

Cottage economy containing information relative to the brewing of beer, making of bread, keeping of cows, pigs, bees, ewes, goats, poultry and rabbits, and relative to other matters deemed useful in the affairs of a labourers' family / By William Cobbett.

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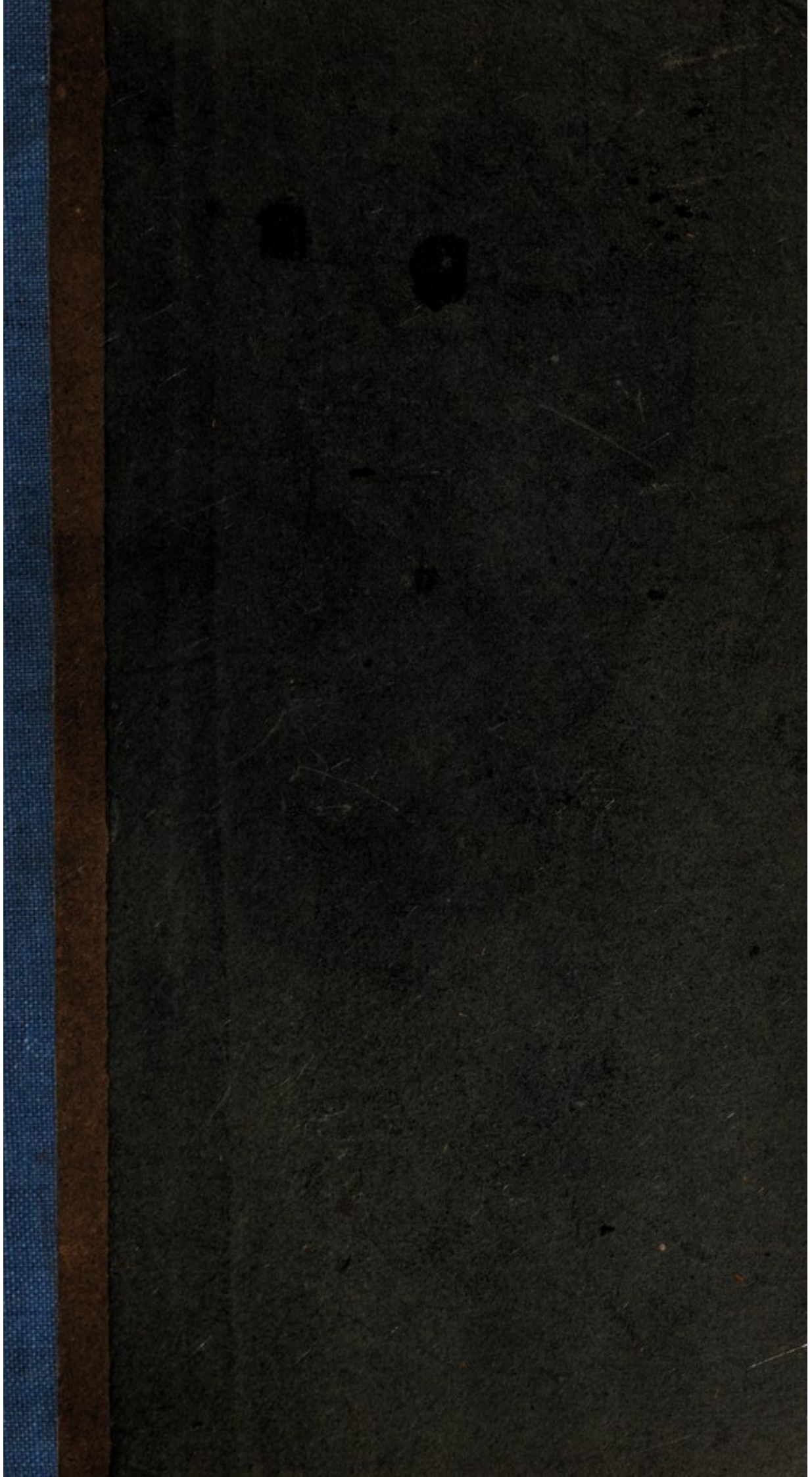
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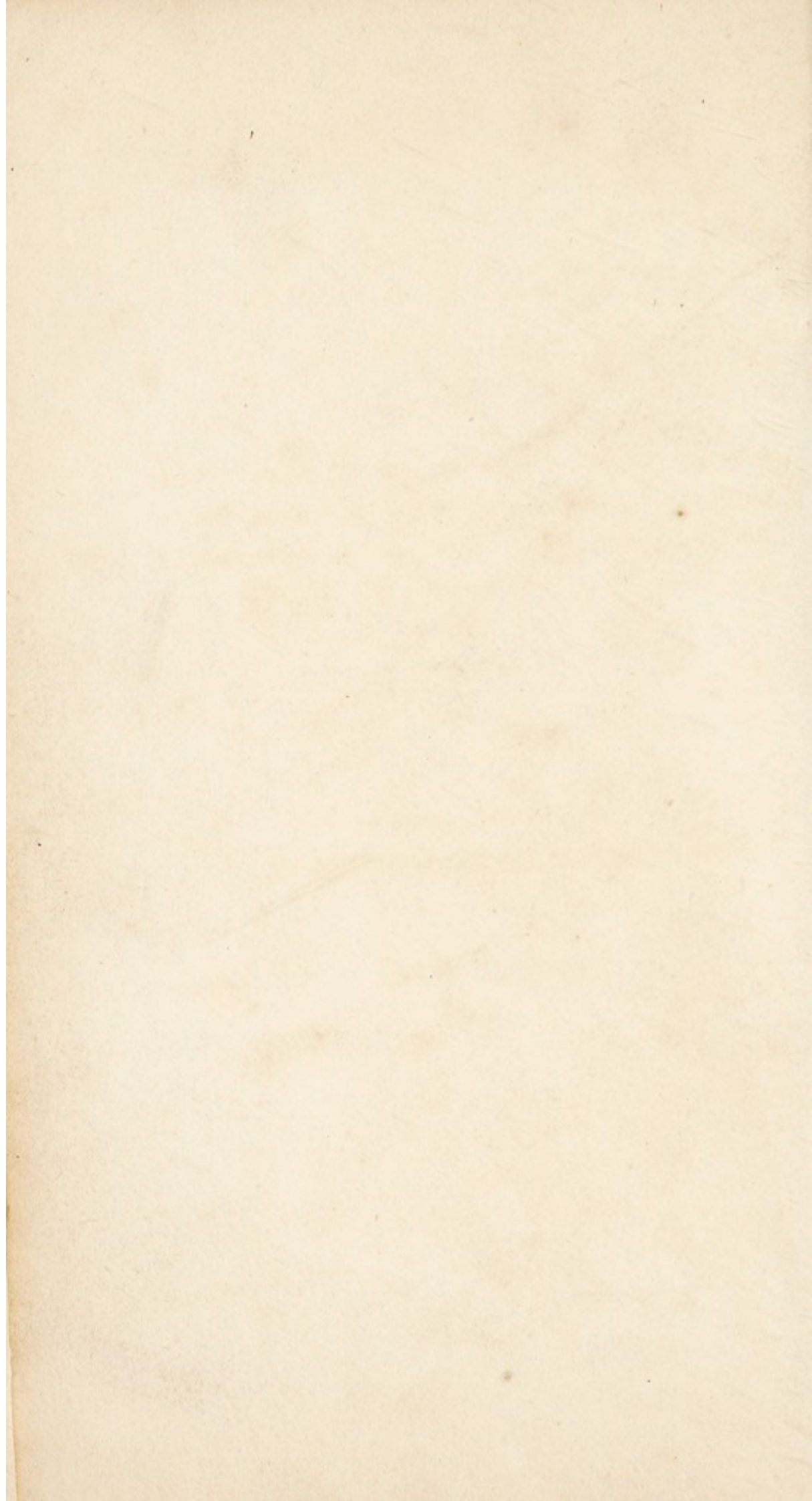


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COTTAGE ECONOMY

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CONTAINING

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Information relative to the brewing of BEER, making
of BREAD, keeping of COWS, PIGS, BEES, EWES, GOATS,
POULTRY and RABBITS, and relative to other matters
deemed useful in the conducting of the Affairs of a
Labourer's family.

~~~~~  
**BY WILLIAM COBBETT.**  
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LONDON:

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INDEX.

A.

AMERICA, domestic economy not there interfered with
by taxes, paragraph 76.

B.

BEER, inducements to brewing of, 20.
..... Details relating as to utensils, 39.
..... Degree of strength, 40.
..... Quality of the materials, 43.
..... The Barley, 44.
..... The Hops, 45.
..... The Water, 46.
..... Use of the Machine for, 47.
..... Directions for the process, 48.
..... Law, as it interferes with private brewing and
lending or letting machines for that purpose,
108.

BEEES, 160—166.

BREAD, contrasted with potatoes as food, 77.
..... Saving in a family by making bread at home,
81—91.
..... Importance of it as connected with the education
of a family, 86.
..... Instructions for making of, 101.

BUCK WHEAT, a sweet grain, 82.

C.

CANDLES and RUSHES, paragraphs 193—197.

Cows, 111.

..... Uses of milk, 112.

..... Wholesomeness of it, 136.

..... Milking, 114.

..... Produce of a cow, 134.

..... Effect of the food on the taste of the milk, 127.

..... Mode of cultivating 40 rods of ground so as to
obtain food for one cow, 116.

..... Cabbages, 118.

..... Swedish turnips, 125.

..... Saving the seed of these plants, 128.

..... Harvesting and preserving the Swedes, 130.

..... The manure, 132.

..... Labour required in cultivating the ground, 133.

..... To have a large garden and be without land for a
cow impossible, 137.

COMMONS, House of, 20.

CURWEN, Mr. 52.

CUSAR, M. 60.

D.

DIGGING described, 133.

..... Labour in, 138.

DRENNAN, Dr. 80.

