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## The Practical

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## A NEW DEPARTCDT

## The Bee-Keepers' Quarteriy

Will be issued Aprllist, 1 894, 2nd be largely derobed to editorial review of apicuilural hiterature. It will contain mot only sall pracrical methods of man: zgettent and devices fousud in Bee fournuls, but many point not siven elsewhere. Eurnost efforts win be made to climinate the impractical theories and claimas so ofter met with in bee literature, givirig ouly prac. ticat information whioh may invariably be reliod apon There is some wha mako a financial ssicooss in thaso hart timps 2 m . to show your bow thoy do it will bo Quartaiy's miseion. Prfoe 250, per year. JANES HEDNON, Dowagiac, Mich.

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bi zents, or Suocrass one year amai Hutchison's book "Advanced Beo Gulture" 75 cants.

If you prefer we will send Succasso one year and Hilton's book "How I Produce Combilioney" fresh from our preas for 50 ceats.

A late gample and two back numbers of The Eee-Keepers Enterprise 10 cents. BURTON L. SAGE, Highwood. Comn. Mention Practical Bee Keeper.

## A OUPERIOR ETRAIN OF GOLDEN ITALIANS

. The results of 13 years' careful solection and breeding. They are getntle, industrious, good comb builders, enter the sections readily, are not inclined to swarti and are second to none in beauty. By practical teas they excel all competitors in storing honey. Queens ready to shaip from April to November at prices as low as good queens can be sold for.
Do mot fall to send for descriptive catalogus before you purchase. Safe arrival and satiefaction guszanteed;

> C. D. DUVALL,

Mention Practićal Bee-Kréper.


To clear out balance of Nuclei for 1894, I will sell TWO FAAME NUCLEI: With two frames of brood and honey, with plenty of bees and 5 Banded Gyern for the low price of

## $\$ 1.50$ EACH.

Also a large number of WARRANTED QUEENS at 76c. each, yeilow as gedd.
SFAND ORDERS AT ONCE.
Gatisfaction guaranteed to all who favor me with their onder, or money refunded.

N H. BMTTH,
Lock Box A Tilbury Centre, Ont.

## g-ganded italian queens

Wi.....uwi-il, after May, 75c. Best stoct and method; no poor, forced greens. This is kow they please:
"The dozen queens I reed frmm you last May, have proved very satisfactory indeed-Part give bees as yellow ns gold, verygentle aud pood workers. You misy expect more arders fram me."
F. J. Millet, ziz Dandas Str, Lon:Ont.
"The queons came promptly. They are an extra fine lut: The Beas are finely marked, gentle, and hustlers when it comer to honey. I have no troable in picking them ort now from over 600 colontes."
W. L Cloggxhall,

West Grotm, N. Y., Owt, 37, Send for Circular and Quantity Prices.
J. B. Case, Pt. Ofange, Florlda. Mention prachesl Bee Keeper.

## The Practical Bee=Keeper.

New Skries
Vol. 1.

Tilbery Centre, Ont., July, 1894.
No. 4.

Dr. Miller in A. B. J. does not advise contracting the brood-chamber in order to force bees to go up into the supers. His plan now is to leave the same number of frames in the hive the year round. To get the bees to work in the supers; he adrises putting into the super a single section partly worked ont. This is done as a bait.

Only clean Sections should be useat for comb honey. Soiled and old ones would better be used for kindling. New sections are so very inexpensive now, that to use any other than those in excellent condition, is hardly excusable. It pays to consider appeatance in producing. comb honer. Temptingly white comb honey in neat and spotless sections will find the readiest sale, and at the best price.-A.B J.

An interesting find has been mad: in Texas. While workm.n wer. digsing a well on a farm near Bandora, they unearthed a petrified tree at a depth of 45 feet. The tree was hollow, and the cavity was filled with honer. The comb was in a perfect state of pres.rration, and the cells wera filled with honer that tasted sweet, fresh and pure. How old this honey is camot be known, but it must have taken humdreds of years to have buried the tree to that depth and caused its petrification by matural causes.

