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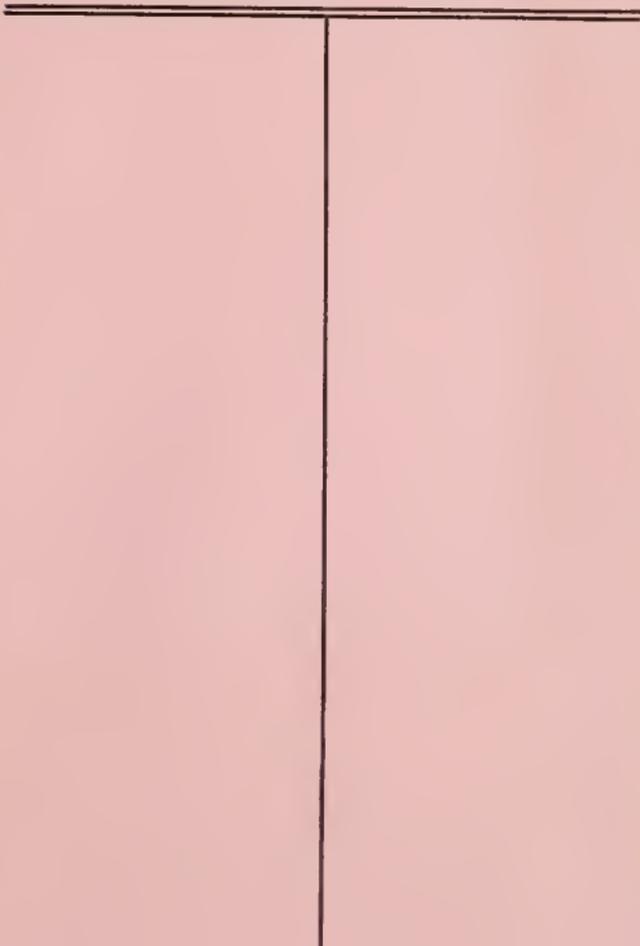


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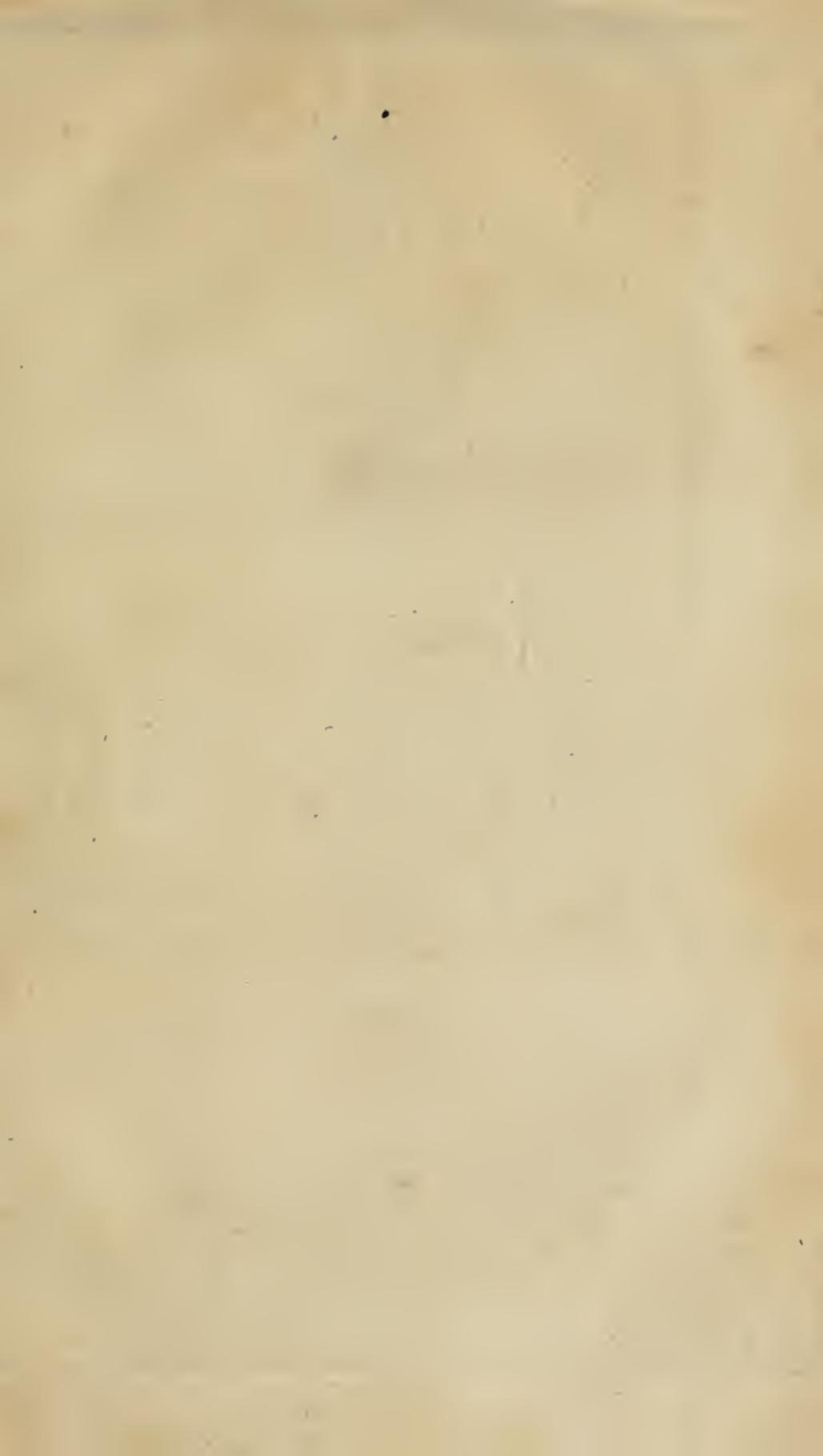
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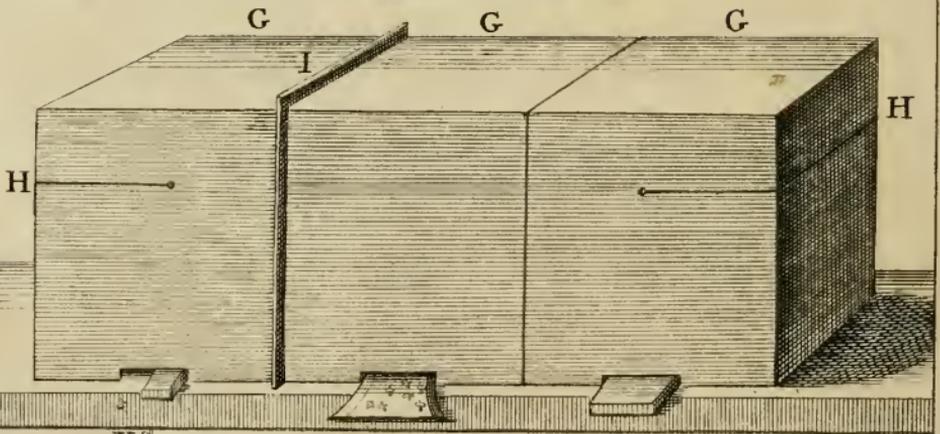
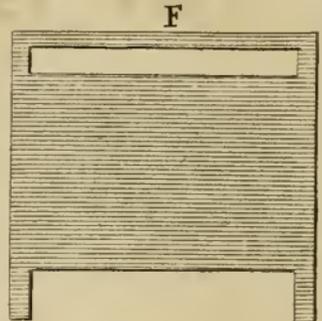
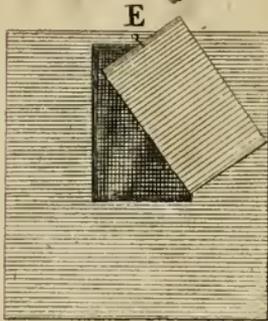
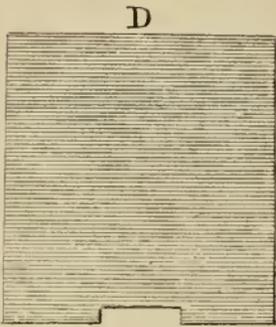
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A. *The Drone or Male Bee.*  
 B. *The Queen or Female Bee.*  
 C. *The working Bee of no Sex.*  
 D. *Front of a Single Box.*  
 E. *Back.*  
 F. *End.*