DRESS, GOODS, FUEL, 199—201.

DUCKS, 169.

E.

ECONOMY means management, 3.

EDUCATION, breeding or bringing up, &c. 11.

ELLMAN, Mr. his evidence of the formerly comparatively
better state of the labourer, 20.

EXCISE, court of, and beer-doctors, 72.

F.

FOWLS, paragraphs 176—180.

G.

GEESE, 167.

GOATS and EWES, 189—192.

H.

HANNING, Mr. Wm. 99.

HILL, Mr. 98.

HOPS, 202.

I.

INDIAN Corn, superior to other grain for hogs, 82.

ICE, to preserve, 149.

L.

LANDLORDS, their burthens intolerable to their estates, 25.

LABOURING classes, introduction to them, 1.

M.

MACKINTOSH, Sir J. 161.

MALTHUS, Parson, 141—144.

MALT, Process in making, 110.

MARKET gardens, quantity of ground occupied by, to supply the markets of the Wen, 137.

METHODIST, parson, about hog-killing time, 148.

MILLS, 93.

MUSTARD, 198.

MUTTON and Beef, of the salting of, 157.

P.

PEEL, Sir R. 152.

PIGEONS, 181—183.

PIGS, 139.

.....Breeding sows, 140.

.....Fatting, 145.

.....Killing, 146.

.....Curing bacon, 149.

PIGS, smoking bacon, paragraph 150.
.....Preserving the bacon, 151.
.....The lard, 152.
.....Of hog meat, cost of it cured at home, 154, 155.

POTATOES. See BREAD.

PORTER, 71.

POVERTY, 6—17.

R.

RABBITS, 184—188.

S.

SCOTT, Sir Walter, 161.

SLAVES, lazy and saucy, 144.

STANHOPE, Lord, 144.

STODDART, 161.

T.

TAX on Malt and on Hops, 21.

TEA, expense and deleterious effects of, 23—29

TURKEYS, 171—175.

W.

WALTER, 161.

WINCHELSEA, Lord, 144.

WINCHESTER, Bishop of, 144.

WILBERFORCE, Mr. 161.

Y.

YANKEES, character of that people, 144.

YEAST, 203—206.

CONTENTS.

No.

1. Introduction. To the Labouring Classes of this Kingdom.—Brewing Beer.
2. Brewing Beer continued.
3. Making Bread.
4. Making Bread continued.—Brewing Beer.—
Keeping Cows.
5. Keeping Cows.
6. Keeping Pigs.—Salting Mutton and Beef.
7. Bees, Geese, Ducks, Turkeys, Fowls, Pigeons,
Rabbits, Goats and Ewes, Candles and Rushes,
Mustard, Dress and Household Goods and Fuel,
Hops and Yeast.

CONTENTS

1. Introduction. To the Laboratory Class of 1888	1
2. Brewing Beer continued.	2
3. Making Bread.	3
4. Making Bread continued—Brewing Beer— Keeping Cows.	4
5. Keeping Cows.	5
6. Keeping Pigs—Fattening Mutton and Beef.	6
7. Eggs, Geese, Ducks, Rabbits, Poultry, Fish, and Honey and Yeast.	7

COBBETT'S COTTAGE-ECONOMY.

[To be comprized in about Six Numbers, to be published
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1. AUGUST, 1821.

INTRODUCTION

To the Labouring Classes of this Kingdom.

1. **THROUGHOUT** this little work, which is intended to be comprized in *Six Numbers*, I shall *number* the Paragraphs, in order to be able, at some stages of the work, to refer, with the more facility, to parts that have gone before. The last number will contain an *Index*, by the means of which the several matters may be turned to without loss of time; for, when *Economy* is the subject, *time* is a thing, which ought by no means to be overlooked.

2. The word *Economy*, like a great many others, has, in its application, been very much abused. It is generally used as if it meanted parsimony, stinginess, or niggardliness; and, at best, merely the refraining from expending money. Hence misers and close-fisted men disguise their propensity and conduct under the name of *Economy*; whereas the most liberal disposition, a disposition precisely the contrary of that of the miser, is perfectly consistent with economy.

3. **ECONOMY** means, *management*, and nothing more; and it is generally applied to the affairs of a house and family, which affairs are an object of the

greatest importance, whether as relating to individuals or to a nation. A nation is made powerful and honoured in the world not so much by the number of its people as by the ability and character of that people; and the ability and character of a people depend, in a great measure, upon the *economy* of the several families which, all taken together, make up the nation. There never yet was, and never will be, a nation *permanently great*, consisting, for the greater part, of wretched and miserable families.

4. In every view of the matter, therefore, it is desirable, that the families of which a nation consists should be happily off; and, as this depends, in a great degree, upon the *management* of their concerns, the present work is intended to convey to the families of the *Labouring Classes* in particular, such information as I think may be useful with regard to that management.

5. I lay it down as a maxim, that, for a family to be happy, they must be well supplied with *food* and *raiment*. It is a sorry effort that people make to persuade others, or to persuade themselves, that they can be happy in a state of *want* of the necessaries of life. The doctrines, which fanaticism preaches, and which teach men to be *content* with *poverty*, have a very pernicious tendency, and are calculated to favour tyrants by giving them passive slaves. To live well, to enjoy all things that make life pleasant, is the right of every man who constantly uses his strength judiciously and lawfully. It is to blaspheme God to suppose, that he created men to be miserable, to hunger, thirst, and perish with cold, in the midst of that abundance

which is the fruit of their own labour. Instead, therefore, of applauding "*happy poverty*," which applause is so much the fashion of the present day, I despise the man that is *poor* and *contented*; for, such content is a certain proof of a base disposition, a disposition which is the enemy of all industry, all exertion, all love of independence.

6. Let it be understood, however, that by *poverty* I mean *real want*, a real insufficiency of the food and raiment and lodging necessary to health and decency; and not that imaginary poverty, of which some persons complain. The man, who, by his own and his family's labour, can provide a sufficiency of food and raiment and a comfortable dwelling place, is not a *poor man*. There must be different ranks and degrees in every civil society, and, indeed, so it is even amongst the savage tribes. There must be different degrees of wealth; some must have more than others; and the richest must be a great deal richer than the least rich. But, it is necessary to the very existence of a people, that nine out of ten should live wholly by the sweat of their brow; and, is it not degrading to human nature, that all the nine tenths should be called *poor*; and, what is still worse, *call themselves poor*, and be *contented* in that degraded state?

7. The laws, the economy, or management, of a state may be such as to render it impossible for the Labourer, however skillful and industrious, to maintain his family in health and decency; and, such has, for many years past, been the management of the affairs of this once truly great and happy land. A system of paper-money, the effect of which was to take from the

labourer the half of his earnings, was what no industry and care could make head against. I do not pretend, that this was done *by design*. But, no matter for the *cause*; such was the effect.

8. Better times, however, are approaching. The Labourer now appears likely to obtain that hire of which he is worthy; and, therefore, this appears to me to be the time to press upon him the *duty* of using his best exertions for the rearing of his family in a manner that must give him the best security for happiness to himself, his wife and children, and to make him, in all respects, what his forefathers were. The people of England have been famed, in all ages, for their *good living*; for the *abundance of their food* and *goodness of their attire*. The old sayings about English roast beef and plumb-pudding, and about English hospitality, had not their foundation in *nothing*. And, in spite of all the refinements of sickly minds, it is *abundant living* amongst the people at large, which is the great test of good government, and the surest basis of national greatness and security.

9. If the Labourer have his fair wages; if there be no false weights and measures, whether of money or of goods, by which he is defrauded; if the laws be equal in their effect on all men; if he be called upon for no more than his due share of the expences necessary to support the government and defend the country, he has no reason to complain. If the largeness of his family demand extraordinary labour and care, these are due from him to it. He is the cause of the existence of that family; and, therefore, he is not, except in cases of accidental calamity, to throw upon others the burthen

of supporting it. Besides, "little children are as arrows in the hands of the giant, and blessed is the man that hath his quiver full of them." That is to say, children, if they bring their *cares*, bring also their *pleasures* and *solid advantages*. They become, very soon, so many assistants and props to the parents, who, when old age comes on, are amply repaid for all the toil and all the cares that children have occasioned in their infancy. To be without sure and safe friends in the world makes life not worth having; and whom can we be so sure of as of our children. Brothers and sisters are a mutual support. We see them, in almost every case, grow up into prosperity, when they act the part that the impulses of nature prescribe. When cordially united, a father and sons, or a family of brothers and sisters, may, in almost any state of life, set what is called misfortune at defiance.

10. These considerations are much more than enough to sweeten the toils and cares of parents, and to make them regard every additional child as an additional blessing. But, that children may be a blessing and not a curse, care must be taken of their *education*. This word has, of late years, been so perverted, so corrupted, so abused, in its application, that I am almost afraid to use it here. Yet I must not suffer it to be usurped by cant and tyranny. I must use it; but, not without clearly saying what I mean.

11. *Education* means *breeding up*, *bringing up*, or *rearing up*; and nothing more. This includes every thing with regard to the *mind* as well as the *body* of the child; but, of late years, it has been so used as to

have no sense applied to it but that of *book-learning*, with which, nine times out of ten, it has nothing at all to do. It is, indeed, proper, and it is the duty, of every parent, to teach, or cause to be taught, their children as much as they can of books, *after*, and not before, all the measures are safely taken for enabling them to get their living by labour, or, for *providing them a living without labour*, and that, too, out of the means obtained and secured by the parents out of their own income. The taste of the times unhappily, is to give to children something of *book-learning* with a view of placing them to live, in some way or other, *upon the labour of other people*. Very seldom, comparatively speaking, has this succeeded, even during the wasteful public expenditure of the last thirty years; and, in the times that are approaching, it cannot, I thank God, succeed at all. When the project has failed, what disappointment, mortification and misery, to both parent and child! The latter is spoiled as a labourer; his book-learning has only made him conceited; into some course of desperation he falls; and the end is but too often not only wretched but ignominious.

