Wu Ting-fang agrees exactly with T. B. Terry in No. 1 in recommending two meals a day, and I think he agrees with Terry also in No. 2 in abstaining from all flesh foods. In No. 3 he agrees with Terry and A. I. Root also. No. 4 I do not know about. When I am eating green corn I want butter and salt both, and quite a little salt, and I want milk to drink with it. It may be that one can get along without salt, and that salt *does* make the bones stiff. I shall have to say I do not know, for I never tried living without salt. No. 5, in regard to *thorough mastication*, we all agree on. No. 6 also. I drink only milk, and only about half a teacupful at that. If I drink more than that three times a day, nature, sooner or later, makes a protest. With Nos. 7 and 8 we are all entirely at an agreement. The concluding suggestion, about eating only when you are hungry, might do for *some* people, but I, for one, want to sit down with a lot of other people and have somebody give thanks, and then talk and laugh and feel happy while I chew my food, and try to make everybody else feel happy.

In regard to abstaining from flesh food, after I tried entire lean meat, as I told you, and after having been at another time of my life *four years* a vegetarian, except that I had eggs and milk, I shall have to say I am undecided. In warm weather, when I can have what I want, as I do at home, I think I would give up meat (I am sure I feel better without it, and it might help to break up the "meat trust"); but while I am traveling, especially during very warm weather, or at other times, when I get what is commonly called "summer complaint," I must reserve the privilege of a pure lean-meat diet until I begin to straighten out. *I do not know of any other way.* Last, but not least, especially when I feel out of sorts, I would go to almost any expense or trouble to get *pure soft water.* Rain water that has been boiled has so far always proved to be all right on that score for me.

POULTRY DEPARTMENT

THE SECRET OF RAISING CHICKENS IN AUGUST.

I want to say something about my discovery—at least I never heard or read of it in any of the poultry-journals. I think it might be worth \$5.00 to many of you. But I am not going to charge \$1.00 for it, nor even 50 cents. Here it is, free to all. Get a sitting hen if you can in August, and let her raise a brood of chicks while she is moulting. Moulting hens rarely lay any eggs, so there will be no time lost, and you actually kill two birds with one stone by letting her run with the chickens while she is on a moult. Mrs. Root insisted that it was too *late* to raise chickens. But I set one hen with 17 eggs about the first of August. She hatched 14 chickens, and has 14 now, this 11th day of September. I never saw chickens grow faster or seem happier, and they will certainly be well feathered out when cold weather comes. The hen commenced dropping her feathers when the chicks were about a week old, and now she is fairly feathered out. By the time the chickens are ready to winter, she will be in good condition to lay again. And, by the way, I have got a nestful of small pullets' eggs, laid by the Brown Leghorn "day-old chicks" the 14th day of April. You see they commenced laying before they were five months old, and so they are already paying for their food. Is not this getting your money back in pretty good time? While the old hens are in moult, the pullets are supplying us with eggs.

THE DAY-OLD CHICKS, AND HOW THEY TURNED OUT.

On page 586, May 1, I mentioned the fact that I took home 25 chicks in a little box. They were hatched April 14. There were 15 Brown Leghorns, 4 Buff Orpingtons, and 6 White Plymouth Rocks. As I had no brooder, and the weather was too cold to put them outdoors, I put them up by the steam-pipes in the greenhouse. Well, the Brown Leghorns *all* lived; but I lost 2 of the Buff Orpingtons and 5 of the White Rocks. It rather looked from this that the Brown Leghorns

were a hardier breed, and I feel satisfied from this experiment (and some others seem to think so too) that I need not have lost any of them, had I kept them away from the artificial heat. The Brown Leghorns, when 4½ months old, commenced laying. As every one of them seems to be a true type of the Brown Leghorns, I think Mr. Uhl furnishes very choice stock. The two remaining Buff Orpingtons are both pullets. They are large and beautiful fowls, without a wrong feather—that is, so far as I can discover, and I think they will lay soon. The single White Rock was a male; and when 70 days old—that is, exactly 10 weeks—he weighed an even 3 lbs., and at the age of 4 months he weighed 6¼ lbs. One reason why I weighed him was that friend Philo, in his advertisement in GLEANINGS, said his Orpingtons, bred in confinement, weighed 2 lbs. when 8 weeks old. There has been some criticism in regard to what was called his extravagant advertising; but in view of what I have just said, I do not think it at all extravagant. Chickens when properly hatched, and have plenty of food, without being scrimped a day of their lives, will give no trouble in making such a record as the Orpingtons and Rocks, and may weigh fully as much as he claims. You see, in buying baby chicks you escape all the trouble incident to an incubator, and get *choice stock* for a small sum of money.

The Brown Leghorn chicks cost 8 cts. each, and the Buff Orpingtons and White Plymouth Rocks, 10 cts. each. I sold the big white cockerel, when 4½ months old, for \$1.00,* and one of the Orpingtons for \$1.50. From some experiments I made in Florida, where grain is much higher than it is here, I decided that a nickel would pay for the feed of a chicken until it is ten weeks old; and 10 cents more would pay for the feed until it is four months old. Now, if this is true, what better business do you want than raising chickens—that is, if you have no more losses than I have had, and start with some choice breeds?

THE "CHICKEN BIBLE;" SEE PAGE 1025; ALSO SOMETHING IN REGARD TO GOOD BOOKS FOR FARMERS, NOT ESPECIALLY DEVOTED TO POULTRY.

Mr. Root:—In your Aug. 15th issue you pass on Mr. Cogswell's inquiry for a "chicken bible." There is no chicken book exactly like the A B C of Bee Culture, but possibly the two most practical poultry writers of modern date are Robinson, of Boston, and Brown, of England. "Poultry Craft," by J. H. Robinson, editor of *Farm Poultry*, of Boston, is certainly the safest, most up-to-date, and most complete outline of the chicken business to be had, the book not being large, having only 272 pages. For a more exhaustive treatment of the subject, Robinson's first and second series of Lessons in Poultry-keeping are probably unsurpassed, and his Common Sense Poultry Doctor, published in 1907, is the best book for general use on that subject. Any person much interested in chickens should have Robinson's books and his monthly paper, *Farm Poultry*, as well as the *Reliable Poultry Journal* and the Cypher's series of poultry-books which you list.

While writing on this subject I should like to call your attention to Fred Grundy's (Morrisonville, Ill.) so-called "Perfected System." It is true it is one of these pamphlet poultry systems, but is one of the most practical I have seen; and his "fireless brooder" is much better, in my opinion, than Philo's, whose book I also have (as well as numerous other poultry publications). For a beginner, Grundy's pamphlet is excellent, except his water-tank, which can not be cleaned properly, the two-part tank being better.

There is another book, or pamphlet, of 56 pages, to which I

* After I told the man he might have him for a dollar, we found he weighed 7½ lbs. With the free range he had all his life, I don't think his feed cost more than 15 cts., and large spring chickens are quoted in the market at 15 cents per lb.

have long intended to call your attention. I have never seen it advertised in any paper, and found it only through an incidental allusion in a *Farm Poultry* editorial. It is F. O. Wellcome's "The Trap Nest Text Book," Yarmouth, Maine. Presumably the author does not care to sell his pamphlet except with his nest patent, but he will sell it separate on request, and I advise every poultryman interested in breeding for eggs to get a copy of the very excellent little book, whether he uses any trap nests or not.

While recommending chicken-books I should like to mention two others of general nature. The first is the equivalent of your A B C book. It is the "Farmers' Cyclopaedia of Agriculture," by the United States Department of Agriculture officials, Wilcox and Smith (Orange Judd Co.). Prof. Bailey has a large cyclopaedia, excellent for libraries, but too expensive for most farmers. But the Wilcox and Smith book, 619 pages, ought to be in every farmer's home, being so up to date and sufficiently complete.

The second general book or books I wish to recommend are the three "Practical Farm Experience" books written by farmers, summarized by Prof. W. F. Massey, and published by the *Practical Farmer*, of Philadelphia, one of your advertisers. Any farmer who has not these books is missing a treat, and will be glad, after reading them, to have had his attention called to them. And I must also highly commend Prof. Holden's A B C of Corn Culture (Simmons Pub. Co. Springfield, Ohio), which you recommended a while back. For its price, 10 cents, it is about indispensable to every corn-grower. It ought to be in the library of every farmer and of every district school.

I have no connection with nor personal interest in any of the books mentioned in the foregoing. I merely like to pass a good thing along.

GENESIS FARM.
Greencastle, Ind., Aug. 26, 1908.