GGG. *Three Boxes joined.*  
 H. *The Tape which ties the End Boards.*  
 I. *The Tin stopping the Communication.*  
 K. *The Bees issuing out of the Box to be taken away.*  
 L. *The Landing Board.*

# *Collateral* BEE-BOXES.

Or, a New, Easy, and Advantageous

# M E T H O D

O F

# M A N A G I N G B E E S .

I N W H I C H

Part of the HONEY is taken away, in an easy and pleasant Manner, without destroying, or much disturbing the BEES; early Swarms, if desired, are encouraged, and late ones prevented.

---

By STEPHEN WHITE, M. A.  
Rector of *Holton* in *Suffolk*.

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Sic Vos *jam* Vobis.  
Pauperis est numerare Pecus.

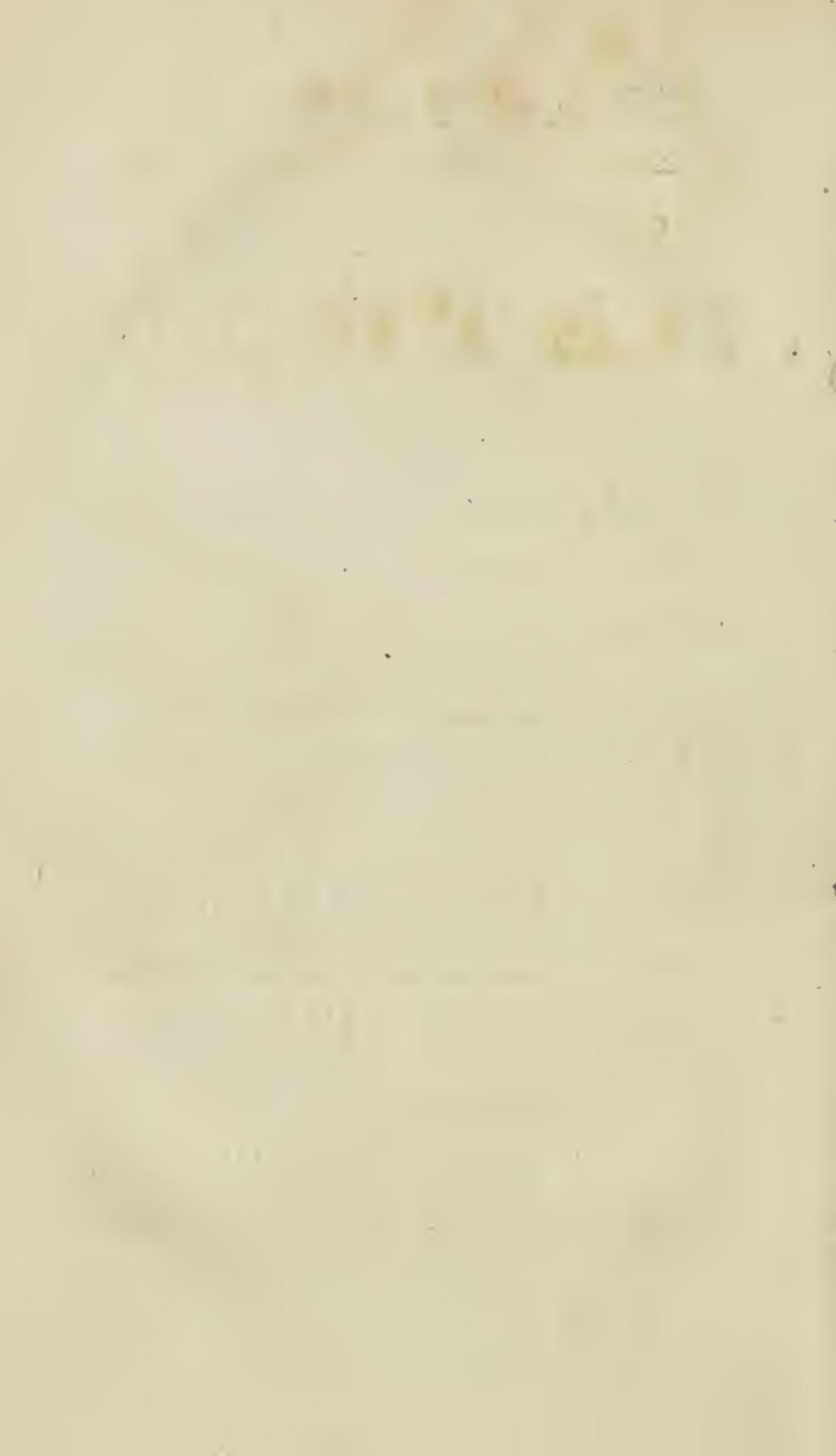
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~~DISCOURDED~~

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L O N D O N ,

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M D C C L V I .