12. Understand me clearly here, however; for, it is the duty of parents to give, if they be able, book-learning to their children, having *first* taken care to make them capable of earning their living by *bodily labour*. When that object has once been secured, the other may, if the ability remain, be attended to. But, I am wholly against children wasting their time in the idleness of what is called *education*; and particu-

larly in schools over which the parents have no controul, and where nothing is taught but the rudiments of servility, pauperism and slavery.

13. The *education* that I have in view is, therefore, of a very different kind. You should bear constantly in mind, that nine tenths of us are, from the very nature and necessities of the world, born to gain our livelihood by the sweat of our brow. What reason have we, then, to presume, that our children are not to do the same? If they be, as now and then one will be, endued with extraordinary powers of mind, those powers may have an opportunity of developing themselves; and, if they never have that opportunity, the harm is not very great to us or to them. Nor does it hence follow, that the descendants of labourers are *always* to be labourers. The path upwards is steep and long, to be sure. Industry, care, skill, excellence in the present parent lays the foundation of *a rise*, under more favourable circumstances, for his children. The children of these take *another rise*; and, by and by, the descendants of the present labourer become gentlemen.

14. This is the natural progress. It is by attempting to reach the top at a *single leap* that so much misery is produced in the world; and the propensity to make such attempts has been cherished and encouraged by the strange projects that we have witnessed of late years for making the labourers *virtuous* and *happy* by giving them what is called *education*. The education which I speak of consists in bringing children up to labour with *steadiness*, with *care*, and with *skill*; to show them how to do as many useful things as possible;

to teach them to do them all in the best manner; to set them an example in industry, sobriety, cleanliness and neatness; to make all these *habitual* to them, so that they never shall be liable to fall into the contrary; to let them always see a *good living* proceeding from *labour*, and thus to remove from them the temptation to get at the goods of others by violent or fraudulent means, and to keep far from their minds all the inducements to hypocrisy and deceit.

15. And, bear in mind, that, if the state of the labourer has its disadvantages when compared with other callings and conditions of life, it has also its advantages. It is free from the torments of ambition, and from a great part of the causes of ill-health, for which not all the riches in the world and all the circumstances of high rank are a compensation. The able and prudent labourer is always *safe*, at the least, and that is what few men are who are lifted above him. They have losses and crosses to fear, the very thought of which never enters his mind, if he act well his part towards himself, his family and his neighbour.

16. But, the basis of good to him, is, *steady and skilful labour*. To assist him in the pursuit of this labour, and in the turning of it to the best account, are the principal objects of the present little work. I propose to treat of Brewing Beer, making Bread, keeping Cows and Pigs, rearing Poultry, Rabbits, Pigeons, keeping Bees and the uses of the Honey; and to all these things, too, in a mere Cottage Establishment; and to show, that, while, from a very small piece of ground, a large part of the food of a considerable family may be raised, the very act of raising it will be the best pos-

sible foundation of *education* of the children of the labourer; that it will teach them a great number of useful things, *add greatly to their value when they go forth from their father's home*, make them start in life with all possible advantages, and give them the best chance of leading happy lives. And, is it not much more rational for parents to be employed in teaching their children how to cultivate a garden, to feed and rear animals, to make bread, beer, bacon, butter, and cheese, and to be able to do these things for themselves, or for others, than to leave them to prowl about the lanes and commons or to mope at the heels of some crafty, sleek-headed pretended saint, who while he extracts the last penny from their pockets, bids them be contented with their misery, and promises them, in exchange for their pence, everlasting glory in the world to come? It is upon the hungry and the wretched that the fanatic works. The dejected and forlorn are his prey. As an ailing carcass engenders vermin, a pauperized community engenders teachers of fanaticism, the very foundation of whose doctrines is, that we are to care nothing about this world, and that all our labours and exertions are in vain.

17. The man, who is doing well, who is in good health, who has a blooming and dutiful and cheerful and happy family about him, and who passes his day of rest amongst them, is not to be made to believe, that he was born to be miserable, and that poverty, the certain reward of laziness, is to secure him a crown of glory. Far be it from me to recommend a disregard of even the outward observances of the ceremonies of religion; but, can it be *religion* to believe, that

God has made us to be wretched and dejected, and to regard as marks of his grace the poverty and misery that invariably attend our neglect to use the means of obtaining a competence in worldly things? Can it be *religion* to regard as blessings those things, those very things, which God expressly numbers amongst his curses? Poverty never finds a place amongst the *blessings* promised by God. His blessings are of a directly opposite description; flocks, herds, corn, wine and oil; a smiling land; a rejoicing people; abundance for the body and gladness of the heart: these are the blessings which God promises to the industrious, the sober, the careful, and the upright. Let no man, then, believe, that to be poor and wretched is a mark of God's favour; and let no man remain in that state, if he, by any honest means, can rescue himself from it.

18. Poverty leads to all sorts of evil consequences. *Want*, horrid want, is the great parent of crime. To have a dutiful family, the father's principle of rule must be *love* not *fear*. His sway must be gentle, or he will have only an unwilling and short-lived obedience. But, it is given to but few men to be gentle and good-humoured amidst the various torments attendant on pinching poverty. A competence is, therefore, the first thing to be thought of; it is the foundation of all good in the labourer's dwelling; without it little but misery can be expected. "*Health, peace and competence,*" one of the wisest of men regards as the only things needful to men; but the two former are scarcely to be had without the latter. *Competence* is the foundation of happi-

ness and of exertion. Beset with wants, having a mind continually harassed with fears of starvation, who can act with energy, who can calmly think? To provide a *good living* therefore, for himself and family, is the *very first duty* of every man. "Two things," says AGUR, "have I asked; deny me them not before I die: remove far from me vanity and lies; give me neither poverty nor riches; feed me with food convenient for me: lest I be full and deny thee; or lest I be poor and steal."

19. A *good living*, therefore, a *competence*, is the first thing to be desired and to be sought after; and, if this little work should have the effect of aiding only a small portion of the Labouring Classes in securing that competence, it will afford great gratification to their friend,

WM. COBBETT.

Kensington, 19. July, 1821.

BREWING BEER.

20. Before I proceed to give any directions about brewing, let me mention some of the inducements to do the thing. In former times, to set about to show to Englishmen that it was good for them to brew beer in their houses would have been as impertinent as gravely to insist, that they ought to endeavour not to lose their breath; for, in those times (only forty years ago) to have a *house* and not to brew was a rare thing indeed. Mr. ELLMAN, an old man and a large farmer, in Sussex,

has recently given in Evidence before a Committee of the House of Commons this fact, that *forty years ago*, there was not a labourer in his parish that did not *brew his own beer*; and that *now*, there is *not one that does it*, except by chance the malt be given him. The cause of this change has been the lowering of the wages of labour, compared with the price of provisions, by the means of the paper money, the enormous tax upon the barley when made into *malt*, and the increased tax upon *hops*. These have quite changed the customs of the English people as to their drink. They still drink *beer*, but, in general, it is of the brewing of *common brewers*, and in public houses, of which the common brewers have become the owners, and have thus, by the aid of paper-money, obtained a *monopoly* in the supplying of the great body of the people with one of those things, which, to the hard-working man, is almost a necessary of life.

21. These things will be altered. They must be altered. The nation must be sunk into nothingness, or, a new system must be adopted; and the nation will not sink into nothingness. The malt now pays a tax of 4s. 6d. a bushel, and the barley costs only 3s. This brings the bushel of malt to 8s. including the malster's charge for malting. If the tax were taken off the malt, malt would be sold, at the present price of barley, for about 3s. 3d. a bushel; because a bushel of barley makes more than a bushel of malt, and the tax, besides its amount, causes great expences of various sorts to the malster. The hops pay a tax of about 4d. a pound; and a bushel of malt requires, in general, a pound of hops. If these two taxes were taken off, therefore,

the consumption of barley and of hops would be exceedingly increased ; for double the present quantity would be demanded, and the land is always ready to send it forth.

22. It appears impossible that the landlords should, much longer, submit to these intolerable burthens on their estates. In short, they must get off the malt tax, or lose those estates. They must do a great *deal more*, indeed ; but that they must do at any rate. The paper-money is fast losing its destructive power ; and things are, with regard to the Labourers, coming back to what they were *forty years ago*, and, therefore, we may prepare for the making of beer in our own houses, and take leave of the poisonous stuff served out to us by common brewers. We may begin *immediately* ; for, even at *present prices*, home-brewed beer is the *cheapest* drink that a family can use, except *milk*, and that can be applicable only in certain cases.

23. The drink, which has come to supply the place of beer has, in general, been *tea*. It is notorious, that tea has no *useful strength* in it ; that it contains nothing *nutritious* ; that it, besides being *good* for nothing, has *badness* in it, because it is well known to produce want of sleep in many cases, and, in all cases, to shake and weaken the nerves. It is, in fact, a weaker kind of laudanum, which enlivens for the moment and deadens afterwards. At any rate it communicates no strength to the body ; it does not, in any degree, assist in affording what labour demands. It is, then, of no use. And, now, as to its *cost*, compared with that of *beer*. I shall make my comparison applicable to a year, or three hundred and sixty five days. I shall

suppose the tea to be only five shillings the pound ; the sugar only seven pence ; the milk, only two pence a quart. The prices are at the very lowest. I shall suppose a tea pot to cost a shilling, six cups and saucers two shillings and sixpence, and six pewter spoons eighteen pence. How to estimate the firing I hardly know ; but certainly there must, in the course of the year, be two hundred fires made that would not be made, were it not for tea drinking. Then comes the great article of all, the *time* employed in this tea making affair. It is impossible to make a fire, boil water, make the tea, drink it, wash up the things, sweep up the fire place and put all to rights again in a less space of time, upon an average, than *two hours*. However, let us allow *one hour* ; and here we have a woman occupied no less than three hundred and sixty five hours in the year, or, thirty whole days, at twelve hours in the day ; that is to say, one month out of the twelve in the year, besides the waste of the man's time in hanging about waiting for the tea ! Needs there any thing more to make us cease to wonder at seeing labourers' children with dirty linen and holes in the heels of their stockings ? Observe, too, that the time thus spent, is one half of it, the best time of the day. It is the top of the morning, which, in every calling of life, contains an hour worth two or three hours of the afternoon. By the time that the clattering tea tackle is out of the way, the morning is spoiled ; its prime is gone ; and any work that is to be done afterwards lags heavily along. If the Mother has to go out to work, the tea affair must all first be over. She comes into the field, in Summer time, when

the sun has gone a third part of his course. She has the heat of the day to encounter, instead of having her work done and being ready to return home at an early hour. Yet early she must go, too; for, there is the fire again to be made, the clattering tea tackle again to come forward; and even in the longest day she must have *candle light*, which never ought to be seen in a cottage (except in case of illness) from March to September.