In order to test the adrautages or disadvantages of "The Wells System" the editor has had constru.ted for him two hives. These hives are dovetailed,
twenty-six inches long by twenty inches wide and hold sixteen Hoffman frames. In the centre of the hive is an eight inch partition, full depth and perforated with holes about one eighth inch in circumference and one halt inch apart in every way. These holes were made witn a saddlers punch. A better plan would be to driil the holes with a small bit
On June 1st two colonies were transfered to one double hive and on June Sth two more were put in the other. The hives have two entrances, both in front, although the inventor, Mr. Wells, advocates four, two in front and one at either end. On June 9 th a super was placed on the hive first transtered, mot that honer was plentifut (for, I am sorry to say, the white clover does not seem to yield any nectar this. year) but that th: colonies might not be tempted to swarm through lack of romm. These supers have the same outside measurements as the hives, but have a partition perforated with half inch holes in the centre. This partition is threeceighths of an inch thick, strengthens the super and supports the standard tin rests for the sections. Each super holds fifty-six sections. A super was placed on the second double hive on the 1bth, and an examination showed that the bees had just begun to work in the other. If any of our readers wish a fuller description of this hive we will be pleased to furnish it. Next month we shall tell how the hive tumed out as a honey producer. At present, we are sorry to sar, that bees are doing unthing. The blossoms sem to contain no nectar owing to the continued dry weather.

Advices from our correspondents presage an abundant harvest. While we consratulate them. we condole with ourselves, as bees at this vriting', July 1, in our vicinity, have done little or nothing. The lower story is well filled, brood and bees are plentiful, but absolutely nothing has been done in the supers.

The "Progressive" is all that its name implies. Apart from the excellent matter it contains we desire to offer our meed of praise to the excellence of its typographical work, especially to its well displayed advertisements.

A Northern beekeeper says, when his bees hegin gratnering honey from the willows, maples and other early honeyproducing trees, he goes to work in the evenings and uncaps the honey in every colony, puts a queen excluder and halfstory filled with combs on each colony. -Then he packs all argund and on top of the half story, covering all with the lid of the winter case. During the night the bees in their well-packed hives will rush the uncapped honey into the halfstory, which wiil leave more empty combs in the brood chamber for the queen. Soon after that the combs in the brood chambers will be filled with brood clear up to and all along the top bars. The bees will also continue storing honey in the half-stories when oners started this way. If this method is followed evary colony will be in prime condition when the clover blooms, and ther will have gathered already a large quantity of honey from fruit blossom, dandelions and thorn trees.-American Farmer.

## WESTERN FAIR, LONDON.

As usual at this time each year the Western Fair Office staff are busily engraged in mailing Prize Lists and other advertising matter throughout the Province, in comnection with their great

Live Stock and Agricultural Exhibition which they hold in London, September 13th to 22nd, this year.

The Secretary writes us that he will be pleased to mail a Prize List to any who may have been overlooked, on receiving their address. Thousands have been sent out, but still there are more to follow. On examining them you will find the Directorate have had their eyes open to the continual advancement of this great fair, and have made several additions, alterations and amendments to the last year's iist, some of them very important to breeders and agriculturists, and others of a lesser magnitude. All of the live stock departments have received some new sectimis, and an-increase of prizes which will no doubt be received kindly by intending exhibitors.

## SATISTIED.

Lucan, June 25, 94.
Mr. C. A. Ouellette,
Dear Sir.
Received Premium queen on 21stall right. I hope she will prove a good one. With thanles, yours,
G. W. Hodgins.

St. Marys, June 25, 1894.
Dear.Sir.
The two queens came on 23rd. Saturday night, all right. They are two nice queens. They came the next mail after I sent the letter..

> Yours truly, Josiah Whetstone.

Ronson, June 22, 1894.
Dear Sir:
Received your Premium Queen on 20th all O.K. Many thanks. She is a dandy. Is well worth a dollar. If you work on the same plan another year, think I shall be able to send you several names. With best wishes for your success.

> Respectfully,
> WIm. Simmons.

Lieury, June, 26, 1894. Drar Sir,

The premium queen arrived all safe at this office and was delivered to Mr . Reeder

## Yours truly, <br> Morland Reeder, P. M. <br> Essex Centre, June 21, 94

Sir:
In answer to your P. C., she arrived safe with her body-guards with much satisfaction to myself. I introduced her forthwith. At the desired time I took a squint; she had disappearea among the many with many hopes of securing her reproduction in the near future, thanking you for your Bee-line system I remains: Yours Respectfully,

Samuel Dean, Essex Centre, Ont.
Mr. Ouelette, Sir;
Your card of 20 th inst to hand, enquiring about Queen, arrived all right four days before your notice, and is now laying nicely. She is a nice looking queen, thanks for same.