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T H E

I N T R O D U C T I O N .

**T**HE first Inventor of the Octagonal Bee-Boxes, which we now and then meet with in the Gardens of the Curious, was *John Gedde* Esq. He published his Invention, in the Year 1675, having obtained the King's Patent for the same, and likewise the Approbation of the Royal Society. These Boxes appear, at first Sight, to be very expensive and unwieldy: and every one, I believe, who has experienced them, has found, to his Cost, that they answer only *one* of the *Ends* the ingenious Gentleman proposed by them, and which,

A 2

as

as his principal End, he sets forth in the Title Page of his *English Apiary*, viz. *To free the Owners from the great Charge and Trouble that attends the Swarming of Bees*: that is, in other Words, to deprive the poor Bee-Master, of all the Profit, and one of the highest Pleasures he can expect, from these useful and delightful Insects. This End, if it be a desirable one, every Bee-Mistress may obtain, without beating her Brains, but by only ordering her Artificer to provide a large Quantity of Straw, and make her Hives to contain two Bushels a-piece.

Many Years after this, Mr. *Warder* of *Croydon* published his *true Amazons, or Monarchy of Bees*, which has gone through no less than Eight Editions. He directs you, how to make the same Sort of Boxes, with  
 I some

## INTRODUCTION. v

some, not very material Alterations. He calls this a new Discovery and Improvement, and recommends it likewise to his Reader, by telling him, it will *prevent Swarming*.

In the Approbation of the Royal Society, prefixed to Mr. *Gedde's* Book, we are told by the Gentlemen of that illustrious Body, that in the Treatises, relating to the Management of Bees, we find several Draughts, of different Bee-Hives, to the Intention of *preventing Swarming*, but that none of those Ways have proved so effectual, as the Method prescribed by Mr. *Gedde*.

Bless me! (have I often said to myself) why so much Pains, to hinder me from increasing my small Stock? Why should these Gentlemen deprive me of a Pleasure I so ardently look and long for every Spring, and which  
I am

vi INTRODUCTION.

I am more delighted with, than all the other Pleasures of the Month of *May*? Can the whole Brute Creation afford a more entertaining Scene, than to see a vast Multitude of these diminutive People, merely for the Good of the State they are leaving for ever; to see them, I say, with a cheerful Alacrity, abandoning their native Country, to go and settle in a foreign Region, they know not where; quitting all their Treasures, which they have laboured so hard to procure, and fought so valiantly to defend, and going to seek an empty House, not knowing whether they shall be able to find one. Behold my little Emigrants! in Spight of all our *Swarm-Preventers*, behold, I see a Cloud of them, overshadowing my Garden! See them hurrying backwards and forwards, exulting in the  
Presence

## INTRODUCTION. vii

Prefence of their Sovereign, observing her Motions, and waiting her Commands, while She, with the double Anxiety of a Queen, and a Parent, is looking for a convenient Branch, on yonder Espaliers, where She may rest a-while, and consult what Course She is to take, and whither She shall lead her loyal and beloved Subjects.

But I must recall my licentious Imagination: I must leave these Ecstasies, how pleasing soever, and consider, that while I am transported, the courteous Reader is unedified. It is Time he should know, yet I must detain him a little longer, before he does know, what he is to find in the following Sheets.

The Smallness of my Cure, has afforded me more leisure Hours, than usually

## viii INTRODUCTION.

usually fall to the Share of a great Part of my Brethren. Many of these Hours, during almost the whole Space of a now declining Life, have been employed in my Bee-Garden; with as much Innocence, I hope, and a great deal more to my Taste and Entertainment, than if they had been spent, with a Gun and Pointer in the Fields, or, in my Parlour, with a Pack of Cards. These fashionable Amusements (especially the latter) can afford little Entertainment to a contemplative Mind: But the surveying the Works of Nature, particularly the Instincts and Polity of many living Creatures, and the wonderful Methods they make use of, for their Sustenance and Safety, will give a real and high Delight to a rational Soul: and as it is next to impossible,

INTRODUCTION. ix

possible, to turn our Thoughts to the Observation of these Creatures, without lifting them up, at the same Time, in Adoration of Him who formed them, this will, in a manner, sanctify our Pleasures, and turn even our *Diversions*, into a *Sacrifice* to our *Maker*.

*Manifold are the Works of God, and in Wisdom has he made them all.* But if my Partiality for my favourite Insects, does not very much deceive me, their indefatigable Industry, their Loyalty to their Queen, the geometrical Accuracy of their Combs, &c. are Wonders, not to be met with, in any of the innumerable Beasts, Birds, or Insects, that are upon the Face of this Earth.

My Fondness for these little Animals, soon put me upon endeavouring,

ing, if possible, to save them from Fire and Brimstone. I thought I had Reason to be content, to share their Labours, for the present, and great Reason to rejoice, if I could, at the same Time preserve their Lives, to work for me another Year. The main Drift therefore of all my Observations and Experiments has been, to discover an easy and cheap Method, suited to the Abilities of the common People, of taking away so much Honey as can well be spared, without destroying or starving the Bees: And by the same Means to *encourage*, rather than *prevent* Swarming, I mean first, and seasonable Swarms; for second, and late Swarms, being little worth, and very prejudicial to the old Stocks, they ought, and in the Method I propose, may easily be prevented.

INTRODUCTION. xi

vented. This Design, I can assure every Lover of Bees, and every Lover of himself, *i. e.* of his own Interest, with all the Confidence of a Projector, I have, after a great many unavailing Experiments, at last fully accomplished.

I don't wonder, that *Epicurus's* Atoms, without either Hand or Head to direct them, should be so long in forming the Universe, and should make so many wrong and imperfect Worlds, before they hit on a right one, since my Deal Boards, much fitter Materials for the Purpose, than Atoms, assisted with all the Mechanical Skill, that I, and my ingenious Carpenter, are Masters of, have been jumbled together, in such a Variety of wrong and ineffectual Forms, and been

B 2

almost

xii INTRODUCTION.

almost Forty Years in making a Bee-Box ; such a plain and simple Bee-Box, as you will see in my first Chapter.

A New,

A New, Easy, and Advantageous

# M E T H O D

O F

## MANAGING BEES.

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### CHAP. I.

*Directions how to make a single Box.*

**I**T may be made of Deal, or any other Boards, well seasoned, that are not apt to warp or split. The Boards should be near an Inch thick. Let it be eight Inches and half in Height and Breadth, every Way, measuring within, and including the Space the thin Boards take up at the Ends, as if there were no such Boards.