24. Now, then, let us take the bare cost of the use of tea. I suppose a pound of tea to last twenty days which is not nearly half an ounce every morning and evening. I allow for each mess half a pint of milk. And I allow three pounds of the red dirty sugar to each pound of tea. The account of expenditure would then stand very high; but to these must be added the amount of the tea tackle, one set of which will upon an average, be demolished every year. To these outgoings must be added the cost of beer at the public house; for some the man will have after all, and the woman, too, unless they be upon the point of actual starvation. Two pots a week is as little as will serve in this way; and here is a dead loss of ninepence a week, seeing that two pots of beer, full as strong, and a great deal better can be brewed at home for three pence. The account of the year's tea drinking will, then, stand thus:

18lb. of Tea	-	-	-	£4	10	0
54lb. of Sugar	-	-	-	1	11	6
365 Pints of Milk	-	-	-	1	10	0
Tea Tackle	-	-	-	0	5	0
200 Fires	-	-	-	0	16	8
30 Day's works	-	-	-	0	15	0
Loss by going to public house				1	19	0
				<hr/>		
				£11	7	2

25. I have here estimated every thing at its very lowest. The entertainment which I have here provided is as poor, as mean, as miserable as any thing short of starvation can set forth; and yet the wretched thing amounts to a good third part of a good and able labourer's wages. For this money, he and his family may drink good and wholesome beer, and in a short time, out of the mere savings from this waste, may drink it out of silver cups and tankards. In a labourer's family, *wholesome* beer, that has a little life in it, is all that is wanted in *general*. Little children, that do not work, should not have beer. Broth, porridge, or something in that way is the thing for them. However, I shall suppose, in order to make my comparison as little complicated as possible, that he brews nothing but beer as strong as the generality of beer to be had at the public house, and divested of the poisonous drugs which that beer but too often contains; and I shall further suppose that he uses in his family two quarts of this beer every day from the first of October to the last day of March inclusive; three quarts a day during the months of April and May; four quarts a day during the months of June and September; and five quarts a day during the months of July and August; and if this be not enough it must be a family of drunkards. Here are 1097 quarts, or, 274 gallons. Now, a bushel of malt will make eighteen gallons of better beer than that which is sold at the public houses. And this is precisely a gallon for the price of a quart. People should bear in mind, that the beer, bought at the public house is loaded with a *beer tax*, with the tax on the public house keeper, in

the shape of license, with all the taxes and expences of the brewer, with all the taxes, rent and other expences of the publican, and with all the *profits* of both brewer and publican; so that when a man swallows a pot of beer at the public house he has all these expences to help to defray, besides the mere tax on the malt and on the hops.

26. Well, then, to brew this ample supply of good beer for a labourer's family; these 274 gallons, requires *fifteen* bushels of malt and (for let us do the thing well) *fifteen pounds of hops*. The malt is now eight shillings a bushel, and very good hops may be bought for less than a shilling a pound. The *grains* and *yeast* will amply pay for the labour and fuel employed in the brewing; seeing that there will be pigs to eat the grains, and bread to be baked with the yeast. The account will then stand thus:

			£	s.	d.
15 bushels of Malt	-	-	-	6	0
15 pounds of Hops	-	-	-	0	15
Wear of Utensils	-	-	-	0	10
			<hr/>		
			£7	5	0

27. Here, then, is four pounds, two shillings and two pence saved every year. The utensils for brewing are, a brass kettle, a mashing tub, coolers (for which washing tubs may serve), a half hogshead, with one end taken out for a tun tub, about four nine gallon casks, and a couple of eighteen gallon casks. This is an ample supply of utensils, each of which will last with proper care a good long life time or two, and the whole of which, even if purchased new from the shop, will only exceed by a few shillings, if they exceed at all, the amount of the saving arising *the very first year*, from

quitting the troublesome, and pernicious practice of drinking tea. The saving of each succeeding year would, if you chose it, purchase a silver mug to hold half a pint at least. However, the saving would naturally be applied to purposes more conducive to the well being and happiness of a family.

28. It is not, however, the *mere saving* to which I look. This is, indeed, a matter of great importance, whether we look at the amount itself, or at the ultimate consequences of a judicious application of it; for, *four pounds* makes a great *hole* in a man's wages for the year; and when we consider all the advantages that would arise to a family of children from having these four pounds, now so miserably wasted, laid out upon their backs in the shape of decent dress, it is impossible to look at this waste without feelings of sorrow not wholly unmixed with those of a harsher description.

29. But, I look upon the thing in a still more serious light. I view the tea drinking as a destroyer of health, an enfeebler of the frame, an engenderer of effeminacy and laziness, a debaucher of youth, and a maker of misery for old age. In the fifteen bushels of malt, there are 570 pounds weight of *sweet*; that is to say of nutritious matter, unmixed with any thing injurious to health. In the 730 tea messes of the year there are 54 pounds of sweet in the sugar and about thirty pounds of matter equal to sugar in the milk. Here are eighty four pounds, instead of five hundred and seventy, and even the good effect of these eighty four pounds is more than over ballanced by the corrosive, gnawing, the poisonous powers of the tea.

30. It is impossible for any one to deny the truth of this statement. Put it to the test with a lean hog : give him the fifteen bushels of malt, and he will repay you in ten score of bacon or thereabouts. But give him the 730 tea messes, or rather begin to give them to him, and give him nothing else, and he is dead with hunger, and bequeaths you his skeleton at the end of about seven days. It is impossible to doubt in such a case. The tea drinking has done a great deal in bringing this nation into the state of misery in which it now is ; and the tea drinking, which is carried on by “ dribs” and “ drabs ;” by pence and farthings going out at a time ; this miserable practice has been gradually introduced by the growing weight of the taxes on Malt and on hops, and by the everlasting penury amongst the labourers, occasioned by the paper money.

31. We see better prospects, however, and therefore let us now rouse ourselves, and shake from us the degrading curse, the effects of which have been much more extensive and infinitely more mischevious than men in general seem to imagine.

32. It must be evident to every one that the practice of tea drinking must render the frame feeble, and unfit to encounter hard labour or severe weather, while, as I have shown, it deducts from the means of replenishing the belly and covering the back. Hence succeeds a softness, an effeminacy, a seeking for the fire side, a lurking in the bed, and, in short, all the characteristics of idleness, for which, in this case, real want of strength furnishes an apology. The tea drinking fills the public house, makes the frequenting of it habitual,

corrupts boys as soon as they are able to move from home, and does little less for the girls to whom the gossip of the tea table is no bad preparatory school for the brothel. At the very least, it teaches them idleness. The everlasting dawdling about with the slops of the tea tackle gives them a relish for nothing that requires strength and activity. When they go from home, they know how to do nothing that is useful. To brew, to bake, to make butter, to milk, to rear poultry; to do any earthly thing of use they are wholly unqualified. To shut poor young creatures up in Manufactories is bad enough; but there at any rate, they do something that is useful; whereas the girl that has been brought up merely to boil the tea kettle, and to assist in the gossip inseparable from the practice, is a mere consumer of food, a pest to her employer, and a curse to her husband, if any man be so unfortunate as to fix his affections upon her.

33. But, is it in the power of any man, any good labourer who has attained the age of fifty, to look back upon the last thirty years of his life, without cursing the day in which tea was introduced into England? Where is there such a man, who cannot trace to this cause, a very considerable part of all the mortifications and sufferings of his life? When was he ever *too late* at his labour; when did he ever meet with a frown, with a turning off and with pauperism on that account, without being able to trace it to the tea kettle? When reproached with lagging in the morning, the poor wretch tells you, that he will make up for it by *working during his breakfast time*! I have heard this a hundred and a hundred times over. He was up time

enough ; but the tea kettle kept him lolling and lounging at home ; and now instead of sitting down to a breakfast upon bread, bacon and beer, which is to carry him on to the hour of dinner, he has to force his limbs along under the sweat of feebleness, and at dinner time to swallow his dry bread, or sleek his half feverish thirst at the pump or the brook. To the wretched tea kettle he has to return at night with legs hardly sufficient to ^{support} maintain him ; and thus he makes his miserable progress towards that death which he finds ten or fifteen years sooner than he would have found it had he made his wife brew beer instead of making tea. If he now and then gladdens his heart with the drugs of the public house, some quarrel, some accident, some illness is the probable consequence ; to the affray abroad succeeds an affray at home ; the mischievous example reaches the children, corrupts them or scatters them, and misery for life is the consequence.

34. I should now proceed to the *details* of Brewing ; but, these, though they will not occupy a large space, must be put off to the *second number*. The custom of brewing at home has so long ceased, amongst labourers, and, in many cases, amongst tradesmen, that it was necessary for me fully to state my reasons for wishing to see the custom revived. I shall, in my next, clearly explain how the operation is performed ; and, it will be found to be so *easy a thing*, that I am not without hope, that many *tradesmen*, who now spend their evenings at the public-house amidst tobacco smoke and empty noise, may be induced, by the finding of better

drink at home for a quarter part of the price, to perceive that home is by far the pleasantest place wherein to pass their hours of relaxation.