I am sure we are very much obliged indeed for the above from one who has no interest in any of the books or periodicals mentioned. Friend Grundy's little book, "Perfected System," is certainly a valuable little work, and I would have given it a good editorial notice before this time

were it not such a very small book for the price. I believe it was originally sold at \$1.00, but the price has been reduced to 50 cents. Perhaps we ought to be satisfied with this latter price, but it still seems to me that a fifty-cent book, especially of such small size, should have better print, better paper, and better engravings. I know there are a good many people who do not agree with me in regard to this matter, and may be I am wrong about it. The trap-nest book, if I remember correctly, is also 50 cents, and I would find the same fault with it that I do with the Grundy book, and something else besides, because the book from beginning to end is an advertisement of his patent-right trap-nest. At the same time, the trap-nest is a good thing—the best one I have ever gotten hold of; and the trap-nest book tells us more about egg-laying, and how to tell absolutely which hens lay eggs, than any other book or lots of books I have ever gotten hold of; and I can heartily indorse all that is said about the A B C of Corn Culture. This book is as large as some of the fifty-cent books, and the price, 10 cts., is ridiculously low. If every corn-grower would get a copy and read it, it would put hundreds of dollars' profit in the pockets of thousands of people. By the way, we are cutting our ten acres of corn to-day, Sept. 14; and I believe the general verdict is that it is one of the nicest pieces of corn in this part of Ohio.

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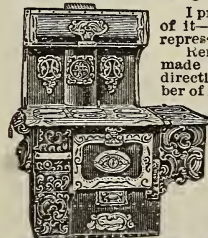
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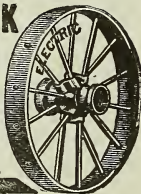
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Made of high carbon Steel Wire Horse-high, Bull-strong, Chick-en-tight. Sold direct to the Farmer at lowest manufacturers prices on 30 Days Free Trial, freight prepaid. 100 page Catalogue and price-list free. **KITSELMAN BROS.** Box 21 MUNCIE, IND.



The Rochester Radiator will

SAVE HALF YOUR FUEL or give you double the amount of heat from the same fuel, if you will give it a trial, or we will refund the money paid for it. Write for Booklet on heating homes.

ROCHESTER RADIATOR CO. 50 Furnace St., Rochester, N. Y.

Prices from \$2 to \$12 For hard or Soft Coal wood or gas Fits any Stove or Furnace

CUTS USED IN THIS MAGAZINE ARE FROM THE MUGLER ENGRAVING CO. MUGLER BLDG. CLEVELAND, OHIO.

Read His Letter

Read of the economy and profit in this farmer's potato-digging,—how he gets every potato in the field,—how he avoids loss from scarred and crushed potatoes,—how he has made the work easy and fast.



It Tells You how the Acme Hand Digger ATTACHMENT

proved out under hard, practical actual field use:

Potato Implement Co., Traverse City, Mich. Gentlemen.—Two years ago I bought one of your Acme Hand Potato Diggers and after giving it a short trial in the field, my sons, who were digging the potatoes, were so pleased with the Acme Digger that I now have five in use on my farm.

The Acme is just the digger we needed. Unlike the machine diggers it digs clean, gets every potato in every hill, doesn't scar the stock, and is not bothered by the vines. The men work easily, yet quickly, and don't get so tired as with ordinary fork or hook digging.

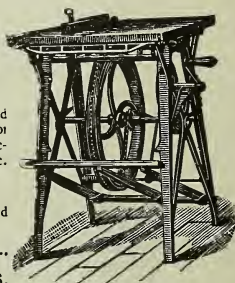
I know from my own experience that the Acme Digger does better, easier and cheaper work than any other digger I have seen, and the best recommendation I can give anyone is that I continue to use it on my own farm.

I am, yours truly, **F. LAUTNER,** Leelanau County.

Send \$1.00 Today. Let the Acme Attachment prove itself to you. Let it prove that your dollar is better than \$100 investment in other diggers—that it will dig potatoes better and more economically—that it is the digger you have been waiting for. *Sent prepaid by express.* Money returned if you had rather have it than keep the digger. Pamphlet and Potato Book free on request. Send now. Address Bx 520, **Potato Implement Co., Traverse City, Mich.**

BARNES' Hand and Foot Power MACHINERY

This cut represents our combined circular saw, which is made for bee-keepers' use in the construction of their hives, sections, etc.



Machines on Trial

Send for illustrated catalog and prices. Address **W. F. & JNO BARNES CO.** 545 Ruby St. ROCKFORD, ILLINOIS.

BOOKS of All Kinds on CREDIT

You can have all the books you need by our plan. Write for that beautifully illustrated and descriptive book. "A Book store in your home." It is free. Write today. We guarantee quality and value. Our prices the lowest. Write for catalog. It is free. The largest mail order Book house in the world. 48 years in business. Dept. GB28 **THE FRANKLIN-TURNER CO., 65-71 Ivy St., Atlanta, Ga.**

Fashion Book Free!

I want to send you my handsome new book showing over 400 of the latest styles with illustrated lessons on cutting and dressmaking. I will agree to sell you all the patterns you want for 5 cents each. They are the same patterns you have always paid 10c and 15c for at the stores, made by the same people, and correct in every detail.

HOW I DO IT.

I publish **The Home Instructor**, an illustrated woman's magazine and I want your name on my subscription list. **The Home Instructor** is bright, entertaining, clean and instructive—just the sort of a paper you should have in your home. It has departments for every feature of home life, and prints the choicest fiction every month.

Every issue has several pages devoted to the latest fashions, fully illustrated.

My Special Offer.

Send me 25 cents and I will send you **The Home Instructor** for two years and will send my big fashion book to you free. I will also agree to sell you any pattern you want thereafter for 5 cts. I can sell them for 5 cents because I buy them by the thousand and don't make any profit. I don't want the profit, I want your subscription to **The Home Instructor**. You will save many times the cost of my offer in a year. Write to-day **A. OTIS ARNOLD, Dept. B Quincy, Ill**



APPLETON, WIS., Sept. 4, 1908.

THE A. I. ROOT CO., Medina, O.

Gentlemen:—I wish to acknowledge receipt of the two Italian queens ordered from you a few days ago. They arrived in good condition, and I must say they are fine-looking queens. Thanking you for your promptness in lending, I am Yours truly, **GEO. EICKMAN, Rt. 3, Box 4.**

NEW GOODS! BIG STOCK!

New Warehouse Root's Goods
Prompt Shipment Low Freight

EVERYTHING FOR THE BEE-KEEPER AT SAVANNAH, GA.

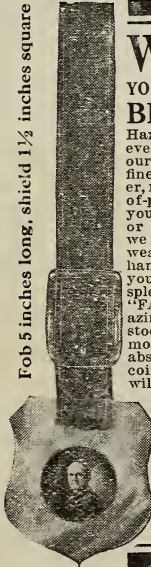
We are now prepared to furnish promptly a full line of supplies; choice new stock just from the factory.

Bees and Queens!

We have large apiaries of fine stock. Book your orders at once, as there will be a heavy demand this season. Catalog sent free. Correspondence solicited.

HOWKINS & RUSH
241 BULL ST. SAVANNAH, GA.

Fob 5 inches long, shield 1 1/2 inches square



Watch Fob Free

YOUR CHOICE OF CANDIDATES
BRYAN OR TAFT

Handsome Campaign Badge you have ever seen. You may have it FREE with our compliments. This fob is made of a fine grade of seal grained Russia leather, nickel-plated buckle, beautiful mother-of-pearl shield, containing a photo of your favorite candidate, either Bryan or Taft. It is guaranteed to be just as we describe it and you will be proud to wear it. We are giving away these handsome fobs to get acquainted with you and to get you acquainted with our splendid and instructive farm paper, "FARM AND STOCK," an up-to-date magazine devoted mainly to corn and live stock. The Watch Fob and a three months' trial subscription given you absolutely free on receipt of 10 cents in coin or stamps to pay for mailing. We will also send you our liberal proposition whereby you can secure other handsome premiums free by giving away several of these fobs to your neighbors. You are sure to be delighted with both fob and paper, so send 10c at once while they last to

FARM AND STOCK
Box 307, St. Joseph, Missouri

FASHION BOOK FREE!

I want to send you my handsome new book showing hundreds of latest styles with illustrated lessons on cutting and dressmaking. I will agree to sell you all the patterns you want for five cts. each. They are the same patterns you have always paid 10c & 15c for at the stores, made by the same people, and correct in every detail.

HOW I DO IT.

I publish the **FARMER'S CALL**, a weekly paper for every member of the family, An especially interesting feature each week are the children's letters; and the Woman's Department is unusually strong and instructive. Among the special features for Women folks, is its fashions in which I show the 5c patterns. Let me help you to save money.