I remain, Yours,
David Smith.
Beaverton, June 27th 1894.
C. A. Ouellette, Dear Sir:

The Queen came all right and is safely introduced.

Yours Truly
P. Dawson.

Winchester, June 2594.
Dear Sir;
Queen arrived safely.
Yours, etc.
J. Rowat.

Cokransville, Que. June 24th 1894, Dear Sir.

Very much pleased to state, your premium queen received and she is a beauty and satisfactorily introduced and attending to business. Two cards filled with eggs already. Please accept many thanks.

Yours truly,
Asa A. aJohnston.

## REMOVING BEES FROM TREES.

[1885] I notice your correspondent, W. Adarns ( 1869 , p. 215), in Bhe Journal of May 3i, inquires as to taking stock of beas from trees. Having taken four or five lots from hollow trees, my plan may he of use to him. First, with centre-bit hore four or more holes round the entrance, something in the nature of a square, so as to have it nuarly a foot each way. Then run a fine saw through from hole to hole, and the piece of wood so sawn can then be got out. - Next bore a hole in back of tree, and use the smoker; by this moans he will cause nearly all the bees to cake wing; he can then insert his hand, und with the help of a knife take out the combs one by one, and tie them in his frames. Of course, it must be understood the queen-will not take flight, and on finding the comb on which the queen is seen he can then drive sut the few bees remaining in tree. Keplace the square of wood at the entronce, stopping up the holes and also the one at back of tree with clay. The flying bees will join the queen in the frame hive, and he can remove it when they are settled down and quit in the evening if its future location is two or more miles away. Otherwise it should be left near the tree till the end of season. If the above plan is carried out with ordinary care and courage, I think he will get his beea, as I have done, and have yet io learn what the wird fail means so far as this job groes.
1 am sorry we are having so much wet weather just now, as hives here are all crammed with bees, and cannot do much for want of sunshine.

Thos. Adams, Ely, near Cardiff, June 4-B. B. J.

Scot is used by English gardeners for onion maggot. They dust it over the plants and apply to the soil.

## QUEENS.

N. H. SMITH.

In the Northern States, to my inind, July is the best month in which to discard your old and worn out queens, or if you still have black or hybrid bees, to introduce the Golden Italian, I mean the so-called five-banded queen.

I have tried a great many of the different races of bees but have found none to compare with them in all respects. They are as much superior to the threebanded as the latter are superior to the blacks.

The tollowing are some of their charasteristics which to my mind recommend themselves to the consideration of the advanced bee keeper:

1. They are larger bees and better honey gatherers, and easy to handle.
2. They will work well in cold weather when other bees do nothing.
3. They cap the honey very white, work well in the sections, breed up early in the spring and do not swarm much.

When I find anything better I will get them.

I always winter young queens unless I have some extra breeders, in which case I keep them just-as long as they are o. k. I wintered one hundred swarres last season and did not lose one of them. I may be accused of partiality in this matter because I rear queens for sale, but I beg to assure the reader that from the time I bought four Italian queens and found in the fall that these four had the best colonies in the apiary, with plenty of winter stores and some to spare, while other colonies standing alongside of them required feeding, I changed my whole apiary to Italian as soon as possible and would advise others to "go and do likewise.".

Buy two or three queens as I did, place them side by side with your hybrids or blacks and compare results. These are the days of improvement in stock. The grogressive farmer thinks little of par-
ing a high price for a thoroughbred calf or pig in order to raise the standard of his stock, and he finds in every case it pays him to do so. In like way the pro gressive bee keeper is always on the lookout for improvement in everything connected with the apiary. The queen bees as well as the modern appliances in bee-keeping supplies and in this way he keeps abreast of the times.

Full Sheets of foundation given to bees in brood-frames having no combs, will greatly encourage the bees to work.

## NOTES FROM LINDEN APIARY.

How many bee keepers are looking. forward to a good honey flow? Evelv bee kaeper should be busy at this season of the year. I have been unusually busy running a queen yard of over two humdred nuclei, "out apiaries," and the other necessary work in the apiary, besides I am just finishing picking a large crop of strawberries. Now I will have more time to devote to the bees; we are having the best honey flow we have had for several years. Tulip poplar yielded well and clover is in its height now.