35. My work is intended chiefly for the benefit of *cottagers*, who must, of course, have some *land*; for, I propose to show, that a large part of the food of even a large family may be raised, without any diminution of the labourer's earnings abroad, from 40 rod, or a quarter of an acre, of ground; but, at the same time, what I have to say will be applicable to larger establishments, in all the branches of domestic economy; and especially to that of providing a family with *beer*. Where the family is of a description to consume at the rate of ten gallons a week, or more, there is a *brewing machine* of singular convenience and advantage and of very little expence. The use of this curtails the labour, narrows the space within which the operation may be performed, greatly diminishes the quantity of fuel; and renders the whole matter so easy as to be performed, without any inconvenience, in almost any tradesman's house in even the most crowded part of London.

36. The use of this machine was recommended to me by a gentleman living in the country, who is the very best *provider* (an excellent quality) that I ever knew. I have given it ample trial. The cost has been 12 pounds; and 200 would not, in my estimation compensate for the want of this machine. However, the de-

tail must be reserved for the next Number, with this reservation only, that in *six hours*, from first to last, I can brew 18 gallons of beer with this machine. And, observe, that, by this act, I save, if I make beer as strong as the common public-house beer, a *pound*, a golden sovereign, which will very soon buy the *sixth part of an acre of good land!* A larger quantity, with a larger machine, is brewed in the *same space of time*.

37. With this machine there is no *art* in brewing. The master of a family, or, indeed, more becomingly, the mistress, has only to explain the thing once to any servant, man or woman; and to *see the thing done* for that once. Not that I think that the mistress of a family can be better employed than in personally attending, as often as is necessary, to all the business of providing for that family. But, at any rate, the thing is so simple, it is so easy of execution, the security of obtaining proper degrees of heat (which is a great matter) is so completely provided for, that *once instructing* any servant is sufficient; always supposing, however, that the word *servant* describes a person who will act conformably to the orders of the master or mistress.

37. Of the use of barley *unmalted* in the making of beer, I shall give an account at the same time; but, I am all along supposing, that malt alone is to be used, and malt with the present enormous tax on it too. In my view of the economy of the cottage, brewing is com-

bined with cow and pig keeping and various other things; but, I am satisfied, that in *all families*; be they high or low, be they in country or in town, not to brew their own beer is a great waste of means, and, which is of still greater importance, a great injury to *health*.

THE END OF NO. I.

NEEDHAM & CO'S
PATENT BREWING MACHINE,
202, PICCADILLY.



- A. *Moveable Fire place.*
 B. *Cylindrical Boiler to be placed on A. C. Cover for B.*
 D. *Extracting perforated Cylinder to be placed within B.*
 E. *Centre.*
 FF. *Coolers, one to pack within the other.*
 G. *Machine ready for use, the Cover raised to shew the internal*

Cobbett's Cottage Economy.

[To be comprised in about Six Numbers, to be published Monthly.]

No. 2.] London, published at No. 1, Clement's Inn. [Price 3d

1. SEPTEMBER, 1821.

BREWING BEER.

(Continued.)

38. IN the foregoing Number I stated the *inducements* to the brewing of beer in our own houses, and particularly in paragraphs from 24 to 30. I now proceed to the details of the act of brewing.

39. In paragraph 27 I have mentioned the *utensils* necessary for brewing in a Labourer's family. It is said, that *washing-tubs* are not good, as *coolers*, and that nothing that has ever had *soap*, or *grease* of any sort, in it, is fit to use about beer. I do not believe this; because it is well known, that boiling water, properly applied, will completely remove all the effects of grease. However, leaving the washing-tubs aside, two heads of any large old tubs, cut off, will answer the purpose, and the cost is very trifling indeed. If only one sort of beer is made at one time, no cooler at all is necessary; for the beer may go, *at once, into the tun-tub*, and remain there until it come down to the proper degree of heat to

be set to working, which degree will be mentioned by-and-by.

40. The *kind of beer* for a Labourer's family ; that is to say, *the degree of strength*, must depend on circumstances ; on the numerousness of the family, on the season of the year, and various other. But, generally speaking, beer *half* the strength of that mentioned in paragraph 25 will be quite strong enough ; for that is, at least, one third stronger than the farm-house "*small beer*," which, however, as long experience has proved, is best suited to the purpose. A judicious Labourer would, probably, always have some *ale* in his house, and have small beer for the general drink. There is no reason why he should not keep *Christmas* as well as the farmer ; and when he is *mowing, reaping*, or, at any other hard work, a quart, or three pints, of *really good fat ale* a day is by no means too much. However, circumstances vary so much with different Labourers, that, as to the *sort* of beer and the number of brewings and the times of brewing no general rule can be laid down.

41. The *process* of brewing has fixed rules, which are applicable to all circumstances. To give a certain degree of strength there must be so much malt. To make the beer keep the proper time, there must be so much hops. The quantity of yeast to produce fermenta-

tion is fixed. The degrees of heat are also settled on; as are the spaces of time, during which the wort is to stand, or to boil. Where the common wooden utensils are used, there must be a copper to boil in; but, perhaps, the best way for me to proceed will be, to *go through the whole process* by the Brewing-Machine, mentioned in paragraphs 35 and 36, a plate, representing the several parts of that machine being inserted in this present Number; for, as the quantity of the materials, the *heat*, the *spaces of time*, are, of course, the same, of whatever description the *utensils* may be, the directions for brewing with the machine will apply, as to all the essentials, to brewing with the ordinary utensils.

42. Those who are already in the constant practice of brewing ought to want no instructions from any body; yet, I know, that, at my house, we frequently had not good ale and small beer, though there was no sparing of materials or utensils. Our beer was frequently *not clear*, which arose from want of due attention to the *heats* and other little matters. Our beer, now that the "*master's eye*" is on it, is clear as soon as cold. The country-people do not use a *Thermometer*, and, therefore, as to the *heats*, they must, to have good beer, be very watchful and must have great experience. If they were to use a thermometer, the machine would, *as to the heats*, possess no advantage over the Wooden Utensils, though

it would still have many which are hereafter to be mentioned, and which will, indeed, manifestly enough appear.

43. Before I proceed to explain the uses of the several parts of the Machine, I should speak of the *quality* of the materials of which beer is made, that is, the *Malt*, *Hops*, and *Water*. Malt varies very much in quality, as, indeed, it must, with the quality of the Barley. When good it is full of flour, and in biting a grain asunder, you find it bite easily, and see the *shell thin* and filled up well with flour. If it bite *hard* and *steely*, the malt is bad. There is *pale* malt and *brown* malt; but, the difference in the two arises merely from the different degrees of heat employed in the drying. The main thing to attend to, is, the *quantity of flour*. If the barley was bad; *thin*, or *steely*, whether from unripeness or blight, or any other cause, it will not *malt* so well; that is to say, it will not send out its roots in due time, and a part of it will still be barley. Then the world is wicked enough to think, and even to say, that there are malsters in the world, who, when they send you a bushel of malt, *put a little barley amongst it*, the malt being *taxed* and the barley *not*! Let us hope, that this is seldom the case; yet, when we *do know* that this terrible system of taxation induces the beer-selling gentry to supply their customers with stuff little better than poison, it is

not very uncharitable to suppose it possible for some malsters to yield to the temptations of the Devil so far as to play the trick above-mentioned. To detect this trick, and to discover what portion of the barley is in an unmalted state, take a handful of the *unground* malt, and put it into cold water. Mix it about with the water a little; that is, let every grain be *wet all over*; and whatever part of them *sink* are not *good*. If you have your malt *ground*, there is not, that I know of, any means of detection. Therefore, if your brewing be considerable in amount, *grind your own malt*, the means of doing which is very easy, and neither expensive nor troublesome, as will appear, when I come to speak of *flour*. If the barley be all *well malted*, there is still a variety in the quality of the malt; that is to say, a bushel of malt from fine, plump, heavy barley, will be better than the same quantity from thin and light barley. In this case, as in the case of wheat, the *weight* is the criterion of the quality. Only, bear in mind, that as a bushel of wheat, weighing *sixty-two* pounds, is better worth *six* shillings, than a bushel, weighing *fifty-two* is worth *four* shillings, so a bushel of malt weighing *forty-five* pounds is better worth *nine* shillings, than a bushel, weighing *thirty-five* is worth *six* shillings. In malt, therefore, as in every thing else, the word *cheap* is a deception, unless the quality be taken into view. But,

bear in mind, that, in the case of *unmalted* barley mixed with the malt, the *weight* can be no rule; for, barley is *heavier* than malt.

44. As to using *barley* in the making of beer, I have given it a full and fair trial twice over; and, I would recommend it to neither rich nor poor. The barley produces *strength*, though nothing like the malt; but, the beer is *flat*, even though you use half malt and half barley; and, flat beer lies heavy on the stomach, and, of course, besides the bad taste, is unwholesome. To pay 4s. 6d. tax upon every bushel of our own barley turned into malt, when the barley itself is not worth 3s. a bushel, is a horrid thing; but, as long as the owners of the land shall be so dastardly as to suffer themselves to be thus deprived of the use of their estates to favour the slave-drivers and plunderers of the East Indies, we must submit to the thing incomprehensible to foreigners, and even to ourselves, as the submission may be.