MY SPECIAL OFFER

Send me 25c and I will send you the **FARMER'S CALL** every week (over 1000 pages) for one year and will send my big Fashion Book to you free. I also agree to sell you any pattern you want thereafter for 5c. I can sell them for 5 cts because I buy them by the thousand and don't make any profit. I don't want the profit, I want your subscription to the **FARMER'S CALL**. You will save many times the cost of my offer in a year. WRITE TO-DAY! **JOHN M. STAHL, Dept. G, QUINCY, ILL.**



20 American Girl postcards, and membership to our post-card exchange, also 3 mo. subscription to our paper—all for 10c. **Up-to-Date Farming, Dept. P, Indianapolis, Ind.**



FOR SALE.—It will pay to get our special proposition. **A. G. WOODMAN & CO., Grand Rapids, Mich.**

QUEENS of MOORE'S STRAIN OF ITALIANS

Produce workers that fill the supers, and are not inclined to swarm. They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Mr. W. Z. Hutchinson, editor of the *Bee-keepers' Review*, Flint, Mich., says, "As workers, I have never seen them equaled. They seem possessed of a steady, quiet determination that enables them to lay up surplus ahead of others. Easier bees to handle I have never seen."

My queens are all bred from my best long-tongued three-banded red-clover stock (no other race bred in my apiaries), and the cells are built in strong colonies well supplied with young bees.

PRICES: Untested queens, 75 cts. each; six, \$4.00; doz., \$7.50. Select untested, \$1.00 each; six, \$5.00; doz., \$9.00.

I am filling orders by return mail. Safe arrival and satisfaction guaranteed. Descriptive circular free. Address

J. P. Moore, queen-breeder, Rt. 1, Morgan, Ky.

Italian Queens

GOLDEN AND CLOVER STOCK.

Choice queens, 75 cts. each; six for \$4.00, or \$7.50 a dozen
GEO. W. BARNES, Box 340, Norwalk, O.

Golden Italian Queens, 75c

Six for \$4.00.

Mailed promptly. Safe arrival and satisfaction guaranteed. Circular.

J. B. CASE, . . . Port Orange, Fla.

Westwood Red-clover Queens

Are the bees that got the honey in 1907. Better try them for 1908. Nuclei and full colonies a specialty. Price list on application.

HENRY SHAFFER, 2860 Harrison Ave., Sta. L, Cincinnati, O.



NOW IS THE TIME

to buy your queens for fall increase. I can mail promptly young vigorous queens—Italian, Carniolan, Banat, and golden. Prices, untested, 75 cts.; \$8.00 per dozen; tested, \$1.25 each; \$12.00 per dozen.

Circular free.

Grant Anderson, Sabin, Tex.

Taylor's Strain of Italians

IS THE BEST.

Long tongues and goldens are the best of honey-gatherers; 19 years a specialty, breeding for the best honey-gatherers. Untested, 75 cts. each, or \$8.00 a dozen; tested, \$1.00 each, or \$10.00 a dozen; select tested, \$1.50 each. Breeders, the very best, from \$3.00 to \$5.00 each. We sell nuclei in full colonies. Bees in separate yards. Safe arrival guaranteed. Send all orders to

J. W. TAYLOR & SON, Beeville, Bee County, Texas.

ITALIAN QUEENS



Fine 3 and 5 banded queens till Nov. 15, untested, only 60c or \$6.00 a doz.; extra fine queen, \$1; tested, \$1.25. Full colonies in 8-fr. hive, with queen, \$5.50; 3-fr. nucleus, with queen, \$2.75. Safe arrival guaranteed. Directions to introduce go with queen. Price list free.

J. L. FAJEN, ALMA, MO.



RED-CLOVER QUEENS

200 lbs. honey from my breeding colony. Mostly red-clover honey. Untested queen, 75 cts.; tested, \$1.00; doz., \$7.00. Four-frame nuclei and fine tested queen, \$4. G. Rutzmann, Biglerville Pa.

ITALIAN QUEENS

Large prolific queens of the Moore strain. Nice to handle, and good workers. Untested, 60c; 6 for \$3.25; doz., \$6.00, now going by return mail. S. F. TRECO, Swedona, Ill.

Queens ITALIAN Queens

BY RETURN MAIL.

Untested, 60 cts. each; 6 for \$3.25; tested, \$1.00 each; 6 for \$4.75. 150 colonies of bees for sale. Write for prices.

E. A. SIMMONS, GREENVILLE, ALA.

Extra Fine QUEENS

Queens of the Doolittle-Moore cross, \$2.00 each; 3, \$5.00; 6, \$9.00. Queens of the Moore strain, \$1.00 each; 6, \$5.00; 12, \$9.00. All queens warranted purely mated.

W. M. PARRISH, Rt. 8, Lawrence, Kan.

COVERT, KAN., Sept. 12, 1907.

Dear Sir:—The queen I received of you in 1906 yielded, this year, twice as much surplus as any other one colony I have.

CLARENCE A. HALL.

CARNIOLAN, BANAT, AND CAUCASIAN QUEENS

Home-bred, \$1.00 each; five at 80c each; Imported, \$4.00 each. FRANK BENTON, Box 17, WASHINGTON, D. C.

WHAT'S THE USE

OF HAVING FINE HONEY IF IT IS IN POOR PACKAGES?

If you are among the fortunate ones who have secured a good crop of honey, surely you will not be so unbusinesslike as to sell it in second-hand or inferior cases. Your honey will sell far easier in nice new cases or tins. WE HAVE THEM.

John Nebel & Son Supply Co., High Hill, Mont. Co., Mo.

ITALIAN QUEENS

And nothing but Italians. An improved superior strain is what QUIRIN-THE-QUEEN-BREEDER raises. Stock is Northern-bred and hardy—not a single colony lost during the past winter; have five yards, all wintered on summer stands. Am now taking off supers of nice white-capped clover honey. Prices of bees and queens as per below:

Prices of Queens after July 1.	1	6	12
Select queens	\$ 75	\$4 00	\$ 7 00
Tested queens	1 00	5 00	9 00
Select tested queens	1 50	8 00	15 00
Breeders	3 00	15 00	
Straight five-band breeders	5 00		
Two-comb nuclei, no queen	2 25	12 00	22 00
Three-comb nuclei, no queen	3 25	18 00	32 00
Full colonies on eight frames	5 00	25 00	

All queens now go by return mail Safe arrival and pure mating guaranteed. We employ 400 to 500 swarms. Can furnish bees on L. or Danz. frames. Add price of whatever queen is wanted to nuclei or colony. No order too large, and none too small. Over 20 years a queen-breeder. Address all orders to

QUIRIN-THE-QUEEN-BREEDER, Bellevue, Ohio.

5000 QUEENS

of the famous 3-banded LONG-TONGUE RED-CLOVER STRAIN OF ITALIAN BEES is what I want to sell this season.

My bees GATHER HONEY if there is any to get; ARE LITTLE inclined to swarm and sting, they please such people as The A. I. Root Co. R. F. Holtermann, W. Z. Hutchinson, Morley Pettit, etc., and if they don't please you, send in your kick.

Queens of all grades now ready.

	1	6	12
Untested queens	\$1.00	\$5 00	\$9.00
Select untested queens	1 25	6.00	11 00
Tested queens	1 50	8 00	15 00
Select tested queens	2.00	11.00	20.00
Breeders \$5 00 to \$7 00			

W. O. VICTOR (Queen Specialist), Hondo, Tex.

GOLDEN-ALL-OVER and RED-CLOVER ITALIAN QUEENS

My stock is the result of years of careful selection, and is equal to any in the country. The prices are only such as to insure long-lived, prolific queens, whose workers will be hardy and good honey-gatherers Write for 1908 circular. PRICES.

	1	6	12
Untested	\$1.00	\$5.00	\$9.00
Select untested	1 25	6.50	12.00
Tested, \$1.75 each; select tested, \$2.00 each.			

Positively all orders filled in rotation.

Wm A. Shuff, 4426 Osage Ave., Philadelphia, Pa

Long-tongued Red-clover Queens

Bred by their Originator

Do you want to get some specimen queens of the world-famous red-clover stock of Italian bees? Then buy from me, because I am the originator, and surely ought to know how to breed them in their purity. When you get them from me you know you have the real strain. For years I have devoted time and skill to this stock, trying to reach perfection. I can submit many splendid testimonials in favor of this stock to show my work has not been in vain. Try them, and YOU will be pleased also. I endeavor to please the practical man looking for definite results in dollars and cents. Many years' experience as head apiarist of The A. I. Root Co. enables me to fill the most exacting order with complete satisfaction to the purchaser Let me show you how well I can please you.