About the first of May I bought an apiary of forty hives of black bees in box hives about twenty miles from my home yard. It was too late m the season to transfer them and I could not bring them $\cdots$ home on account of the black drones, so I bought them with the privilcge to lot them remain where they were until fall. I made artifical swarms from them as fast as they were strong enough, ane paid twenty-five cents each for every natural swarm the parties would hive for me. I will get a nice lot of bees and some surplus honey-

The Solar wax extractor has been a source of pleasure to me this year. It is something that no one who keeps a dozen or more hives can afford to do without, and if any bee-keeper is trying to get along without one they had better
gret one as it will soon pay for itself; the
The question was asked at the convention at Chicago last fall, "What is the cause of so many of the queens sent out proving worthless," or something to that effect. I have come to the conclusTon one of the causes is having queens raised from larvac instand of the egg. I find some of the breeders that are using. the Doolittle plan, are sending out inferior queens to what they did before they adopted that method. I think the trouble is in trying to gat a colony to raise too many queen cells or using too old larvae. I want my queen cells started from the egg to produce the best queens. Our queen breeders, I am afraid, are sacrificing quality for the sake of producing cheap queens, yet I believe they are unconscious of it.

> C. D. Duvall.

Spencerville, Md., June 1894.

## AN INNOVATION.

G. jourdain.

An innovation which appears to us to be a happy one has been wrought out lately, in the construction of hives.

The practical man is begiming to understand that strong colonies are a primary condition of success, and he has utilized the fecundity of saveral queen bees to obtain colonies composed of nearly 100,000 bees.

At first the twin-hive was invented. The word itself defines the thing; it is a single hive containing two brood-nests; in it are lodged separataly two families up to the end of April or during May, at which time the poorer quaen is suppressed and the two colonies remited.

Does this system really. present any advantages?

Practically this is what we have:
(1) A better method of wintering because the two colonies mutually warm each other through the thin partition which s?parates them:
(2) An advanced development of the brood favored by the temperature of the hive and by the economy of provisions which is a consequence of $i t$ :
(3) A double force of workers for the honey flow since a part of the nurses are no longer occupied in raising brood.
The twin-hive has beer much extolled by the distinguished apiculturist M. Devauchelle. For two or three years it has been growing in favor in widely scattered localities and many apiaries are now furnished with good and beautiful double hives. The Bulletin of the Apicultural Society of the Somme has several times published results obrained by Mr. Devauchelle. These results show clearly the advantages to be derived from the new system.

The double hive has also been tried in Belgium. In place of dividing the strong colony obtained by the suppression of one of the queens in May, some of the Belgian apiarists prefer to add a small colony in July to the double hive. This puts them in possession of an enormous colony for the honey flow succeeding.

An English apiculturist makes use of a metal partition which does not allow the bees to pass but assures to each hive the same odor. He thus avoids any disturbance at the entrance of the hive.
In some double hives the partition is never raised. Each hive works on its own side. But above the two brood chambers is placed one common supar. When the honey flow is greatest the bees of the two colonies put their honey in the common super. A parforatad metal partition (queen excluder) allows the workers to pass but not the queens or drones. This makes a combination to which we are not partial. The simple twin hive is certainly better.

To resume, the double hive marks an important prograss in apicultura. It is a little heavy for manipulation but this is more than offset by the grod results obtained from its use.

## Bees and Pollination of Blossoms.

 BY PROF. A. J. COOK.[A LECTURE DELIVERED BEFORE THE SOUTHERN CALIFORNIA HORTICULTURAL SOCIETY AT PASADENA, ON MAY 3, 1894.]
(Continued.)
In some plants called dichogamous, the pollen is ripe, and discharged either before or after the stigma is ripe, or ready to receive it. This is seen in some of our pears, and is a common peculiarity among plants. Other hermaphrodites, known as heterogonous, have two kinds of Stamens and two kinds of pistils, one long and the other short. One set of flowers have long pistils and short stamens, and the others short pis. tils and long stamens. In these cases insects transfer the pollen, and crosspollination is insured.