45. With regard to *Hops* the quality is very various. At times when some sell for 5s. a pound, others sell for *sixpence*. Provided the purchaser understands the article, the quality is, of course, in proportion to the price. There are two things to be considered in hops: the *power of preserving beer*, and that of giving it a *pleasant flavour*. Hops may be *strong*, and yet not *good*. They

should be *bright*, have no *leaves* or bits of branches amongst them. The hop is the *husk*, or *seed pod*, of the hop-vine, as the *cone* is that of the fir-tree ; and the *seeds* themselves are deposited, like those of the fir, round a little soft stalk, enveloped by the several folds of this pod, or cone. If, in the gathering, leaves of the vine or bits of the branches, are mixed with the hops, these not only help to make up the *weight*, but they give a *bad taste* to the beer ; and, indeed, if they abound much, they spoil the beer. Great attention is, therefore, necessary in this respect. There are, too, numerous *sorts* of hops, varying in size, form, and quality, quite as much as *apples*. However, when they are in a state to be used in brewing, the marks of goodness are, an absence of *brown colour* (for that indicates *perished* hops) ; a colour *between green and yellow* ; a great *quantity of the yellow farina* ; seeds *not too large or hard* ; a *clammy feel* when rubbed between the fingers ; and a *lively* pleasant smell. As to the *age* of hops, they retain for twenty years, probably, their *power of preserving beer* ; but not of giving it a pleasant flavour. I have used them at *ten years old*, and should have no fear of using them at twenty. They lose none of their *bitterness* ; none of their power of preserving beer ; but, they lose the other quality ; and, therefore, in the making of fine ale or beer, new hops are to be preferred. As to

the *quantity* of hops, it is clear, from what has been said, that that must, in some degree depend upon their *quality*; but, supposing them to be good in quality, a pound of hops to a bushel of malt is about the quantity. A good deal, however depends upon the length of time that the beer is intended to be kept, and upon the season of the year in which it is brewed. Beer intended to be kept a long while should have the full pound, also beer brewed in warmer weather, though for present use. Half the quantity may do under an opposite state of circumstances.

46. The *Water* should be *soft* by all means. That of brooks, or rivers, is best. That of a *pond*, fed by a rivulet, or spring, will do very well. *Rain-water*, if just fallen, may do; but stale rain-water, or stagnant pond-water, makes the beer *flat* and difficult to keep; and *hard* water, from wells is very bad: it does not get the sweetness out of the malt nor the bitterness out of the hops, like soft water; and the wort of it does not ferment well, which is a certain proof of its unfitness for the purpose.

47. Having secured the proper materials, let us, referring to the *plate* as we proceed, give an explanation of the uses of the Machine. The two *figures*, F, F have nothing to do with the Machine. They represent *two coolers* of sheet-iron, placed on two beer-casks of

different sizes and shapes, and of these we shall speak by-and-by. The Machine complete is represented by *figure G*; and A, B, C, D and E, represent its several parts. A is the bottom, made of strong sheet-iron standing upon three legs. The hollow part of it contains the *fire*, put in at a door, of which you see the latch in front. The long thing that sticks up is a stove-pipe, to carry off the smoke, and the little thing under, between the legs, is a receptacle for the ashes or cinders that fall down through the grate above. B is a sheet-iron vessel, tinned on the inside, the bottom of which fits into the top of A; and the cock, in B, is to let off the wort, as will be seen hereafter. C is the lid to this vessel. D is made of sheet-iron tinned inside and out, and full of holes, to act as a strainer. It is to hold the *Malt* first and the *Hops* afterwards, and it *goes into B*, as will be seen if you look at G. In the middle of D is a round space, E, made of the same metal, and rising up from the bottom, having itself *no bottom*. It has holes in it all the way up, like those in D.

48. Let us now proceed to the act of brewing. You put the Machine together as in G, all but putting on the lid. Then the first thing is to put your malt, very *coarsely ground*, into D, and *no part of it into E*, or *into the space round between B and D*; for, if you do, D cannot act as a *strainer*, when you come to draw off

the liquor; and in this consists its use. Having put in your malt, you put in your *water*, which, of course, flows into any part of the vessel B. Stir the malt well with a stick, or with something that will separate it completely, so that there be no *lumps*, or little *balls*, formed by the flour of the malt. This is very apt to be the case, when *hot* water is poured on the malt, which is the case when a copper and the wooden utensils are used. The water being put in a cold state upon the malt, you have little trouble in causing the malt to be well and completely separated in the water.

49. Now, as to quantity of water, let me suppose, that the strength of the beer is to be that of three bushels to the hogshead (54 gallons), or a bushel to 18 gallons, which is a greater degree of strength than that of *London Porter*. There are machines to brew from *one* bushel to *six*; but, let me suppose that you are using the one-bushel machine. When your malt is in, you pour upon it *twelve* gallons of water.

50. Having stirred the malt very truly, you light your *fire*, and, as soon as you can, get the liquor to 170 or 180 degrees of heat. This you will ascertain by lifting off the lid, and dipping the thermometer, from time to time, into the centre E, and keeping it there a *full minute* to give the quick-silver time to rise. While the mash is coming to this heat, stir the malt well three

or four times. When you have got your proper heat, put out your fire, and cover the whole of the machine over with sacks, or with something to keep away external cold, especially in cold weather, or when you brew in the open air, which, as will be seen by-and-by, you may do if necessary.

51. In this state the mash remains for *two hours*. You turn the cock and draw off the wort, which will amount to about 9 gallons, for 3 will remain absorbed by the grains. Put this wort into a tub of some sort and keep it as warm as you can. Then put into the machine 12 gallons more of water. Re-kindle your fire; bring the heat to 170 degrees as soon as possible; let the mash now stand *an hour*; then put out your fire; draw off the second wort and put it aside as you did the first and, as we are supposing only *one* sort of beer, it may be put to the first.

52. You now take out the grains; lift out D; clean it well; clean also all the inside of B; then put D in again; put your hops into it as you did the malt before, as directed in paragraph 48; then put the whole of the wort into the machine; then, having put on the lid of the Machine, light your fire for the *third* time, and bring the liquor to a boil as quickly as possible. Let it boil a full hour with the lid off, and boil briskly all the time. And now you will see the use of the centre

E; for, the Machine being nearly full to the brim, the *bubbling* takes place in the centre E only, where there is *no hops*. There is a great *boiling over* in this centre, but the liquor sent up falls in D, and so there is no boiling over of B.

53. When the full hour of brisk boiling has expired, put out your fire; draw off the liquor, leaving, of course, the hops in D. The liquor is now to go into *coolers*, or a *cooler*. These may be the heads of large casks cut off, or shallow tubs, or vessels of any sort. The Patentee of the Brewing-Machine sells them made of sheet-iron tinned; and I have them. But, they may be almost any thing that is *shallow*; for, it is desirable to cool *quickly*, though it is not absolutely necessary.

54. You must now watch the liquor till the heat of it comes down to *seventy* degrees. Then take half a pint of *good yeast*, take out about a gallon of liquor from your coolers, or cooler, *mix the yeast well in it*, and then pour the whole into the cooler, or coolers, and, if two or more coolers, into each in proportion to its contents; and, when you have thus put the yeast in, mix the whole well up; and there leave the liquor till it comes down to about *sixty* degrees of heat.

55. The next removal is into the *Tun-tub*, in which capacity B, without D within it, serves you. While the liquor is cooling, you take out D and throw away the

spent hops ; you take off the stove, or fire, pipe ; you take away the ash-receiver ; and you remove B, standing upon A, into some convenient place, where, if it can be avoided, the heat should not be under about 55 degrees. The *cellar* itself is likely to be as good a place as any ; for, into it, the liquor must go at last."

56. Having fixed the Machine (now to act as tun-tub) in its proper place, and finding your liquor down at 60 degrees, you draw it off, or take it out of the coolers, and carry it and put it into the tun-tub, and put on the lid. If it be very cold weather, or, if the tun-tub be in a cold place, cover it over with sacks, or with any thing that may keep away the external cold. Here the *fermentation* takes place, sometimes sooner and sometimes later ; but it generally shows itself by a head beginning to rise in about eight or ten hours ; and, at the end of about forty-eight hours, you will perceive the head assume a *brownish* appearance and to get *smoother*, *more level*, than it was ; that is to say, it will be *yeast* rather than *froth*.

57. The moment you perceive these marks, you should put the beer into the *cask*. And now as to your *cask*, and the *quantity* of beer that you have got. As to the former, the *bell-shaped* is certainly the best, though the other does very well. The main things are *soundness* and *sweetness*, in both of which respects the

cask must be *perfect*, or all your labour and expense are thrown away ; and, therefore, of means of insuring these important points I shall speak fully by-and-by. With regard to the *quantity* of beer that you have got in the tun-tub, you will remember, that you put 12 gallons each time into the Machine ; and that you want but 18 to fill your cask ; but, there will be three gallons remain in the *grains* and the *hops* ; some will go off in *evaporation* ; some will be *spilled* in so many removals ; some will go away in the sediment in the Machine, some in the sediment in the tun-tub, some will go off in the yeast ; and some must be left to fill up, as we shall presently see, to the top of the cask after the working in the cask has ceased. So that, as experience has proved to me, the 24 gallons of water is none too much to yield 18 gallons of beer.

58. The cask being fixed on the stand in the cellar, and the beer ready, you first *skim off the head* of the beer, which is the *yeast*. This you put into some clean and rather deep than broad earthen vessel, and put it by for use. You should skim off very clean, which will take away a little of the beer, but it may be drained away afterwards. Having skimmed off the yeast, draw off the beer into a pail, and with the help of a funnel, fill the cask *quite full*. There may, or there ought to be, about a gallon over your quantity, which should be drawn off, and put by in something clean.

59. The beer will now ferment again more or less, and will, of course, send out froth and yeast from the bung-hole, which must, for that purpose, be left open. If the cask be of the *bell-shape* (See the *upper F* in the plate) the yeast will lodge on the top, whence it must be taken and put to what you skimmed off before. If a cask in the shape of that seen in the *figure* of the *lower F*, and if the bung-hole be in the side and not at the top, it must be laid *across* the stand, and the bung-hole, for the present, pointing a little towards *one side*, that the yeast may descend from that side into something placed to receive it.