Boards. With these Dimensions, it will contain about a Peck and one Pint. The Box is in Figure Four Square. The Front Part, must have a Door cut in the Middle of the Bottom Edge, about Four Inches wide, and half an Inch in Height, which will give free Liberty to the Bees to pass through, yet not be large enough for their Enemy the Mouse to enter. In the back Part you must cut a Hole with a Rabbit in it, in which you are to fix a Pane of the clearest and best Crown-Glass, about Five Inches in Length, and Three in Breadth, and fasten it with Putty. Let the Top of the Glass be placed, as high as the Roof within-side, that you may see the upper Part of the Combs, where the Bees, with their Riches, are mostly placed. You will, by that means, be better able to judge of  
of

of their State and Strength, than if your Glafs was fixt in the Middle. Such as are desirous of seeing more of the Bees Works, may make the Glafs as large as the Box will admit, without weakening it too much; which may be prevented by nailing a little Slip of Board cross the Bottom. The Glafs must be covered with a thin Piece of Board, by Way of Shutter, which may be made to hang over the Glafs, by a Piece of Tape, going through the upper Part of the Shutter, and fastened on the Top of the Box, by thrusting both Ends into a Gimlet Hole; and after driving a Peg pretty hard into the Hole, you may cut off the Peg close to the Box.

As for the two other Sides of the Box, which, for Distinction Sake, I call *Ends*, they are not to be wholly enclosed.

enclosed. A Space is to be left in each End, near an Inch wide at the Top, and another Space more than an Inch wide at the Bottom: which Spaces are to be extended in Length, the whole Breadth of the Box. Thro' these, the Bees are to have a Communication from one Box to another. To form these Communications, a thin Piece of slit Deal must be let into the Edges of the Front and the back Boards, so as to be flush with the Edges of those Boards.

In the next Place, you are to provide a Piece of slit Deal, full half an Inch thick, and large enough to cover one of the Ends, but to be used indifferently, sometimes at one End, and sometimes at the other: for which Reason, it is not to be nailed, but tied on, in the following Manner; *viz.* Take about three Quarters  
of

of a Yard of pretty strong Tape, which I chuse, because it is less apt to relax and slacken than Pack-thread. Fix one End of the Tape, in the Front-Board, about Six Inches above the Mouth, and directly over the Middle of it. Let this End of the Tape be fastened in a Gimlet-Hole, with a Peg drove hard in, and then cut off close to the Board, as was directed for the Shutter. You are next to bore a Hole on each Side of your Glass, Six Inches and a Half from the Bottom of the Box: into each of these Holes, drive a Peg, which may stand out more than an Inch from the Box. Let the Pegs be made of Ash, which is a tough Wood, and let one End of them be flat, that you may scrue them out or in, the more conveniently. When this is done, take

your loose End-Board, and set it in its proper Place, so that it may cover one of the Ends, it matters not which : then drawing your Tape as tight as you can over it, fasten the End of it to one of the Pegs by the Side of the Glafs. This will confine your End-Board, and keep the upper Part of it close to the Box : and if the lower Part should gape a little, or start from the Box, you may keep it tight, by a Nail or two, drove so gently into the Stool, on which the Box is placed, that you may, whenever you have Occasion, draw them out with your Fingers : Or, if you like it better, you may add another Tape, with Pegs as before, to go cross the lower Part of the End-Board.

The Gimlet Holes I have directed, need not be carried quite through the  
Board,

Board, and it is better they should not: for if any Part of the String appears within the Box, it will give Offence to the Bees, and cost them a great deal of Pains to pull it to Pieces.

You have now only to fix a Stick, crossing the Box from End to End, about Three Inches from the Bottom, to be a Stay to the Combs; and when you have painted the whole, to make it more durable, your Box is finished.

The judicious Bee-Master, I hope, will here observe, that the Form of the Box I have been describing, is as plain, as it is possible for it to be. It is little more than Three Square Pieces of Board nailed together: so that a poor Cottager, who has but Ingenuity enough to saw a Board into the given Dimensions, to square

it exactly, and to drive a Nail, may make his own Boxes well enough, without the Help, or the Expence of a Carpenter.

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## C H A P. II.

*How to hive a Swarm into the Boxes.*

**T**O do this, you are to take a Box, with one End-Board tied to it (as before directed) on your Right Hand, and another Box, with the End-Board tied to it on your Left Hand; fet these two together, leaving the Communications open from one Box to another: then tye the Boxes together, as fast as you can, with a String going Five or Six Times round them. The Boxes should not  
be

be tied, till you are just going to use them, because the String will grow slack with standing, and then the Boxes will be apt to slip one from the other, as you handle them.

Be careful to tye the Shutters close to the Glafs, that the Light may not enter: for the Bees seem to look upon the Light, as a Hole, or Breach in their House, and, on that Account, may not so well like their new Habitation. But the principal Thing to be observed, at this Time, is to cover the Boxes, as soon as ever the Bees are hived, with a Linen Cloth, thrown loosely over them; and it may be proper to lay some green Boughs upon them besides, to protect them from the piercing Heat of the Sun. Boxes will admit the Heat much sooner than Straw-Hives; and if the Bees find their House too

hot for them, they will be wise enough to leave it. In all other Respects, they are to be hived in Boxes, after the same Manner as in common Hives, which being well known, I need not stay to give particular Directions concerning it.

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### CHAP. III.

*In what Manner and Situation to place the Bees when hived.*

**M**R. Gedde, and Mr. *Warder*, have directed very *costly Bee-Houses* (as it is fit they should) for the Reception of their *fine-wrought Boxes*. These may serve well enough for an Ornament to a Gentleman's Garden, or for the Amusement of the Curious: but my Endeavours are chiefly

chiefly laid out, and my Boxes intended, for the Use and Advantage of the industrious Farmer, and poor Cottager: and I do here assure them, from my own long Experience, that their Bees will be safe, in these Boxes, though they stand in the open Air, in the coldest Winter. Be but careful to skreen them from the *Sun*, and then bid Defiance to the puffing Checks of *Boreas*: skreen them from the Summer Sun, because the Heat of it is greater than the Bees, or their Works, can bear: and skreen them from the Winter Sun, the Warmth of which will draw them from that lethargic State, which is natural to Bees, as well as many other Insects, in the Winter Season. A certain Degree of Cold, and a greater Degree of it than is commonly imagined, is favourable to Bees in Winter: it  
 chills,