Prices

	1	6
Untested queen	Before October 30, \$1 00	\$ 5 00
Select untested queen	" 1 25	6 00
Tested queen	" 2 00	10 00
Select tested queen	" 3 00	15 00
Breeding queen	" 5 00	
Select breeding queens	" 7 50	
Extra select 1 yr. old	" 10 00	

F. J. Wardell

Uhrichsville, Ohio, U. S. A

QUEENS

of the Robey strain of three-banded Italians during the season of 1908. Warranted queens, 75 cts. each; \$4.25 per six; \$8.00 per doz. Tested queens, \$1.00 each. Satisfaction or money refunded.

L. H. ROBEY, Worthington, W. Va.



Queens

Colden and three-banded.

Wurth's queens take the lead everywhere; have 600 queens; can send by return mail; untested, 60 cts. each. Send for circular.

DANIEL WURTH, Rt 3, Fayetteville, Ark.

PATENTS.

Twenty-five Years' Practice.

CHARLES J. WILLIAMSON,

Second Nat'l Bank Bldg. Washington, D. C.

Patent practice in Patent Office and Courts.
Patent Counsel of The A. I. Root Co.

UDO TOEPPERWEIN

W. M. MAYFIELD

THE BEE-KEEPERS' Headquarters for the Southwest

TexasOld MexicoNew Mexico

WE NOW HAVE ON HAND
AN IMMENSE STOCK OF HONEY-CANS
(13,000 cases)

Weed's New-process Foundation

We make it right here from a new set of machinery. At present our factory is running nights, as well as in daytime, to keep up with orders. Still we can take immediate care of your order when it comes, as you certainly want the best. Keep out of trouble and get the very best foundation money can buy. We have it here—made in San Antonio.

Plenty of Shipping-cases

12-in. 4-row shipping-cases with 3-in. glass	\$17.00 per 100
9½-in. 4-row shipping-cases with 3-in. glass	15.00 per 100
10-in. 2-row shipping-cases with 3-in. glass	9.35 per 100
6½-in. 3-row shipping-cases with 3-in. glass	9.80 per 100
7½-in. 3 row shipping-cases with 3-in. glass	10.70 per 100

A large warehouse of Root's Bee-supplies

Sold at Root's factory prices. Write us with regard to your wants. Catalog for the asking. If you have mislaid it, send for another.

Honey and Beeswax Wanted

We are always in the market for honey and beeswax in large or small lots. Beeswax, 25 cts. cash; in trade, 28 cts.

Whenever you are in San Antonio make our office your office, and let us show you through our plant. Stay here awhile and meet the bee-keepers as they come in. You are always welcome and will be courteously treated.

TOEPPERWEIN & MAYFIELD
1322 SOUTH FLORES ST. SAN ANTONIO, TEXAS

CLASSIFIED ADVERTISEMENTS

Notices will be inserted in these classified columns at 25 cents per line. Advertisements intended for this department can not be less than two lines, and should not exceed five lines, and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

Honey and Wax for Sale

FOR SALE.—To reduce stock I offer for sale as follows: 27 cases No. 40, and 44 cases No. 43 at \$10.80 per case of two 60-lb. (new) cans. This is a raspberry-basswood blend, and is the cream of two apiaries, being extracted from select all-sealed upper stories. The partly full upper stories are being extracted by themselves (No. 33), and sold at a less price. Money can not buy better honey than lots No. 40 and 44. The above honey was gathered during June and the first half of July, and was extracted the week beginning Aug. 10. This oft-on-the-hive-all-summer honey is sappy, rich, ripe. A free sample will convince you. Other lots at a less price; also a little comb honey left.
E. D. TOWNSEND, Remus, Mich.

FOR SALE.—150 cases of No. 1 comb honey, 15 sections in 3-inch glass, non-drip cases, 6 cases in a crate, very fine, at \$2.00 per case, f. o. b. cans here. Also 8000 lbs. clover and basswood extracted, in new 60-lb. cans, 2 in case, very heavy body and fine flavor, at 8c, f. o. b. cans here. Sample free. Also extracted in 1-lb. Simplex jars, at \$2.00 per dozen.
W. H. TOWNSEND, Hubbardston, Mich.

FOR SALE.—My new crop of white-clover extracted honey. Honey has been left in full charge of the bees for three weeks after harvest, and is rich, waxy, and of fine flavor, and is as good as a specialist can produce. Price is 9c. per lb. by the case of 120 lbs. or for the entire crop. Cash to accompany order.
LEONARD S. GRIGGS, 711 Avon St., Flint, Mich.

FOR SALE.—Aug. 16 we finished taking off our clover, basswood, and button-willow honey. It is principally clover, fine and rich. Delivered at station in 60-lb. square cans, two cans to case; 8½ cts. per lb. Reference, our postmaster or agent, Lakeville, St. Joseph Co., Ind., at which place address C. A. BUNCH.

FOR SALE.—New crop of fancy white-clover extracted honey, thoroughly ripened on the hives before extracting. None of better quality on the market. Put up in barrels, new 60-lb. tin cans, and smaller packages if desired. For prices, etc., address
EMIL J. BAXTER, Nauvoo, Hancock Co., Ill.

FOR SALE.—Write for prices on clover, basswood, and buckwheat honey in 60-lb. cans and kegs; also comb honey and beeswax, all guaranteed to be pure.
W. L. COGGSHALL, Groton, N. Y.

FOR SALE.—Choice extracted honey for table use, gathered from clover and basswood—thick, well ripened, delicious flavor. Price 9 cts. per lb. in 60-lb. cans, two to case. Sample, 10 cts.
J. P. MOORE, Queen-breeder, Morgan Ky.

FOR SALE.—5000 lbs. of clover and amber honey in 160-lb. kegs.
C. J. BALDRIDGE, Homestead Farm, Kendala, N. Y.

FOR SALE.—5 tons of fine-quality comb and extracted. State amount you wish, and we will quote you our lowest cash price.
QUIRIN-THE-QUEEN-BREEDER, Bellevue, O.

FOR SALE.—Choice white extracted honey, mostly clover and raspberry mixed, in new 60-lb. cans. Price on application. Sample, 10 cts.
JAMES McNEILL, Hudson, N. Y.

FOR SALE.—Fancy clover extracted honey in new cans, two in a case. Send 10 cts. for sample, which may be deducted from first order.
EARL RULISON, Rt. 1, Amsterdam, N. Y.

FOR SALE.—8000 lbs. raspberry, milkweed, and basswood extracted honey in new 60-lb. cans, very fine. What am I offered?
P. W. SOWINSKI, Bellaire, Mich.

VERY CHOICEST HONEY.—It is rich, thick, and has that exquisitely delicious flavor of honey ripened in the comb—clover, raspberry, or basswood. **HONEY-BUYERS,** this your opportunity to buy the *very best* at a *low price*, as I must close it out. State quantity, and I will send a sample with very lowest price.
F. B. CAVANAGH, Boscobel, Wis.

FOR SALE.—Extracted clover and buckwheat honey. Write for what you want.
D. H. COGGSHALL, Groton, N. Y.

FOR SALE.—Extra fancy white-clover comb and extracted honey.
F. M. MABERRY, Lederach, Pa.

FOR SALE.—Fancy and No. 1 white-clover comb honey.
ANTON G. ANDERSON, Holden, Mo.

FOR SALE.—Two barrels of nice white-clover honey.
Box 134. JOHN W. JOHNSON, Canton, Mo.

FOR SALE.—White and buckwheat extracted honey in cans or kegs.
A. E. WOODWARD & SON, Rt. 2, Voorheesville, N. Y.

FOR SALE.—3000 lbs. white comb honey at 13½ cts.
W. D. SOFER, Jackson, Mich.

FOR SALE.—Carload of alfalfa honey in 5-gallon square cans.
WM. MCKIBBEN, Ontario, Ore.

FOR SALE.—Honey, clover, or buckwheat, comb or extracted. Write for price. Sample of clover extracted free. State quantity and quality desired.
C. B. HOWARD, Romulus, N. Y.

FOR SALE.—Basswood extracted honey, left on the hives until thoroughly ripe. One box of two 60-lb. cans, \$9.60.
GUSTAVE GROSS, Lake Mills, Wis.

FOR SALE.—1908 crop of white-clover honey—a strictly fancy table honey, extracted from capped combs. If you want good honey, here it is, put up in new 60-lb. cans, square or round sample free.
WARREN H. WINCH, Hopkinton, Iowa.