In all these cases, we see that nature has fenced against close pollination, or as some one has suggested, nature seems to abhor close pollination. The flowers have so developed in the process of evolution, that cross-pollination is enforced and in the last case we see that insects have controlled in giving trend to the development. The other argument comes from direct experimentation, and proves that many perfect flowers require cross-pollination. Flowers were emasculated just as they were opening, before the pollen was ripe. That is, the stamens were all removed. When the stigmas were ripe for the pollen, they were dusted with pollen from other blossoms on the same tree, from those of other trees of the same variety, and from those of trees of other varieties. Other blossoms were covered, and the stigmas dusted exclusively with pollen from their own stamens.

These experiments gave different results with different fruits, and with dif
efrent varictics of the same fruits. Some varieties are perfectly sterile, and others perfectly pollinated with their own pollen, or that of the same variety of trees, while others were imperfect in form and size, and seedless if not pollinated with pollen of another variety. Many varicties, especially of plums and pears, will bear no fruit, or very imperfect fruit, if not cross-pollinated.
Experiments in mohicati.

While in Michigan, I tried hit the State Agricultural College, numerous experiments, as did my friend and colleague, Lr. W. J. Beal, that we might determine just how necessary this cross-pollination might be. Dr, Beal experimented with red clover, and I with red and Alsike clover, and with several cullivated fruits, as cherries, plums, apples, pears, strawberries, raspberries and blackberries. Sets of blossoms of the same number were marked on contiguous plants or twigs, and one or two of the sets just prior to the opening of the flowers, were closely covered with cheese-cloth, while the other set was left uncovered.

In several cases it was noted just when the stigmas were ripe, and bees were caught and enclosed in one of the cheese-cloth bags surrounding the flowers. The bees were watched and seen to work on the flowers in several of the experiments. The results published in the Report of the State Board of Agriculture were surprising. The covered flowers, where bees : were excluded gave from no fruit to very little, except in the case of strawberries and blackberries. where there seemed very little difference, while the uncovered and covered, while bees were enclosed in the bags with the blossoms, bore well.

In some of the cases, as with cherries and plums, the contrast was remarkable. In several of the experiments where bees were admitted under the
covers, especially red clover, where bumble-becs were enclosed in the sacks, the fruitage was equal to that of the uncovered plants

These experiments seemed to show conclusively that cross-pollination was necessary, and that bees and other sweet-loving insects were a most important factor in securing a full crop of fruit.
It has been objected to the above experiments, that the very fact of the covers vitiated the results; that very likely the covers themselves would partially or wholly prevent the development of fruit. I would reply that in hand pollination such is not found to be the case, and that in some of the above eases the flowers were covered, and bees caught and put inside the covering sacks, and a good yield of fruit secured.
experiments at pomona college.
Upon coming to this State and county, early this year, it occurred to me that it was very desirable that similar experiments should be conducted at this :place. That a thing is true in Michigan is no certain proof that it is so under the very different conditions of California. If cross-pollination is essential here, where fruit culture and bee-keeping alike are important industries, it is very important that it should be generally known, that the fullest benefits of such knowiedge may be secured. ? therefore commenced some investigations, which though less extensive and complete than I should like, and less so than the importance of the subject demands, are as much so as the time at my command would permit. Some of the experiments, indeed we may say all of them, are yet in progress.
Among deciduous fruits I have experimented on plums, cherries, apricots and pears. I am also investigating the pollination of the orange and lemon among citrus fruits. As yet I can only report
on the deciduous fruits, and of these the report will be but partial.

The experiments were conducted in much the same manner as in Michigan, only in evc.y case I put bees in one of the sacks surrounding the blossoms, and in one experiment with the plums I removed one sack when the bees were working in force on the tree, and marked the blossoms on which I saw the, ees alight: covering all up again as sôn as I ceased watching them. I caught some: of the bees and examined them with a lens, and found their heads, legs and bodies well dusted with the polien. A similar examination of the Howers showed that they had received.pollen from the visiting bees. The number of blossoms in each experiment varied from 32 to over 100 .
As soon as the blossoms withered I removed the covers, and a week later found what seemed healthy developing fruit in abundance on all the twigs. Thus we see that any lack as the result of closs pollination does not show at once. Last Friday I examined all the twigs. The plums- two different trees in different orchards-the cherry and the pears (two trees) show not a single fruit on the twigs from which all bees were excluded, while those covered with sacks in which bees were put, given on plum in one case three, in the other five; the cherry five and the pear six and eight, respectively. The limbs meorered from the same number of blossoms give eight and five on plums; the cherry seven; and the pear eight and elevon.