60. When the working in the cask has ceased, there will be a *void*, occasioned by the working. You must now apply the remainder of your beer to fill the cask completely up. Having done that, you put in a handful of *fresh hops*, wrap some course linen cloth round the bung, put it in, and drive it close with a little mallet.

61. If the work, from first to last, have been properly performed, such a cask of beer will be *clear* in a week; and, as soon as clear, it may be tapped. *Small beer* may be tapped in less time.

62. Such a *number of things* are directed to be done in the brewing of this cask of beer, that, upon the perusal, the *time* and *trouble* would appear to be very great. But, it should be borne in mind, that the whetting of a

scythe requires, probably, as many words to describe it as the mowing of all the land of a farm. Several of the operations above described, take up less time to *perform* than to describe them. In fact the whole of the business, from the putting of the malt into the Machine, to the putting of it into the tun-tub, requires, under hardly any circumstances, not more than seven *hours*; and, during the greater part of that time, the brewer is inactive being merely *watching the fire*. And, as to the *labour*, it may be easily performed by any efficient *servant maid*.

63. The reader will observe, that, for the sake of avoiding complexity, I have here supposed only *one sort of beer* to be made from the same parcel of malt. On a larger scale, or with casks of a smaller size in this little scale, two sorts may be made, *ale* and *small beer*, taking the first wort for the former and the second for the latter. Even with this small machine more than a bushel of malt might be applied to the making of 18 gallons, but then, to get a sufficient quantity of liquor, there must be another mashing. I think, however, that, where two sorts of beer are wanted, the brewings would be best separate; and *one day* is enough for two brewings.

64. I observed, in paragraph 57, that the *soundness* and *sweetness* of the casks were points of great importance. If the cask be not sound, it will *leak*, and the defect is

easily seen. The *cooper* puts this to rights. But it is not so easy to discover defect in point of sweetness. *Scalding out* is hardly sufficient in any case. The safest way is to take *out the head*, and *scower clean*; and, if the cask be once *mouldy*, there is, I believe, *no cure*. So that people should be very cautious how they purchase *second-hand* beer casks, which are generally found to bear no distant resemblance to second-hand eggs in something of more consequence than the shape. Having good casks to begin with, *care*, and care only, is requisite to keep them good for a pretty long life time of a man. One thing above all others is necessary; the moment the beer is out, *cork up the cask as closely as possible*, unless it be to be used again immediately; and let it remain in that state, till it be taken to be prepared for use again. If this precaution be taken, and if, to good and repeated scaldings, be added the putting in of a *chain*, or a quart or two of *small stones*, not bigger than a walnut, and the rolling of the cask well about, with these within it, so as to rub off any particle of adhesive matter, a cask may be used a long while without taking out the head. At any rate, let the cask be *sweet*; for, if that be not the case, the beer is spoiled.

65. I am not writing a *treatise on beer*, but merely attempting to furnish some useful hints to those who may wish to supply themselves with *useful drink* of their

own preparing. Therefore I say nothing of *strong* beer; of *bottled* beer; or of *large cellars* and *rotation of brewings*. What I aim at is, to point out, as plainly as I can, how families may perform the work with as little trouble and as great advantage as is practicable.

66. For a small family, where only a couple of quarts of ale and four or five of small beer are wanted in a day, the *one-bushel* Machine and about five 18 gallon casks are sufficient; and this might require about eight brewings in the year, taking care always to have a cask, or nearly a cask, of each sort, *on hand*. If the family be somewhat larger, the *two-bushel* Machine; and so on to the *six-bushel* Machine.

67. Now, as to the *prices* of the Machines, the Patentee has, since the publication of the former Number of this work, reduced them to the following: The *one-bushel* Machine, 8*l*; the *two*, 13*l*; the *three*, 18*l*; the *four*, 24*l*; the *five*, 30*l*; the *six*, 33*l*. This is exclusive of *coolers*, which do not belong to the *patent*, of course, and which may be had with the machine or not, as the purchaser pleases.

68. The advantages that an utensil of this description possesses over the common utensils are as follow. With the common utensils, you must *remove* your water from the copper to the *mashing-tub*, while the Machine serves for copper and mashing tub. With the common uten-

sils the process is necessarily much *slower*, and the fuel consumed five times, or, perhaps, ten times, as much. But, the great thing of all is, the convenience as to *room*, and *place of brewing*. The common utensils require a great deal of room to use them in. There must be a *copper*, and that must be *fixed*, too, in brick-work. In short, a *brew-house* is wanted for a family of any considerable size. Whereas the Machine is set up opposite any fire place, and the pipe is put up, or into, the chimney, at any distance from the floor, or into the fire-place itself. There is no boiling over; no slopping about; and the thing may be done upon a boarded floor as well as on a brick or stone-floor. If you have *no fire-place*, you can place the Machine against a window, take out a pane of glass, and put the end of the pipe through the opening. If this be not convenient, you can put it through a wall, or through any outside of a building of any sort; only observing, that, if the opening be through *wood*, or any thing that will burn, it must be so large as to *prevent the pipe from touching it in any part*. Having no place at all in the house; a coach-house, a stable, a cart-house, a barn, a shed of any sort will do equally well; and, if you have *no covering at all*, the open air, in a garden walk, a court, a field, is just as good, provided there be *no rain*; and provided that you take the trifling precaution as to *cover-*

ing, pointed out in paragraph 50.—When the brewing is finished, the Machine should be well scalded, and *rubbed dry*, and put away in a *dry place*, to prevent *rust*.

69. The reader will observe, that I have no *private interest*, direct, or indirect, in the success of the proprietor of this Machine. I bought mine at the recommendation of a gentleman, who has long had a *six-bushel* one, and who gave me some beer, of different strengths and age, that he had made with it. In pointing out the many and great advantages of the Machine, I have solely the public good in view; and, if I were to-morrow, to discover, or to hear of, any thing preferable to this Machine for accomplishing the same ends, I should undoubtedly hasten to communicate the discovery to my readers. The Patentee has, of course, furnished the *Plate* and paid for the *advertizing* of his prices, on which advertizing I myself *pay a tax*. He has reduced the prices, I believe, in consequence of representations made to me by several persons, and with the substance of which representations I made him acquainted. But, these things excepted, I have no concern whatever with the Patentee; because it is manifest that this paper is calculated greatly to promote the sale of the Machine, and because I would leave no suspicion to operate against my recommendation, my

most anxious wish being to encourage the practice of private brewing, and especially amongst the Labouring Classes and the Class of Tradesmen. I am aware, that, even at *eight pounds*, the Machine is beyond the reach of the *Common Labourer*; and, it is him, before all, that I am desirous to assist. If, therefore, any of my readers can point out any method by which we should be likely to restore the practice of brewing to the *Cottage*, I shall be greatly obliged to them to communicate it to me.

70. Having stated the inducements to the brewing of beer, and given the plainest directions that I was able to give for the doing of the thing, I shall, next, proceed to the subject of *bread*. But, this subject is too large and of too much moment to be treated with brevity, and must, therefore, be put off till my next Number. I cannot, in the mean while, dismiss the subject of *Brewing Beer* without once more adverting to its many advantages, as set forth in the foregoing Number of this work.

71. The following instructions for the making of *Porter* will clearly shew what sort of stuff is sold at *public-houses* in London; and we may pretty fairly suppose, that the public-house beer in the country is not superior to it in quality. “A quarter of malt, all the ingredients, “will make *five barrels of good porter*. Take one quar- “ter of high-coloured malt, eight pounds of hops, nine “pounds of *treacle*, eight pounds of *colour*, eight “pounds of sliced *liquorice-root*, two drams of *salt of* “*tartar*, two ounces of *Spanish-liquorice*, and half an

"ounce of *capsicum*." The author says, that he merely gives the ingredients, as *used by many persons*.

72. This extract is taken from a *book on brewing*, recently published in London. What a curious composition! What a mess of drugs! But, if the brewers *openly avow* this, what have we to expect from the *secret practices* of them, and the *retailers* of the article! When we know, that *Beer-doctor* and *Brewers'-drug-gist* are *professions*, practised as openly as those of *Bug-man* and *Rat-killer*, are we simple enough to suppose, that the above-named are the *only* drugs, that people swallow in those potions, which they call *pots of beer*? Indeed we know the contrary; for, scarcely a week passes without witnessing the detection of some greedy wretch, who has used, in making or in *doctoring* his beer, drugs, forbidden by the law. And, it is not many weeks since one of these was convicted, in the Court of Excise, for using potent and dangerous drugs, by the means of which and a suitable quantity of water, he made *two butts of beer into three*. Upon this occasion it appeared, that no less than *ninety* of these worthies were in the habit of pursuing the same practices. The drugs are not unpleasant to the taste: they sting the palate: they give a present relish: they communicate a momentary exhilaration: but, they give no force to the body, which, on the contrary, they enfeeble, and, in many instances, with time, destroy; producing diseases from which the drinker would otherwise have been free to the end of his days.

73. But, look again at the receipt for making Porter,

Here are *eight* bushels of malt to 180 gallons of beer; that is to say, 25 gallons from the bushel. Now, the malt is eight shillings a bushel, and allowing eight pounds of the very *best hops*, they will cost but a shilling a pound. The malt and hops, then, for the 180 gallons, cost but *seventy-two shillings*; that is to say, only a little more than *fourpence three farthings a gallon*, for stuff which is now retailed for *twenty pence a gallon*! If this be not an abomination, I should be glad to know what is. Even if the treacle, colour and the drugs be included, the cost is not *fivepence a gallon*; and, yet, not content with this enormous extortion, there are wretches, who resort to the use of other, and pernicious drugs, in order to increase their gains!

74. To provide against this dreadful evil there is, and there can be, no *law*; for, it is *created by the law*. The *law* it is, that imposes the enormous tax on the *malt* and *hops*; the *law* it is, that imposes the *licence tax* and places the power of granting the licence at the discretion of persons appointed by the government; the law it is that checks, in this way, the private brewing, and that prevents *free and fair competition* in the selling of beer, and, as long as the *law* do these, it will in vain endeavour to prevent the people from being destroyed by slow poison.