FOR SALE.—White-clover honey of the finest quality, in new cans, boxed single, and holding 58 lbs. net each. Price per can, \$5.50. Postpaid sample, 6 cts.
R. & E. C. PORTER, The Bee-escape Folks, Lewistown, Ill.

Honey and Wax Wanted

WANTED.—25 tons of fancy comb honey. Write, stating particulars, to C. M. CHURCH, New Kensington, Pa.

WANTED.—Comb, extracted honey, and beeswax. State price, kind, and quantity.
R. A. BURNETT, 199 South Water Street, Chicago, Ill.

Mail small sample, giving quantity you have, how put up, and lowest cash price you will take for it.
E. R. PAHL & Co., Milwaukee, Wis.

WANTED.—We are in the market for white extracted honey, in any quantity up to two or three cases. Mail sample and give source of honey, quality, quantity, and price.
M. H. TWEED & Co., 1175 Penn Ave., Pittsburg, Pa.

WANTED.—We are in the market for No. 1 white extracted honey in any quantity. Correspondence solicited. State kind, quantity, and price asked. We also have for sale 60-lb. honey-cans, 2 cans in case. Both cans and cases in A1 condition, at 30 cts. per case.
MICHIGAN WHITE CLOVER HONEY CO., 31-33 Griswold St., Detroit, Mich.

Wants and Exchanges

WANTED.—Refuse from wax-extractors and old comb for cash
ARCHIE COGGSHALL, Groton, N. Y.

WANTED.—Refuse from the wax-extractor, or slumgum State quantity and price.
OREL L. HERSHISER, 301 Huntington Ave., Buffalo, N. Y.

Poultry Offers

A. I. Root's Bee-goods, Poultry-supplies, Seeds, etc.
STAPLER'S, 412-414 Ferry St., Pittsburg, Pa.

Indian Runner ducks, Jennings stock, \$1.00 each; fine S. C. B. Leghorn cockerels, \$1.00.
J. A. EVANS, Ellwood City, Pa.

Bee-keepers' Directory

I no longer club a queen with GLEANINGS.

W. T. CRAWFORD, Hineston, La.

Bee-keepers' Supply Co., Lincoln, Neb. We buy car lots of Root's goods. Save freight. Write.

No more queens for sale this fall.

A. W. YATES, 3 Chapman St., Hartford, Ct.

ITALIANS, CARNIOLANS. No disease. Two-comb nucleus with queen, \$3.00. A. L. AMOS, Comstock, Nebraska.

GOLDEN yellow Italian queens—my specialty. Price list free. E. E. LAWRENCE, Doniphan, Mo.

ROOT'S BEE SUPPLIES. Send for catalog.

D. COOLEY, Kendall, Mich.

Mott's long-tongues by return mail, also goldens—hardy, yet gentle, but little or no smoke. E. E. MOTT, Glenwood, Mich.

Well-bred bees and queens. Hives and supplies.

J. H. M. COOK, 70 Cortlandt St., New York City.

For bee-smoker and honey-knife circular send card to

T. F. BINGHAM, Farwell, Mich.

ITALIAN BRES, queens, honey, and Root's bee-keepers' supplies. ALISO APIARY, El Toro, Cal.

Golden-all-over and red-clover Italian queens; circular ready. W. A. SHUFF, 4426 Osage Ave., Philadelphia, Pa.

Order your bee-supplies from Superior Honey Co., Ogden, Utah, at Root's catalog prices. You save time and money. Largest dealers in the West.

Root's bee-supplies at factory prices, *Black Diamond Brand Honey*, and *bee-literature*. Catalog and circulars free.

GEO. S. GRAFFAM & BRO., Bangor, Maine.

QUEENS.—Improved red-clover Italians, bred for business, June 1 to Nov. 15, untested queens, 60 cts.; select, 75 cts.; tested, \$1.00 each. Safe arrival and satisfaction guaranteed. H. C. CLEMONS, Boyd, Ky.

Improved Italian queens now ready. Nuclei and colonies May 1 to 10. Over twenty years a breeder; 500 colonies to draw on. Free circulars and testimonials. For prices see large advertisement in this issue.

QUIRIN-THE-QUEEN-BREEDER, Bellevue, O.

ITALIAN BRES AND QUEENS. I breed three-banded stock only, and use the finest breeding stock to be had. For prices, see display advertising columns in this issue. Send for price list. Twenty-five years' experience.

F. J. WARDELL, Uhrichsville, O.

TENNESSEE QUEENS.—Best that experience can produce. Untested three-band and goldens, \$1.00 each; 6 for \$5.00; 12 for \$9.00. Caucasians, \$1.25 each. Write for circular; order goldens from Ben G. Davis; others from John M. Davis, Spring Hill, Tenn.

Breeding queens of pure Caucasian and Carniolan races—price \$3.00. Order from A. E. TITOFF, Expert in Apiculture, with Russian Department of Agriculture, Kiev, Russia. Remit with orders. Correspondence in English.

For Sale

FOR SALE.—Tasmanian necklace shells, any quantity. Sample sent. G. H. SMITH, Ramsgate, Tasmania.

FOR SALE.—Sweet-clover seed, 15 cts. per pound, postage extra. Root's supplies. ANTON G. ANDERSON, Holden, Mo.

FOR SALE.—Shipping-cases, the no-dip kind; overstocked; get our special prices. A. G. WOODMAN CO., Grand Rapids, Mich.

FOR SALE.—A full line of bee-keepers' supplies; also Italian bees and honey a specialty. Mellilotus (sweet clover) seed for sale at 8 cts. per lb. Write for catalog and particulars.

W. P. SMITH, Penn, Miss.

FOR SALE.—If you want an illustrated and descriptive catalog of bee-keepers' supplies for 1907 send your name and address to
FRANK S. STEPHENS,
Paden City, W. Va.
(Root's Goods.)

FOR SALE.—About 1300 or 1400 cases, two five-gallon cans each, practically free from nail-holes, and were new tins when originally shipped to us. Make us an offer.
CLEVELAND HEALTH FOOD CO., Cleveland, O.

FOR SALE.—360 ten-frame hives complete, \$1.00, as follows: One hive-body with ten wired combs on full sheets of foundation, H. frames; one Danz super trimmed with full sheets of foundation; lid and bottom; Root's goods, in good condition. Also one Root observatory hive, new, complete, \$4.00. All must be sold at once.
H. A. ROSS,
1709 Upper Second Street, Evansville, Ind.

Bees and Queens

FOR SALE.—75 first-class colonies of bees, mostly in ten-frame hives. J. D. HOLDENER, Carlyle, Ill.

FOR SALE.—Fine select untested Red-clover and Golden Italian queens, 60 cts. each. F. M. MAYBERRY, Lederach, Pa.

FOR SALE.—100 colonies at Horseheads, N. Y., complete for extracted honey, \$2.50 each. WM. CARDER, Constance, Ky.

FOR SALE.—Improved Italian and Golden Mortgage-lifter queens. Tested and untested, \$1.00 to \$3.00.
BEST THE BEE-MAN, Slatings, Pa.

FOR SALE.—Italian, Carniolan, and Caucasian queens. Untested, 75 cts.; 12, \$8.50; virgins, 40 cts.; 12, \$4.50. Stamps not accepted. EDWARD REDDOUT, Baldwinville, N. Y.

FOR SALE.—First-class apiary, of 120 colonies with all supplies. Write for particulars to
J. B. HALL, Box 595, Woodstock, Ont., Can.

FOR SALE.—300 surplus young tested queens, red clover or golden, 50 cts. each as long as they last.
H. A. ROSS, 1709 Upper Second St., Evansville, Ind.

FOR SALE.—Selected young Italian queens, bred for superiority in honey production. Single queen, 75 cts.; 6 for \$4.00; one dozen, \$7.50. Also golden-all-over, Cyprians, Carniolans, and Caucasians. JULIUS HAPPEL, 414 Fourth St., Evansville, Ind.

FOR SALE.—Italian bees and queens now ready. Untested, \$1.00; tested, \$1.50. Bee-keepers' supplies, Root's goods. Send for prices. Eggs from Silver-laced Wyandotte poultry.
N. V. LONG, Biscoe, N. C.

FOR SALE.—500 colonies of bees in lots to suit purchaser, at a bargain. Fine condition; no disease. Will ship, or furnish good locations. No wintering problem here. For particulars write
B. F. YANCEY & SON, Angleton, Texas.