It will be observed that only from onefourth to one twentieth of the blossoms under observatiou have developed fruit. You all know that this isalways so. The blossons are in clusters of five, more or less: while the fruit, if we except crabapp:les, is usually single. In case of oranges, how very few of the blossoms come to fruit.
(to be continued.)

LOSSES. THE SEASON. SMOKE.
Some twenty-four years agrol lost all the bees I had in wintering. I had about sixty colonies. They died of the beediarrhoea. As might be expected, that led me to look very carefully into the wintering problem. After that, during a period of perhaps ten or twelve years, my winter losses ranged from about fiftean per cent at first down to about five, anurfor the last dozen years or more about two to four per cent would cover winter losses, barring accidents, such as a colony or two turning out to be queenless when put into winter quarters, or occasionally a colony consuming. an abnormăl quantity of stores ( 30 pounds) and starving to death. But the past winter I lost some fifty colonies, about half my stock. "How was that?" The reader may ask. Well, it was thus: As most readers know, I was absent from home last season at the World's Fair in charge of the Ontario apiarian exhibit, and when I arrived home on December 23 rd, I found my bees in very bad shape and ten colonies already dead. There had been zero weather as well as wet and stormy weather, and as they were still outside and nuprotected the adverse conditions were playing havoc with them. The result this spring was not, therefore unexpected. However, things are booming now, and I shall soon have about as many bees again as I want. They have been on the Alsike clover about ten days, and yesterday (June 17,) the white clover showed itself, and the swarming goes steadily on. It was thought carly in the season that the elover was about all winter and spring killed, and very much of it was, especially the Alsike and the red; but the white is showing up fairly well and the Alsike, of last year's seeding escaped the frost andis pretty good. As I sow the Alsike every year, 1 am fortunate this spring in having ic considerable to fall! back upon. While the neetar in the

- Mammoth red is usually inaccessible to the bees, and the White frequently fails to yield even when there is a profusion of bloom, the Alsike I have never known to fail in its yield of nectar. It is therefore my favorite honey plant. Of course the linden or basswood stands alongside if not ahead, of the clover in Ontario as a honey producer, but the saw mills and paper mills, I am sorry to say, have swallowed up all in this district except seattering trees. I am looking forward, however, with pleasant anticipation to the time (if I do not shuffe off this mortal coil too soon) when my own basswood orchard of about five hundred trees, planted with my own hands, will be yielding up the precious sweet to the bees. The trees are looking well this spring and are growing rapidly.

Bees, so far as I have heard have wintered well and the Spring on the whole has been very favorable here in castern Ontario. April was very fine and the Maple, laandelion and fruit bloom gave the bees an early and vigorous start. True, there was a cold, wet spell lasting some ten days, but it occurred just at the right time to do the bees least harm, between fruit bloom and clover bloom. On the whole the prospects are good for a fair crop of honey. SMOKE-SMOKING-AND SMOKERS.
A good smoke, properly applied from the nozzle of a good smoker is one of the thingsin a bee-vard much to be desired In a letter before me from a customer to whom I had supplied a colony of bees, he says he took the wire cloth from the entrance as directed, after placing them on their stand, but that he did not "do the rest" as the bees "chased him off," adding that he would "do the: rest in the morning." A little smoke blown in at the entrance before taking away the wire net, would have obviat.d any necessity of "rumming away," and enabled him to finish fixing them up in iheir new home. And if he had no smoker a piece of rotten wood buming at
one end would have answered.
Which is the best smoker? That I shall not undertake to decide, but the best, I think, that I have used so far for a good smoke, a long smoke and a strong smoke, is one made, I believe. by Mr. R. L Patterson of Wentworth Co., which was obtained through the kindness of our foul brood Inspector, Mr. McEvoy, who loves a good smoker, knows a good smoker, and of course keeps his "weather eye" open for the best. Which is the best fuel?. I have tried and used a grood many kinds $m$ the past thirty vears, The last is the best and cheapest and here it is, unpatented. I load up in the following manner, and it takes about three to five minutes to get the charge in. First in, some dry cedar shingle shavings. The shingle shavings, unlike ordinary planer shavings, are long and stringy, resem bling woolen yarn somewhat in appearance. A lighted match is dropped down in the shavings. Then old, dry cedar bark (what I am now using is twenty years cut) is broken up (and if it is par. tially decayed there is no difficulty in breaking it) and put in over the shavings, loosely at first till it. gets well ignited and then packed. The barral is filled up nearly to the top, the last material put in being a crumpled up ribbon from the inside of the bark, which keeps back the debris and ashes from comingout at the nozzle. It may be necessary to give the fire a klast from the bellows once or twice to make sure it will have a grod start. This ives a good and strong smoke and will burn for hours. Let those who are bothered about smoke try it. In the absence of shingle shavings, excelsior or even ordinary dry pine shavings will do to start with.
But given a good smoker and a good smoke. I find that only a few know how to use the smoke. They may know how to use the smoker butnot the smoke. The different colonies of bees, like
the differing and different pupils in school, require different treat ment. A gentle puff is amply sufficient for some, a torrent of blasts for others. But bergin gintly with all and only give such doses as are required. In all my experience I never met with but one colony not amenable to smoke-indeed with a lofty contempt for the sinoker. Aft ar I had deluged them with smoke to no purpose, and the stings were coming thick and fast, and the Scotch that is in me had gotten rep about as high as the ire of the bees, I stood up alongside the bive, and having on my big boots, I began to kick the hive in vigorous fashion. It was a fast bottom, and I kicked and smoked and smoked and kicked till I kicked it off its stand. In the space of about five minutes the little hycrid hornets succumbed to the heroic treatment, and spreading themselves all over hive and frames. with wings extended uttered that note of submission known to all who have manipulated bees and "order reigned in Warsaw."
But this kiciing business is quite exceptional and forms no part of the "advice to beginners.".