chills, and benumbs their little Bodies, so that their animal Spirits are very little wasted by Perspiration, and consequently, there is little or no Occasion to recruit them by Eating. If a sharp Frost continues for the Space of Two or Three Months, without Intermiſſion, you may obſerve, through your Glaſſes, that the Bees are, all this Time, cloſely linked together in Cluſters, between the Combs. If they are not altogether without Motion, yet 'tis certain they ſtir not from their Places, while the Cold continues, and conſequently eat not at all: and if ſuch a Frost was to laſt all the Winter, our Bees, I am perſuaded, would be no Sufferers, either by the Cold or by Faſting: on the contrary, they would ſave all their Winter Stores: and if you could ſuppoſe the Flowers to ſpring ſuddenly

denly out of the Ground, at the End of this Frost, they would as suddenly recover their former Activity, with the returning Heat, and go forth to their Labours, with their usual Vigour and Alacrity. This gives us a plain, and the true Reason, why more Bees are observed to die in warm and open, than in cold and severe Winters: and for the same Reason, Mr. *Gedde's* Observation, I am confident, is a very just one, that *Bees, standing on the North Side of a Building, whose Height intercepts the Sun Beams all the Winter, will waste less of their Provision (almost by Half) than others standing always in the Sun; for coming seldom forth, they eat little, and yet in the Spring are as forward to work, and to swarm, as those that had twice as much Honey, in the Autumn before.*

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Let your Bees therefore be so placed, that the Sun may not shine upon them at all in the Winter, to entice them Abroad, when they can get nothing but an Appetite, which, though it be necessary to the Health of a Man, is not always requisite to the Health of an Insect.

As for the Summer Sun, though the Boxes (as I have said) must be carefully protected from it, the experienced Bee-Master will easily understand my Meaning, *viz.* that it must not be suffered to dart its Rays on the Top, or Sides of the Boxes, which they will by no means bear; but it ought to shine on the Skirts of them, where the Entrance for the Bees is made, which will be of Service to them, in many Respects.

Your Boxes must likewise be sheltered from Rain, as common Hives  
are;

are ; for the Wet getting in between the Joints, will cause the Combs to mould, and otherwise incommode the Bees. The following easy Frame will sufficiently defend them both from Sun and Rain.

Get a pretty thick Board Seven Feet and a Half long, and One Inch wider than the Boxes, for your Floor. Let the upper Side of it be very smooth and even, that the Boxes may stand true upon it: then fix in the Ground Four Oaken Posts, about the Bigness of such as are used for drying Linen. Let the Posts, or Pillars, be fastened together at each End with a strong Piece of Board, about a Foot from the Ground in this Form, } for the Ends of the Floor to rest upon. This Floor must be supported in the Middle, to keep it from swagging: you may then place on it Three Colonies

or Setts of Boxes, consisting of Three Boxes to a Sett. And there will be Room, if Need be, to add a fourth, to one of the Setts. There should be several Awger-Holes bored in proper Places in your Pillars, in which Holes you are to thrust pretty strong wooden Pins, on which, Floors may be supported for Two more Rows of Boxes. These Floors must be placed, in Summer, Four or Five Inches above the Boxes underneath: in Winter they may be let down, so as to lye flat upon the Boxes, which will keep them closer, and warmer. You are then to defend them from the Sun by placing thin loose Boards, one upon another, edgeways, from Pillar to Pillar, in the Front, remembering to cut Niches in these Boards, over against every Mouth, or Entrance into the Boxes:

Then

Then make some Landing-Boards, for the Bees to pitch upon, in the following Manner: Take a Piece of Board three or Four Inches wide, and in Length, about Six Inches on one Edge, but shorter on the other. On one Side of this, close to each End, nail a Slip of Wood, so that it may extend about Two Inches beyond the Board, *See Figure L.* Thrust the Two Ends standing out, into the Mouth of the Box, so that the Landing-Board may come close to the Floor, and be level with it, or rather bending a little downwards.

The last Thing you are to provide, is a Cover or Roof for the whole, which had best be a moveable one. This may be made with Two broad Boards, or Four narrow ones feather-edged, fastened together, in the Form of the Roof of a House, only much flatter.

flatter. In this Roof, you may make Four Holes, for the Tops of the Four Pillars to go into, which will be a sufficient Stay or Fastening for it, and you may let it down, or raise it up, according to the Number of your Boxes, or take it quite off, whenever there is Occasion. I have only to add, that every Part of the Frame should be well painted, to make it bear the Weather, and be the more lasting.

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#### CHAP. IV.

*How to order the Bees in the Boxes.*

**H**AVING hived a Swarm in Two Boxes, as before directed, and placed them, in the Evening, where they are to remain ; the String, with  
 which

which you tied the Boxes together, may then be taken off: and the Shutters for your Glaffes being at Liberty, observe which of the Boxes the Bees have made Choice of, for their present Residence, and stop the Mouth of that Box with a Slip of Board, the End of which is fitted to the Opening, so that they may work only out of the empty Box: The Reason of which will appear by and by. After a few Days, if the Weather be fine, your little Labourers will shew you a beautiful Specimen of their Work: You will see, with Pleasure, Two or Three delicate, white, and almost transparent Combs, appear among the Bees. They will fill one Box with their Works, before they begin in the other; soon after they have begun in the second, it will be proper to give them a third, which is  
thus

thus performed. Your provident Bees, by this Time, will have joined the End-Board to the Box, all round the upper Communication, with a gluey Sort of Refin, which the Ancients called *Propolis*; for they are careful to stop every little Hole or Crevice that is found in their Houses, with this refinny Substance, just as we careen our Ships with Pitch and Tar. You are therefore to take a thin Knife, and cut through this Refin, till you find the End-Board at Liberty. After this, you must loosen the String that ties this Board, and having provided a Sheet of double Tin, thrust it gently between the Box and the End-Board, to separate them: then taking away the Board, set an empty Box in the Room of it. Which done, with a gentle Hand draw away your Tin, and thrust the new Box close to the other.

Your Bees will be pleased with this Addition to their Habitation. Instead of a Dwelling of *Straw*, which is no better than living in a *Barn*, you had before given them a *Hall*, and *Parlour*, neatly wainscoted: and now you furnish them with a *Drawing-Room*, where for some time, they may cool and refresh themselves in a sultry Day, and afterwards fill it with their Stores.

You are here likewise to remember, that the Mouth of this third Box must be stopped like the first, that their Entrance may be only in the second or middle Box.