FOR SALE.—250 colonies of bees in ten-frame hives at \$2.75 per colony; no disease; fixtures for comb and extracted honey cheap; also 22 acres of land; first-class buildings, and improvements. If not sold by Jan. 1 a reliable man is wanted to rent or run bees and farm on shares. J. H. ZEINER, Bard, Ark.

FOR SALE.—Bees, 300 full colonies, first-class hives, each \$3.75; three for \$11.00. No disease. Must sell this fall. Empty Dov'd hives, \$1.00; supers, 25 cts.; 4-fr. me extractor, \$18.00. Other supplies. Extracted basswood honey, 10 cts. per lb.
L. M. GULDEN, Osakis, Minn.

FOR SALE.—Moore's strain and golden Italian queens, untested, \$1.00; six, \$4.00; twelve, \$7.00. Carniolan, Banat, and Caucasian queens, select, \$1.00; six, \$5.00. Tested, any kind, \$1.25; six, \$6.00. Choice breeding queens, \$3.00 each. Circular free.
W. H. RAILS, Orange, Cal.

FOR SALE.—350 colonies of bees in first-class order on easy terms. I would also sell an 82-acre farm, all in the best cultivation; three acres in orchard and good out-buildings. I would sell the same in 5 and 10 acre tracts on part payments. It is two miles from Caldwell, where the great government project is established. Caldwell is the liveliest city in Idaho. Great work is developing. I also offer a 9-room house and barn, and one block within half a mile of the main street, where I keep one of my yards of fancy poultry, also one river-bottom farm, 240 acres, rich soil, and good water-right; good location for bees. Write for particulars, as I can give you any information desired, for I have been in this country 24 years. OTTO GEISE, Caldwell, Idaho

Real Estate for Bee-keepers

PECOS VALLEY of New Mexico lands are coining \$50 to \$65 net per acre per year from alfalfa. Forty-five thousand acres of alfalfa in bloom five times a year, surrounding Artesia, means honey for the *bee-keeper*. Live in an ideal fruit country, where the largest artesian wells in the world constantly pour out their wealth. Artesia, the future Rose City, already has the famous "Mile of Roses." Homeseekeers' excursions the first and third Tuesdays of each month. Agents wanted, to accompany parties. Write to-day to R. M. LOVE, General Agent, Artesia, N. M.

FOR SALE.—Delaware farm, public road; good buildings, good water; fruit, wood; rural delivery; school, churches, stores, mills, railroad depot, canneries, blacksmith shops, all convenient; an ideal place for bees, poultry, fruit, and trucking.

L. A. LUDWIG, Maryland, Md.

HOMES.—Deep rich soil, abundance of water for irrigation; best market and climate; wheat, oats, barley, rye, alfalfa; red, alsike, and white clover; vetch; small and large fruits; chickens, hogs. Bees average 100 lbs. per colony.

E. G. GIBSON, Oxford, La Plata Co., Col.

FOR SALE.—Farm of 14 acres near city of 20,000; good soil, market, and bee pasture. L. C. HOOK, Richmond, Ind., Rt. 3.

Educational.

Any one interested in the education of a child not yet in school, send name and address to

E. WHITNEY, Flemington, N. J.

KIND WORDS.

The A. I. Root Co.:

The tested southern-bred queen was received in good condition, and she is a fine one too. Enclosed find check.

Lime Kiln, Md., Sept. 3.

J. F. MCABER.

The A. I. Root Co.:

I received the Italian breeding-queen in good condition. Please forward to me a Caucasian as early as possible.

PETER JAMES HURST.

Nelson, St. Ann's Bay, Jamaica, Aug. 19.

The A. I. Root Co.:

Referring to the bees ordered for Judge Woods, of Marion, S. C., I beg to say that they arrived several days ago by express, and at Judge Woods' request I went over to Marion to assist in giving them. The shipment of hives, etc., from Philadelphia, though badly delayed in transportation, reached Marion in *perfect condition*, and we had no difficulty all in getting every thing in shape. The bees themselves seemed to be in perfect condition. We found only *eight or ten dead bees* in each nucleus. After my experience with black or hybrid bees which I found on my place when I leased it, I was hardly prepared for the extreme gentleness of the Italians, even after all I read about them. With the exception of one stung which I received by mashing a bee with my hand while placing the hand on the bottom of the cage, none of them offered to sting. They were very quiet, even after thumping out those that adhered to the inside of the cages.

L. W. MCLEMORE.

I am now reading my second copy of GLEANINGS, and it is beginning to take some of the wrinkles out of my forehead. I have two stands of bees, and they have filled 120 sections already. Our bees will make honey here till November; no frost very often until then.

Beaver, Ore.

A. F. GARDNER.

THE A B C OF GETTING WELL, ETC.

Please send me 100 copies of your health leaflet. It certainly is generous of you to give them free. For some years I have given a year's subscription to the *Practical Farmer* to different people who, I thought, would be benefited. Your leaflets will enable me to reach a great many more people. It certainly is a great work that you and the *Farmer* are doing.

Barium Springs, N. C., Sept. 7.

W. B. BAILEY.

A KIND WORD FOR "OUR HOMES" OF MORE THAN 20 YEARS AGO.

Mr. Root.—I have been reading one of your sermons, "What doth the Lord require of thee but to do justly, and to love mercy, and to walk humbly with thy God." It is in GLEANINGS for 1886. A friend gave me a lot of them, also a subscription for the

year 1908. It was just the kind of sermon I needed, and it helped me very much. I have much to do on Sunday. The children come home, also my mother and husband's brother. They work away, and like to get home for one day in a week. Of course, it is hard; but I like to have them come, and I guess it is the Lord's work and my duty. Sometimes I have doubted and wondered if it were sinful, but I doubt no more. May you write many more of those good stories.

HATTIE E. GRAVES.

Walpole, N. H., June 21, 1908.

"CHICKEN" BIBLE.

In yours for Aug. 15, one of your subscribers asks for a "chicken bible." I don't think he could get one to compare with GLEANINGS, as I have had some eight years' experience with the "chicken bible" as he calls it. The one that, in my estimation, comes nearest to the above, is *Poultry*, published by Miller Purvis, Peotone, Ill. It is bright, clean, and nicely printed. I have no connection with it.

I get more eggs without males. I have had as many as 270 eggs per bird. I am in the business for the love of it, and not to make money.

R. F. HERRING.

Chicago, Aug. 21.

Convention Notices.

A meeting of the Adirondack Bee-keepers' Association will be held at Glens Falls, N. Y., Oct. 1, in the parlors of the Hotel Ruliff. All interested in apiculture are invited to be present.

Glens Falls, N. Y.

ARTHUR W. CARY, Sec.

The annual meeting of the Northern Illinois and Southern Wisconsin Bee-keepers' Association will be held in the courthouse in Rockford, Ill., on Tuesday and Wednesday, Oct. 20 and 21, 1908. All interested in bees are invited to attend.

Cherry Valley, Ill.

B. KENNEDY, Sec.

The annual meeting of the Western Illinois Bee-keepers' Association will be held on Friday, Sept. 18, in the county courtroom at Galesburg, Ill. All interested in bees are earnestly requested to attend and help make this a profitable meeting.

Altona, Ill.

W. B. MOORE, Pres.

Bee-keepers in Alabama, Florida, Georgia, Mississippi, and Tennessee, also points along the route, who will join the party of a carload to attend the National Convention at Detroit, Mich., Oct. 13—15, will please write us for rates, etc. This promises to be the best convention yet, and is to your interest to attend.

Elamville, Ala.

WM. S. MCKNIGHT.

The annual meeting of the Kansas State Bee-keepers' Association will be held at Hutchinson, Sept. 16, 17. The first session will be held at 2:30 on the 16th. This meeting occurs during the State fair, and it is hoped that a large number of bee-keepers will be present. Several noted bee-keepers from different parts of the country have promised to attend.

Topeka, Kan.

O. A. KEENE, Sec.

MEETING OF TENNESSEE BEE-KEEPERS.

The Central Tennessee Bee-keepers' Association met at the rooms of the Nashville Board of Trade on August 8, with about thirty members present. Pres. J. M. Davis occupied the chair. The meeting was opened with prayer by Mr. Ayres, of Cedar Hill. Nine new members were enrolled.

Among the subjects discussed were the following:

Cement hive-stands; home marketing of honey; transferring bees, etc.

Mr. Leslie Martin, of Lebanon, read a paper entitled "Further Experience with Caucasian Bees." He is of the opinion that the Caucasians have held their own with the average Italians in regard to honey-gathering. They are much more gentle, easier handled, and but very little more given to swarming than the Italians. However, he thinks it will take several years, through both good and bad seasons, to test them thoroughly.