> Allen Pringle,

Scely, Ont. June 18, 1891.

## PORTRAIT OF AN APICULTURIST.

## (translated.)

An apiculturist is not altogetier a man like another. He is in the first place a man exceptionally affectionate; and whoever has familiarized himself with bees, has ouserved them closely, visited them, cared for them, is a man properly constituted. He has for them not only $a$ certain affection but a real passion, mild and calm, it is true, without violence. but sincere and rrofound, inexhaustible in pure pleasures and tender prenccupations of all kinds. With him sife is it pereetual honeymoon.
If an apiculturist is at home he
absolutely cannot resist visiting his bees at least two or three times a day. Generally there is nothing ior him to do; but-he is there, near them; that is sufficient.

If he returns from a journey or from some prolonged necessary absence, be sure that bis first visit after his return will be to his dear bees. Happy man, if while embracing his family he does not permit his impatience to visit his pets to be seen.

Two neighboring apiculturist, are not as might be believed necessarily jealous. If thev are not yet friends, be sure they will not long delay in' becoming so, for each will seek the cccasion and burn with impatience to meet the other. An apiculturist requires to pour out his heart, to communicate his impressions, his thoughts, his joys, his hopes, his good fortune, the experiments he has made, those he proposes to make, in brief those thousand smiling projects, those sweet dreams of the future and of prosperity which are found in the mind of the enthusiastic apiculturist.

Abbr Voirnot.
St. Esprit, June 27, ${ }^{\text {94, }}$
C. A. Ouellette, Esq. Tilbury Centre, Ont.

## Dear Sir.

Enclosed, please find one dollar for Queen and paper. Your No. 2, Vol. 1, of Practical Bee-Kemper, has accidentaly fallen into my hands; and I am greatly satisfied with the articles that I read in it. I would like to receive the first issue; as I have the second on hand. and you can date my subscription. from the start of paper. Please senit circular and price list. This is a good place for bee keeping; and if the queen is spleudid I believe that you will get a few subscribers here.

Please send circular and price list.
Yours truly,
Hermas A. Riopeler.

An exchange says, in making purchases of bees many are apt to select the light and bright-colored Italians. With these we have never had as good success as with the darker strainis. The best comb honey proriucers that we have found have been the hybrids or halfbloods. The only drawback attending these is there vindictiveness. They are more vicious and will not bear the handling that the full-bloods will bear.American Farmer.

Some one has asked if he should put in a starter to make the combs straight. It is always well to use one of some kind, for without the bees will be likely to build the wrong way. Stick a piece of clean white comb on the top of the section with softened beeswax, to serve as a hint to the bees, if you have just a few sections. Nearly all beekeepers use comb foundation and machines to fasten the starters in the sections.-American Farmer.

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