## CHAP. V.

*How to take away Part of the Honey, without destroying, or much disturbing the Bees.*

**N**O true Lover of Bees, I am persuaded, ever lighted the fatal Match, that was to destroy his little Innocents, with livid Flames, and a Smoak, that strikes them dead with its intolerable Stench, without much Concern and Uneasiness. Besides; we are not to imagine, that the bountiful Creator, who has indeed given us all Things richly to enjoy, has likewise given us such an uncontrollable *Right*, of *Life* and *Death*, over all his Creatures, that we may kill them at, and for our *Pleasure*. I know no Right we have  
over

over the Life of the meanest Insect, or vilest Worm that creeps upon the Earth, unless the killing it be, some way or other, useful and beneficial to us. We may take away the Lives of our Cattle, in order to support our own with the Flesh of them: but it would be a criminal Piece of Cruelty, as well as Folly, to butcher an innocent Sheep, meerly for the Sake of its Fleece, which we might take again and again without hurting it. If then we can take from our Bees, a considerable Quantity of their superfluous Honey and Wax, without injuring them; if they will work for us another, and many other Years, and every Year pay us fair and reasonable Contributions; why should we treat *them* with unnecessary Cruelty, and hurt *ourselves* by a Greediness, that will turn to our Prejudice? Avarice

often mistakes its own Interest. It never can be made to understand, or believe, that *Dimidium plus toto*. It is evidently more to our Advantage, to spare the Lives of our Bees, and be content with Part of their Stores, than to kill, and take Possession of the Whole.

We have long since been directed how to do this, in the Use of Mr. *Gedde's* Boxes: But the Method prescribed, is so tedious and difficult, and so perilous too to the Operator, that it has very rarely been practised, and hardly ever attended with Success. The Method I would recommend, and which I practise myself, with Ease and Safety, and high Delight, is as follows :

About the middle of *August*, by a little Inspection through your Glasses, you may easily discover,  
 which

which of your Colonies you may lay under Contribution. Such as have filled Three Boxes, will pretty readily yield you one of them, which is paying you a larger Tax, than any other *free-Britons*, (except the Men of *Totness*,) would be willing to comply with, *viz.* Seven Shillings in the Pound. It is best to take the Box where there are fewest Bees, because the Queen-Bee is not likely to be there. The properest Time, is about Two or Three o'Clock in the Afternoon; and though the Bees are active and busy at this Time of Day, yet as you stand behind the Frame, you will need no Armour for the Attack, except, perhaps, a Pair of Gloves, and a broad-brimmed Hat slouched over your Eyes. The Operation itself is no more than this: Open the Mouth of the Box you are going to seize; or  
it

it may be better if you open only that half of it, which is furthest from the middle Box: then, with a thin Knife, cut through the Resin with which the Bees have joined this Box to the middle one, till you find you have separated them: after which, thrust your Sheet of Tin gently between the Boxes, and your Work is done; and you will, with Pleasure and Surprize, observe the Effects of it: for the Communication being stopped, the Bees in the two Boxes (where it is most likely their Queen is) will be a little disturbed at the Operation, but those in the single Box will appear distracted. They soon become sensible, that their Sovereign is not amongst them: they then run to and fro in the utmost Hurry and Confusion, and send forth a mournful Cry, easily to be distinguished from their

their other Notes. Immediately it is proclaimed, throughout the Territories, that the *Society* is *dissolved*. *Amiffâ rupere fidem*; and that every one is to shift for himself as well as he can. Accordingly, they issue out at the new Door you have opened for them; but not in a Body, as when they swarm, for the Body, with Respect to this Box, is no more. Nor do they come out, with that calm and cheerful Activity, as when they go forth to their Labours; but now and then a Bee or two bursts out, with a wild Flutter, and in a visible Rage and Disorder: but this is quickly over; for no sooner are they got abroad, but they spy their Fellows, and fly to them with eager Haste, at the usual Mouth of the middle Box: and knowing very well, by the Calmness of their Behaviour, that the Queen

is

is safe, and rejoicing at being again restored to the Common-wealth, they either forget, in the midst of their Transports, or do not at all regret the Loss of the Riches they have left behind them. Thus in an Hour or two, (for they go out slowly) you will have a Box of pure Honey, without a *living Bee* in it to molest you, and without *dead Bees* too, as you always have, when you burn them, which are mingled with your Honey, and both waste and damage it.

When you carry off the Prize, (which having so fairly taken, you may with a safe Conscience condemn, and enjoy with Pleasure) you are to set an End-Board in the Room of it, for they will have no Occasion for an empty Box before the following Spring: then drawing away your Tin, and tying the End-Board as tight as you can,  
with

with your Tape, you may take your Leave of them, wishing them a *cold Winter*, and a *sound Sleep* till *February*.

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## CHAP. VI.

*Of the Advantages of these Boxes above Straw-Hives, or the Boxes invented by Mr. Gedde.*

I. **N**O Part of the Honey can be taken out of Straw-Hives, without destroying the Bees: (for driving them, is, in effect, destroying them) and this you are obliged to do, when your Hives are three or four Years old; because then the Combs (not the Bees, as is vulgarly supposed) grow old, and unfit for Use: and our Bees, for what Reason I  
F
know

know not, will not demolish their old Combs, in order to make new ones: so that by burning your *old Hives*, and your *poor ones*, neither of which yield much Honey, you commonly lessen your Stock, as much, or more, than your Swarms will make good. Whereas in the Use of these Boxes, you are *every Year*, by Swarms, *encreasing your Stock*; and barring Accidents, and excepting that you must, now and then, burn a very poor one, you *never diminish it*. For your Boxes, in this Method, are all of them, by Succession, supplied with *new Combs*, before the old ones are decayed: and as for the Bees, if you guard them from *Accidents*, and save them from *Poverty*, they will continue, by Succession, to the *End of the World*.

2. In this Method, you may, with very little Trouble, either give them *more*, or confine them in *less Room*, as there shall be Occasion. If, in the Spring, you confine them to two Boxes, which are equal to a small Hive, this will cause them to swarm early: if you allow them three, which contain as much as a large Hive, your Swarms will be later, but larger: the latter, I believe, will, for the most Part, turn to best Account. After the first Swarm, it will be a greater Advantage to you than is commonly imagined, to add a third, or, if need be, a fourth Box, to prevent second and late Swarms. By this Means, all your Colonies will be well stocked with Bees, in which their Safety chiefly consists: for whenever a Hive is reduced, by over-swarming, or otherwise, to a small Number of Bees,

they commonly become a Prey to Robbers, or Moths, or some other of their Enemies: and though they escape their Enemies, they seldom prosper. If your Situation be good, and the Season favourable, such Colonies as require a fourth Box to prevent second Swarms, will usually allow you to take two Boxes from them in the Autumn.