J. M. Buchanan spoke on "Bees and Honey at the State Fair." It was decided to place a nice exhibit at the State Fair this fall, as this is one of the best methods of advertising our products.

A committee was appointed to confer with Southern bee-men in regard to getting up a carload of bee-keepers to attend the National convention at Detroit. It was decided to extend an invitation to the National Bee-keepers' Association to hold its 1909 convention at Nashville, Tenn. Our local association has now about fifty members, and at our meeting last spring we voted to join the National in a body.

Most of the members reported a rather short crop this year, owing to too much rain during the flow from clover.

The convention adjourned to meet on the second Saturday in March, 1909, on which date occurs the annual election of officers.

Franklin, Tenn., Aug. 17.

J. M. BUCHANAN, Sec.

SPECIAL NOTICES

By Our Business Manager

NEW MANAGER IN OUR NEW YORK OFFICE.

Mr. L. W. Boyden, who has been manager of our New York office for the past three years, and previous to that in charge of our Chicago office for some time, has come to Medina to take up work in the home office. The new manager in charge at New York, beginning Sept. 1, is Walter E. Thorndyke, a nephew of our treasurer and business manager. Mr. Thorndyke was in the employ of the company for seven years, most of the time in the office, first as stenographer, then as assistant book-keeper. For two years past he has been with the American Steel and Wire Co. in their Cleveland office. He returns to the service of the company with increased responsibilities. We commend him to the patrons of our New York office, with confidence that his previous training fits him for efficient service.

QUEENS.

We have a large number of queens, untested, tested, and higher grades, ready for immediate mailing, safe arrival guaranteed to any point in the United States, at our regular prices. For untested, \$1.00 each; 6 for \$5.00; tested queens, \$2.00 each; 6 for \$10.00; select tested queens, \$3.00 each; 6 for \$15.00.

The above refers to our home-bred Italian stock, red clover, leather-colored strain. Commenting on the queens he had received of us, Mr. E. R. Longenecker, of Lytle, Texas, to whom we have sent fifty queens this season, writes: "There is no question about your queens being superior, and their progeny excelling as honey-gatherers on any flora that I have seen them work. I first bought six queens of you in 1903, and have ordered a number of times since, and have no kick coming." We are sending queens by first mail; and as the season is nearly at a close, orders ought to come in at once to be sure of getting this stock, for we shall be unable to ship after cold weather has fairly set in.

Special Notices by A. I. Root

THE WRIGHT BROTHERS AND THEIR AERIAL FLIGHT UP TO DATE.

I suppose you all know that our two friends, the Wright Brothers, are not only "up in the air," but they are, perhaps, standing out more prominently before the whole wide world than any other two persons now living. Not only are the accounts of their successes found in almost every magazine and daily paper, but almost every periodical of any sort is giving them recognition. As we go to press, Orville has made his third long flight, each one of about an hour or a little more. He has been able to manage it perfectly, making figure 8's as well as circles, and making turns with the wind blowing at the rate of ten to fifteen miles an hour. It is true that it staggered the machine somewhat when he turned about from going with the wind, and proceeded directly against it; but after he had become accustomed to handling the craft he made each turn more easily than the one before it. Fifty-seven times the machine came around to the starting-point during a period of 70 minutes and 24 seconds. After this he took Lieut. Lahm, the army's aeronautic expert, along with him for a flight of 6 minutes and 26 seconds. This was the first time he had been accompanied by a passenger in the present series of tests, and the result was the breaking of all previous records for that sort of flight. The first time that he succeeded in making a flight of almost an hour, when his friends came around to congratulate him on his wonderful achievement, the papers tell us that he actually shed tears—yes, tears of joy to think the moment had come, after all the long years of hard work on the part of himself and his brother, when they had actually demonstrated to the world that man can fly as birds do, and make use of the air above for a general thoroughfare for trade and travel, as well as the waters and the solid ground underneath the skies. I especially admire these two young men because they have worked so slowly and carefully. When a young bird essays to make its first flight from the nest, it has to learn how to use the wonderful wings that God has given it, little by little. Well, these two men not only figured out how to build the machine by cutting and trying, but at the same time they were obliged to learn how to use it, just as the bird has to learn by actual practice how to use its wings. We may congratulate them on having had the good sense and steadiness of mind to work so carefully that no accident worth mentioning has ever happened to either of them; and above all and over all I wish to emphasize the fact that from a beginning to end they have steadily refused to use their machine on Sunday, or even work with it that day. They have also set an example before the youth of our land and others by abstaining from the use of intoxicants in every form. When I

was taking breakfast with them one morning I ventured to ask why it was that neither of the brothers accepted coffee. I think it was Wilbur who replied with his peculiar pleasant smile:

"Mr. Root, we expect to make some flights this morning, and we have learned by experience that our heads are clearer and our nerves steadier if we abstain from coffee at breakfast."

Is it really true that the time is coming (or has come) when the world will accord and pay a premium to those who live pure and temperate lives as do the Wright Brothers?

Many are just now asking the question why these brothers do not take a straight fight, say from one city to another, and let the whole wide world see what they are doing, I presume it will be better just yet for them to keep the machine reasonably near the workshop where their tools and appliances are kept. Another thing, they are just now negotiating the sale of one of their machines to France, and another to the government of the United States. When these preliminary tests are completed we may expect to see these machines, or similar ones, flying over the whole wide world, perhaps including even the north and south pole that have been so much talked about.

STILL LATER IN REGARD TO THE WRIGHT BROTHERS.

From the *Woman's National Daily* we clip the following:

CAN EQUAL BROTHER'S RECORD!

LE MANS, Sept. 13.—Wilbur G. Wright says that defects in his motor are all that have kept him from equaling the flights made by his brother Orville at Ft. Myer, in America. "My motor has not worked smoothly yet, but I expect to get it in shape soon. Just as soon as I find that it is all right I expect to make a flight that will be as startling as that of my brother. There is no reason why I should not, as our machines are practically the same."

From the same paper we learn that Orville Wright, when asked why he did not stay up still longer during the last and longest flight, replied as follows:

"Well, the fact is I came down solely because I was tired and hungry. I could have continued the flight another hour just as easily. I knew by the figures chalked on the shed-roof by my mechanic that I had bettered my previous record, and I thought that was enough for one day."

It seems that the city of Dayton, where the Wright Brothers have lived and experimented all their lives, has just been waking up to the importance of giving the brothers a reception or ovation on their return home. The *Dayton Herald* says in regard to the matter:

"Dayton may crumble in dust, but the name of Wright Brothers will endure as long as earth endures."

"Henceforth the names of Orville and Wilbur Wright will be enrolled beside those of Watt, Fulton, Morse, Bell, Edison, and Marconi in history's tablet of fame."

We make a further clipping as follows:

"No one read the reports of the three flights of the Dayton aeroplane with greater avidity, or discussed the accomplishment with more zeal, hope, and inspiration than did the venerable father of Orville and Wilbur Wright—Bishop Milton Wright."

"The venerable churchman fairly radiated with joy; feeling that the toil, planning, hope, ambition of years had become a scientific reality—an accomplishment that would contribute immeasurably to the material wellbeing of society. The venerable gentleman, bowed with the weight of years, looked younger, felt younger. His sons effected a revolution in science."

"GREAT NAVIES TO MAINTAIN PEACE."

We clip the following from the *National Stockman and Farmer*:

The Emperor of Japan wants a great navy to maintain peace. The Russian Czar wants a great navy to maintain peace. The German Emperor wants a great navy to maintain peace. The rulers of France want a great navy to maintain peace. The king of Italy wants a great navy to maintain peace, and the king of England wants a great navy to maintain peace. And so multitudes of men and women are compelled to hard toil and suffering to maintain these great navies to maintain peace. Norway and Sweden and Denmark and Belgium and all the nations of South America get along very comfortably without great navies to maintain peace.

In view of the above I do not know but I shall have to swing back to where I stood first—see p. 1017, Aug. 15. If all the nations of the earth are obliged to maintain great navies to preserve peace, why can't we, especially those of us who call ourselves Christians, "cut it all out" (as the boys say) and substitute in its place "In God we trust"? Then we can consistently breathe the little prayer that ends with "Thy kingdom come; thy will be done on earth as it is in heaven."

"GOD'S KINGDOM COMING."

On the 4th of July four of our saloons closed their doors, and on the 15th of August the other one will close and then our town will be a dry one. I would like to see them all dry.

Bevier, Mo.

V. B. GUFFEY.

20 AMERICAN GIRLS FREE

Country Girls, City Girls, Western, Southern, and Eastern Girls; Skating, Riding, and Bathing Girls, and many other views of the beautiful American Girl—all free; also a membership to the Post-card Exchange.