3. Your Bees will be much better protected from their *Enemies*, in these Boxes, than in Hives. *Mice* pretty frequently make their Way through Straw-Hives, and destroy them, but unless you make the Mouth too large, they can no Ways enter your Boxes.

The *Moth* is, in Appearance, the weakest of all their Enemies, yet destroys more Bees, than all their Enemies besides. She lays her Eggs, under the Skirts of the Hives, and the

Warmth of the Bees hatch them to their own Destruction. From the Egg issues forth a small whitish Worm, or Caterpillar, which instantly spins itself a fine, filken Sheath, or Gallery, which protects it from the Attacks of the Bees: for these Galleries being wrought like a Spider's Webb, the Bees avoid them, it may be supposed, for Fear of being entangled therein. These Worms, as they increase in Bulk, enlarge their Galleries, till they reach the Combs, when putting out their Heads, which are armed with Scales, as with a Helmet, and so impenetrable by the Bees Stings, they securely feed on and devour their curious Works, till the poor distressed Bees are forced to abandon their Habitation.

My Boxes, I freely own, will not secure the Bees from these dangerous  
Enemies;

Enemies; but they are not, I have Reason to think, so much infested with them as Hives are. Besides, there is a Remedy to be had in Boxes, which Hives will not admit of; for by Means of the Glafs Lights, you may discover the Moths, before they have done much Damage; and you may take away the infected Box, and save the others; or you may clear it of Moths, and then restore it to the right Owners.

4. In the Use of these Boxes, you are furnished with the only Method of preserving poor Stocks by *feeding* them. The best Way hitherto practised, is to give them a large Quantity of Honey in *September*, most of which, if melted, and mixed with Water, to bring it to a proper Consistency, they will lay up in their Combs for their Winter Store. I have  
many

many Times, tried this Method; and my Bees have perished with Hunger, with a good deal of this Honey remaining in their Combs. This, I think, can no Way be accounted for, unless we suppose, that the Honey, thus thinned with Water, will not keep, all Winter, in the open Cells; for the Bees never seal it up, as they do the Rest of their Honey: or else, that the crude Wax, commonly called *Bee-Bread*, with which every Hive is stored, is as *necessary* to their Subsistence as Honey; and that when this is all spent, *Honey alone* will *not* keep them from *perishing*.

But if your Bees are in the Boxes I have described, you have an easy and effectual Method of preserving *Part* at least of your *weak Colonies*: For you have Nothing more to do, than to burn the Bees of one poor Stock,  
and

and set the Boxes, or one of them, with all the Combs to another. By this Means, the Bees you save, are supplied with a fresh Store both of Bread and Honey, in their *natural State*; and enjoy the Labours of their suffering Brethren, in the same Manner, as they do their own. This, the good-natured Bee-Master, it is hoped, will comply with, now and then, though it be with Reluctance, since there is, in this Case, a cruel Necessity, either of *destroying* one Stock to *preserve* another, or of suffering *both of them* to perish.

5. It will not, I think, be necessary to say much concerning the Advantages of these Boxes, above those of Mr. *Gedde*. His Boxes are directed to be each as large as a Bushel; and they are to be raised, one upon another, three Stories high, with a Hole  
of

of Communication in the Top of each Box. Now when the poor Bee, after traversing the Fields far and wide, returns Home weary and heavy laden, She has Occasion, perhaps, to deposit her Burden, up two Pair of Stairs in the Garret. The lower Room, 'tis likely, is not yet furnished with Stairs, *i. e.* with Combs: For our little Architects, you know, lay the Foundation of their Structures at the Top, and build downwards. In this Case, the weary little Labourer, is to drag her *Crura Thymo plena* up the Sides of the Walls. When She has done this, She will travel, many Times, backwards and forwards, (as I have frequently seen) along the Roof, before She finds the Door, or Passage into the second Story. Here again, She is perplexed with a like puzzling Labyrinth, before She gets

G

into

into the Third. What a Waste is here, of that precious Time, which our Bees value so much, and which they employ so well? And what an Expence of Strength, and Spirits, on which their Support and Sustainance depends? whereas, in the Collateral Boxes, the Rooms are all on the Ground-Floor: and because I know my Bees are wise enough, to value Convenience more than State, I have made them of such a moderate, tho' decent, Height, that they have much less Way to climb to the Top of them, than they have to the Crown of a common Hive.

6. The Difficulty of driving the Bees out of Mr. *Gedde's* Boxes, in order to take the Honey, has been touched upon before; as likewise the vast Expence of them; which alone, had they been never so well contrived in  
 other

other Respects, would be sufficient to prevent their being brought into common Use. The Expence of my Boxes, and of the Frame I have described, if you make a reasonable Allowance for the *Duration* of them, will not, I am confident, prove greater in the *End*, than the Charge of Straw-Hives, and of the Frames that are made, in most Places, for their Reception: and a great deal of this Expence may be saved, where the Bee-Master will be so provident, as to save or procure Ends and Remnants of Boards, of little Value, which may serve very well for this Purpose. The Charge of the Frame, too, may be saved, if he can spare a Place within any of his Buildings (especially if they be boarded) where he may fix his Stools for the Boxes to stand on, making Holes at proper

Distances for the Bees to work out at: nor need he be very solicitous concerning the Aspect, or Height of his Buildings: for I have known Bees thrive well, and get a large Quantity of Honey, which were placed almost at the Top of a high Turret in *Trinity College*, and on the North Side of it.

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## The CONCLUSION.

**H**AVING now fully instructed the candid Reader, in the Structure, Use, and Advantages of my Boxes, I should here leave him to calculate, by himself, his *future Profits*, in this *new Method* of managing his Bees, but that I am a little afraid he will reckon too fast; and  
 this

this I think myself bound in Conscience to prevent. “ I have now got  
 “ half a Dozen old Hives, says the honest  
 “ Countryman, and I will immediately order my Carpenter, to make  
 “ Col—what d’ye call’um, Boxes, for  
 “ all my Swarms. Every Swarm I get,  
 “ will add to my Stock; and I shall  
 “ hardly be such a Fool, as to lessen it  
 “ any more, by *burning the poor things*,  
 “ since I can get Honey and Wax enough  
 “ for the Market without it. So  
 “ this Summer, if I have any Luck, I  
 “ shall have Six Swarms at least, then  
 “ the Number of my Colonies, as the  
 “ Parson calls ’em, will be Twelve: the  
 “ next Summer, I shall have Twenty  
 “ Four; and so by doubling my Stock  
 “ every Year, I shall soon have as many  
 “ as my little Garden will hold.”