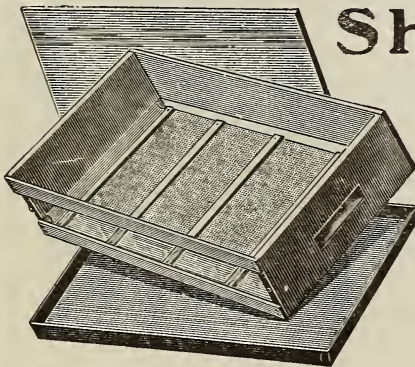
This famous set of souvenir post cards is considered the most popular set ever issued. Twenty different views of the beautiful American Girl; all worth framing—the gem of a post-card collection. I want to place a complete set in the hands of every American woman free.

MY SPECIAL OFFER

In order to place *Up-to-date Farming* in your home I will send it to you for three months for 10 cents, and include, with my compliments, a complete set of American Girl post cards. Every woman should read the family and household pages of *Up-to-date Farming*; the boys will be interested in the stories and puzzles, while the men will read its agricultural and marketing features with much profit.

Remember, 20 souvenir post cards (American Girl set) and a three months' subscription to *Up-to-date Farming*, all for 10 cents (stamps or silver).

Garrett Wall, Up-to-Date Farming, Indianapolis, Ind.



Shipping-cases

for any number or size of sections desired. These cases are made of fine white basswood, and the workmanship is first class. Owing to the shortage in the honey crop last year we have a good stock on hand and can make immediate shipment.

Twelve-inch case, with follower, to hold 24; or eight-inch case, with follower, to hold twelve beeway sections. shipped when no size is mentioned. All cases single tier unless otherwise ordered.

Honey-packages in Tin.

Standard packages for storing and shipping extracted honey. Less chance for leakage or taint from wood; being square they economize space. Five-gallon cans boxed two or one in a box; gallon cans 10, ½-gallon cans 12 to box. Five ½-gallon cans not boxed if desired. Prices on application for any quantity.

Place your order now; prices and prompt shipment guaranteed.

MINNESOTA BEE SUPPLY COMPANY
123 Nicollet Island, Minneapolis, Minn.

Oldest Bee-paper in America

This Coupon Worth 35 cents

Now in its 48th Year

(New Subscribers Only)

Name

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State

If not now a subscriber and you want one of the most helpful aids to successful bee-culture—a paper that tells how to make your bees pay—you should subscribe for the

AMERICAN BEE JOURNAL

A 32-page illustrated 75-cent monthly. It tells all about the best way to manage bees to produce the most honey; with market quotations, etc. A dozen different departments—one for women bee-keepers. Best writers.

It Will Increase Your Honey-Money

If you will send us your name and address with 40 cents (stamps or coin) together with this coupon, we will send you a trial trip of our Journal for 12 months. Order now and let us begin with this month's fine number. Address,

American Bee Journal, 118 West Jackson, Chicago, Illinois

HONEY

We have on hand a fine lot of new extracted white-clover honey which is excellent, and which we offer at the following prices :

Barrels (about 550 lbs. each)	8c per pound
Ten 60-lb. cans or more	8½c "
Two 60-lb. cans or more	9c "
One 60-lb. can	10c "
Six 10-lb. cans or more	\$1.15 each
Twelve 5-lb. cans or more	60c "

After September 20th we can furnish amber fall honey at the same prices as above.

Sample free

DADANT & SONS, Hamilton, Ill.

FOR OVER 25 YEARS

our make of goods has been acknowledged to be in the lead as regards WORKMANSHIP and MATERIAL.

Our AIR-SPACED HIVE is a most excellent winter hive,

and fully as good and convenient for summer management as the single-walled. Same inside dimensions as regular Dovetailed hives; all inside material interchangeable with Dovetailed hives.

We manufacture full line of BEE-KEEPERS' SUPPLIES.

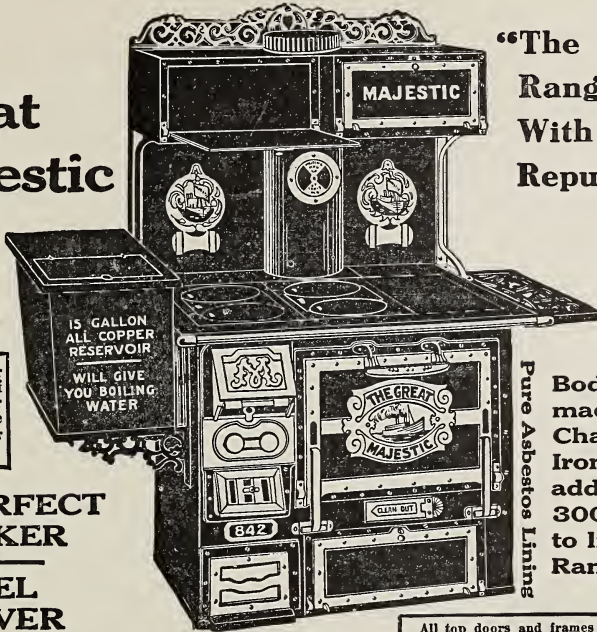
FALL AND WINTER DISCOUNTS:	Sept., 7 per cent.	Nov., 5 per cent.	Jan., 3 per cent.
	Oct., 6 per cent.	Dec., 4 per cent.	Feb., 2 per cent.
			Mar., 1 per cent.

Catalog free.

W. T. FALCONER MFG. CO., Jamestown, N.Y.

The Great Majestic

"The Range With A Reputation"



With water fronts if wanted for pressure or other boilers.

**PERFECT BAKER
FUEL SAVER**

Pure
Body
made of
Charcoal
Iron,
adding
300%
to life of
Range

All top doors and frames made of malleable iron. Can't break or crack.

You don't buy a range every year. Therefore when you buy one, buy the best. At first the Great Majestic may cost you a very little more than an ordinary range, but in the end it is *much cheaper*. It has *durability* and will out-last three ordinary ranges. It is scientifically built—*no heat can escape or cold air enter*—will save half on your fuel bill. A perfect baker—*not one day good—next day poor—but always uniform*. Will save you from disappointment and poorly cooked meals. Your Best Guarantee: 1st—The reputation of the plant behind the range. 2d—Hundreds of thousands in use every one giving satisfaction. We want you to see *The Great Majestic*. If no dealer near you has it, write us—we will send you free our booklet "Range Comparisons," and tell you where you can see a Majestic—the range that gives satisfaction and out-lasts all others.

THE MAJESTIC MFG. CO., St. Louis, Mo.

The Great Majestic Is For Sale In Nearly Every County In Forty States



If YOU are in want of anything for Orchard, Vineyard, Lawn, Park, Street, Garden or Greenhouse, why not patronize the old, reliable, up-to-date, S. & H. CO., who have made a specialty of dealing direct with planters over half a century?

Seeds, Bulbs, Roses, Shrubs, Vines, Mail-Size Trees, Etc.

by mail, postpaid, safe arrival and satisfaction guaranteed.

Large orders and large trees by express or freight. Catalogue No. 1 FREE to buyers of

Fruit and Ornamental Trees;

No. 3 to buyers of Hclland and other Bulbs, Roses, Ferns,

Palms and Greenhouse Plants in general. Try us. 54 years.

44 greenhouses. 1200 acres.

THE STORRS & HARRISON CO.
Box 4, Painesville, Ohio.

SPRAY PUMPS

"TAKE OFF YOUR HAT TO THE MYERS"

15 YEARS

The Pump that pumps easy and throws a full flow. The cheapest pump is the best pump, that's a Myers. Pumps, Hay Tools & Barn Door Hangers. Send for catalog and prices.

F. E. Myers & Bro.
Ashland, Ohio.



MICHIGAN LAND

for fruit, stock, and diversified farming. Write S. S. Thorpe, 10 McMullen Bldg., Cadillac, Mich.

CALIFORNIA PRODUCTS

DIRECT TO YOU

WE PAY THE FREIGHT

Guaranteed First Class and this year's crop

Dried Fruit

Apriots Peaches
Prunes Pears
Muscatel Raisins
Seedless Sultana and
Seeded Mus'l Raisins

Packed in two-pound cartons, except seeded raisins, which are packed in one-pound cartons. Then cartons packed in cases, 25 cartons to the case. Our dried fruit retains all the flavor and goodness of the fruit.

Pure Extracted Honey

Made of the blossoms of the orange and sage—the finest flavor in the world. Put up in one-gallon and five-gallon cans. *It will keep indefinitely.*

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