The Romantick Lady, in the entertaining *History of Bees*, translated  
 from

from the *French* in 1744, has quite outdone my Countryman, in *her* Computations. Her Philosopher had told her of a wild and impracticable Method, of taking Part of the Honey, and saving the Lives of her Bees, by driving them into a Corner of the Hive, by the Smoak of a Rag, while the Operator (bold Man!) should pare away with his Knife, as many of the Combs as he thought proper. Upon this, the charitable Lady, transported with the Discovery, forms the following benevolent Scheme, for the Benefit of her poor Neighbours. *Every Inhabitant of my Hamlet, says she, shall be provided with two Hives. Every Hive, [in France] will, one with the other, produce two good Swarms, so a Man who is now possessed of Two Hives, will have Six next Year, Eighteen the following,*

*Fifty*

*Fifty four the fourth, and the Fifth a Hundred and Sixty two, AND SO ON.* The good Lady, I think, might have been content (but her Charity knew no Bounds) with the last-mentioned Number, and spared her &c.

This was likewise the serious Language of *Gresham College*, in the Approbation above mentioned, which I am sorry should come again in my Way. *Thus much* (say they) *may certainly be affirmed, that by the Methods laid down in Mr. Gedde's Treatise, in few Years, there need not be any or few Poor, in the Land. Every Cottager, having but Room to keep Bees in, may, from one Stock, in a small Time, raise Twenty, which, with little Care and Labour, may be better than Ten Pounds per Annum to him.* How great is the Pity, that not one Cottager (I believe) in the Space of Four-

2

score

score Years, has been prevailed on, to take this easy and certain Method of growing rich? for my Part, I am far from expecting such great Things from my present Undertaking: and yet, if considered as a Projector, I am not sensible, that I want a proper Assurance, and my Reader, I fancy, by this Time, may be of the same Opinion. But being now almost ready to take my Leave of him, I will tell him honestly, and seriously, what he is to expect, if it shall please him to make Trial of my Boxes. In a few Years, I will venture to promise him, he will encrease his Stock, to as great a Number, as the Flowers in his Neighbourhood will maintain, but my Assurance will carry me no further; and sad Experience has taught me, that in some Situations, like this, in which

I am

I am myself (in this one Respect) unhappily placed, that Number will be found very small. There are now, in the Village where I dwell, which is a large one, only Ten Hives or Colonies of Bees: and though we have beautiful Meads, and fine Gardens, in which *Flora* discloses all her Treasures, yet for want of a free and open Air, (as I conjecture) in these thick Enclosures, our Flowers yield so little Food for the poor Bees, that no greater Number, I am well satisfied, than what I have mentioned, or thereabouts, can get a Subsistence in this Place: whereas, in the neighbouring bleak County of *Cambridge*, where the Inundations of the Fens, or the Farmer's Plow, or the Flocks that are grazing (should I say, or starving?) on barren Heaths, will suffer hardly any Flowers to spring,

or open their Blossoms, (excepting the *Flowers of Eloquence*, which thrive exceedingly on the Banks of CAM, but these afford only a thin Sort of

*Juice Nectareous*

fitter for Poets to feed upon than Bees;) yet here, I say, there is such a Profusion of Honey, in the few Flowers that escape, that I have seen between Seventy and Eighty Hives in one Farmer's Yard: and this, just after the *Inquisition* was over, and he had been *murdering* all he intended to *murder* that Season. And these Hives, I know too well, were much better stored with Honey, than any are found to be in these Parts.

Now should this honest Farmer, by way of rewarding me for these my Labours, for his Benefit, make me a Present of Forty or Fifty of his Colonies, and should be so kind as to  
bring

bring and place them in my Garden, what, think you, would be the Consequence of his Generosity? Nothing less than a dreadful Famine. The New-comers would be starved themselves, and would starve all my poor Neighbours Bees, for Three or Four Miles round me. They would be so far from laying up any thing for a Winter's Day, that many of them, I believe, would die for Want, in the midst of Summer.

I have often thought it very surprizing, that neither the Authors who treat of Bees, nor the Keepers of them, ever imagine, that any Place can be over-stocked, or that any one's Bees fare either better or worse, for the larger or smaller Stock that is kept in his Neighbourhood. They think, it seems, that every Flower they see, is a never-failing Cruise of Honey. Let

me here acknowledge the Bounty of our Creator, and with due Thankfulness and Admiration confess, that, in some Sense, it is so: For when a Bee, with its little lambent Trunk, has cleared a Flower of all its *present Store*, another comes, 'tis likely, in less than a Minute, and finds *something*: For the delicious Juice is continually sweating thro' the Pores of the Plant. But, 'tis certain, for all this, that the more of these Guests visit a Flower, the worse must each of them fare: They will have the less to carry Home, or, which is all one, they must go further, and spend more of their precious Time, before they can make up their Burden.

This Consideration gives a mighty Check, I must own, to the Expectations I should otherwise have from my new Boxes. Was it not for this, I  
could

could be as bold, and as large in my Promises, as the Undertakers that have gone before me. I could tell my Countrymen, that I would take upon me to maintain all their Poor, and make their Rates needless.

But this is not my Language. My Country, I flatter myself, will reap some Benefit from the Pains I have taken. There is Reason to believe, that in many Parts of the Kingdom, the little Labourers in Honey and Wax, are *not sufficient* for the *Harvest*; and my Method of managing Bees, if followed, must unavoidably encrease the Number of them; and will encrease it so far, that all the Honey and Wax which the Flowers of our Climate will yield, will be collected into their Store-Houses. And this, perhaps, may be a Saving to the Nation, of all that Money, with  
which

which we purchase base and adulterate Commodities of this Sort, imported from Abroad.

I shall likewise, I hope, have the Satisfaction to find, that many of the poorer Sort will be *benefited*, tho' not *enriched*, by this Method. My Scheme, I am well assured, will furnish them with *Stock*, at a cheap and easy Rate; but I must tell them once more, that *they* must find *Pasture*.

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## P O S T - S C R I P T .

WHILE these Sheets were in the Press, the Author was informed, that the Royal Society *thanked the Gentlemen* who communicated Mr. *Gedde's* Invention to them: and that it is said in their *Transacti-*

ons (Vol. viii.) that his *Method of managing Bees had been used in Scotland with good Success*: But that they gave him no Authority to prefix to his Book a *formal Approbation in their Name*, as he has done. The Reader, therefore, is desired to look upon this pretended Approbation, as the Effect of Mr. *Gedde's* own Vanity and Falshood: and the worthy Gentlemen of the Society will excuse, it is hoped, the Author's speaking of it, as it *did*, and *must* appear to him, before he received the above Information.

F I N I S.