75. Innumerable are the benefits that would arise from a repeal of the taxes on malt and on hops. Tippling houses might then be shut up with justice and propriety. The Labourer, the Artizan, the Tradesman, the Landlord, all would instantly feel the benefit. But the

Landlord more, perhaps, in this case, than any other member of the community. The four or five pounds a year which the day-labourer now drizzles away in tea-messes, he would divide with the farmer, if he had untaxed beer. His wages would *fall*, and fall to his *advantage* too. The fall of wages would be not less than 40*l.* upon a hundred acres. Thus 40*l.* would go, in the end, a fourth, perhaps, to the farmer, and three-fourths to the Landlord. This is the kind of work to *reduce poor-rates*, and to restore *husbandry to prosperity*. Undertaken this work *must* be, and *performed too*; but whether we shall see this until the estates have passed away from the *present race* of Landlords, is a question which must be referred to *time*.

76. In *America* how useful the *brewing-machine*! No tax on malt or hops; no patent on the machine! Barley at about 18*d.* our money, a bushel! Surely we may hope, that when the American farmers shall see this little Essay, they will begin seriously to think of leaving off the use of the liver-burning and palsy-producing *Spirits*.

END OF NO. II.

Cobbett's Cottage Economy.

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1. OCTOBER, 1821.

MAKING BREAD.

77. LITTLE time need be spent in dwelling on the necessity of *this* article to all families; though, on account of the modern custom of using *potatoes* to supply the place of *bread*, it seems necessary to say a few words here on a subject, which, in another work, I have so amply, and, I think, so triumphantly discussed. I am the more disposed to revive the subject, for a moment in this place, from having read, in the Evidence recently given before the Agricultural Committee, that many labourers, especially in the West of England, use potatoes *instead* of bread to a very great extent. And I find, from the same evidence, that it is the custom to allot to labourers “*a potatoe ground*” in part-payment of their wages! This has a tendency to bring English labourers down to the state of the Irish, whose mode of living, as to food, is but one remove from that of the pig, and of the ill-fed pig too.

78. I was, in reading the above-mentioned Evidence, glad to find, that Mr. EDWARD WAKEFIELD, the best informed and most candid of all the wit-

nesses, gave it as his opinion, that the increase which had taken place in the cultivation of potatoes was "*injurious to the country*;" an opinion, which must, I think, be adopted by every one who takes the trouble to reflect a little upon the subject. For, leaving out of the question, the slovenly and beastly habits engendered amongst the labouring classes by constantly lifting their principal food at once out of the earth to their mouths, by eating without the necessity of any implements other than the hands and the teeth, and by dispensing with every thing requiring skill in the preparation of the food and cleanliness in its consumption or preservation; leaving these out of the question though they are all matters of great moment, when we consider their effects in the rearing of a family, we shall find, that, in mere quantity of food; that is to say, of *nourishment*, bread is the preferable diet.

79. An acre of land, that will produce 300 bushels of potatoes, will produce 32 bushels of wheat. I state this as an average fact, and am not at all afraid of being contradicted by any one well acquainted with husbandry. The potatoes are supposed to be of a *good sort*, as it is called, and the wheat may be supposed to weigh 60 pounds a bushel. It is a fact clearly established, that, after the *water*, the *stringly* substance, and the *earth*, are taken from the potatoe, there remains only one *tenth* of the rough raw weight, of nutritious matter, or matter which is deemed equally nutritious with bread, and, as the raw potatoes weigh 56 lb. a bushel, the acre will yield 1,830 lb. of nutri-

tious matter. Now mind, a bushel of wheat, weighing 60 lb. will make of *household bread* (that is to say, taking out only the *bran*) 65 lb. Thus, the acre yields 2080 lb. of bread. As to the *expenses*, the seed and act of planting are about equal in the two cases. But, while the potatoes *must* have cultivation during their growth, the wheat needs none; and, while the wheat straw is worth from three to five pounds an acre, the haulm of the potatoes is not worth one single truss of that straw. Then, as to the expence of gathering, housing and keeping the potatoe crop it is enormous, besides the risk of loss by frost, which may be safely taken, on an average, at a tenth of the crop. Then comes the expence of *cooking*. The thirty-two bushels of wheat, supposing a bushel to be baked at a time (which would be the case in a large family) would demand *thirty-two heatings of the oven*. Suppose a bushel of potatoes to be cooked every day in order to supply the place of this bread, then we have *nine hundred boilings of the pot*; unless *cold potatoes* be eaten at some of the meals; and, in that case, the diet must be *cheering* indeed! Think of the *labour*; think of the *time*; think of all the peelings and scrapings and washings and messings attending these *nine hundred boilings of the pot*! For it must be a considerable time before English people can be brought to eat potatoes in the Irish style; that is to say, scratch them out of the earth with their paws, toss them into a pot without washing, and when boiled, turn them out upon a dirty board, and then sit round

that board, peel the skin and dirt from one at a time and eat the inside. Mr. Curwen was delighted with "*Irish hospitality*," because the people there receive no parish relief; upon which I can only say, that I wish him the exclusive benefit of such hospitality.

80. I have here spoken of a large quantity of each of the sorts of food. I will now come to a comparative view more immediately applicable to a labourer's family. When wheat is *ten* shillings the bushel, potatoes, bought at best hand (I am speaking of the country generally,) are about *two* shillings a bushel. Last Spring the average price of wheat might be *six and sixpence*; and the average price of potatoes (in small quantities) was about *eighteen pence*; though, by the wagon load, I saw potatoes bought at a *shilling* a bushel, to give to sheep; then, observe, these were of the coarsest kind, and the farmer had to fetch them at a considerable expence. I think, therefore, that I give the advantage to the potatoes when I say that they sell upon an average, for full a *fifth* part as much as the wheat sells for, per bushel, while they contain five pounds less weight than the bushel of wheat; while they yield only five pounds and a half of nutritious matter equal to bread; and while the bushel of wheat will yield *sixty-five pounds of bread*, besides the ten pounds of bran. Hence it is clear, that, instead of that *saving*, which is everlastingly dinned in our ears, from the use of potatoes, there is a *waste of more than one half*; seeing that, when wheat is *ten shillings* the bushel you can have

sixty-five pounds of bread for the ten shillings; and can have out of potatoes only five pounds and a half of nutritious matter equal to bread for *two shillings*! This being the case, I trust, that we shall soon hear no more of those *savings*, which the labourer makes by the use of potatoes; I hope we shall, in the words of DOCTOR DRENNEN, “Leave Ireland to her *lazy* root,” if she choose still to adhere to it. It is the root, also, of slovenliness, filth, misery and slavery; its cultivation has increased in England with the increase of the paupers: both, I thank God, are upon the decline. Englishmen seem to be upon the return to beer and bread, from water and potatoes; and, therefore, I shall now proceed to offer some observations to the cottager, calculated to induce him to bake his own bread.

81. As I have before stated, sixty pounds of wheat; that is to say, where the Winchester bushel weighs sixty pounds, will make sixty-five pounds of bread, besides the leaving of about ten pounds of bran. This is household bread, made of flour from which the bran only is taken. If you make fine flour, you take out pollard, as they call it, as well as bran, and then you have a smaller quantity of bread and a greater quantity of offal; but, even of this finer bread; bread equal in fineness to the baker's bread, you get from *fifty-eight to fifty-nine* pounds out of the bushel of wheat. Now, then, let us see, how many quartern loaves you get out of the bushel of wheat, supposing it to be fine flour, in the first place. You get thir-

teen quartern loaves and a half, these cost you, at the present average price of wheat (seven and sixpence a bushel,) in the first place that is 7s. 6d.; then 3d. for yeast; then not more than 3d. for grinding; because you have about thirteen pounds of offal, which is worth more than a $\frac{1}{2}$ a pound, while the grinding is 9d. a bushel. Thus, then, the bushel of bread of fifty-nine pounds cost you *eight shillings*; and it yields you the weight of thirteen and a half quartern loaves. These quartern loaves now sell at Kensington, at the baker's shop at a 1s. $\frac{1}{2}$; that is to say, the thirteen quartern loaves and a half cost 14s. 7 $\frac{1}{2}$ d. I omitted to mention the salt, which would cost you 4d. more. So that, here is 6s. 3 $\frac{1}{2}$ d. saved upon the baking of a bushel of bread. The baker's quartern loaf, is, indeed, cheaper in the country than at Kensington, by, probably, a penny in the loaf; which would still, however, leave a saving of 5s. upon the bushel of bread. But, besides this, pray think a little of the materials of which the baker's loaf is composed. The *alum*, the *ground potatoes*, and other materials, it being a notorious fact, that the bakers, in London, at least, have *mills*, wherein to grind their potatoes; so large is the scale upon which they use that material. It is probable that, out of a bushel of wheat, they make between *sixty* and *seventy* pounds of bread, though they have no more *flour*, and, of course, no more nutritious matter, than you have in your fifty-nine pounds of bread. But, at the least, supposing their bread to be as good as yours in quality, you

have, allowing a shilling for the heating of the oven, a clear 4s. saved upon every bushel of bread. If you consume half a bushel a week, that is to say, about a quartern loaf a day, this is a saving of 5*l.* 4s. a year, or full a sixth part, if not a fifth part of the earnings of a labourer in husbandry.

82. How wasteful, then, and, indeed, how shameful, for a labourer's wife to go to the baker's shop; and how negligent, how criminally careless of the welfare of his family must the labourer be, who permits so scandalous an use of the proceeds of his labour! But I have, hitherto, taken a view of the matter the least possibly advantageous to the home-baked bread. For, ninety-nine times out of a hundred, the fuel for heating the oven costs very little. The hedgers, the copers, the woodmen of all descriptions, have fuel for little or nothing. At any rate, to heat the oven cannot, upon an average, take the Country through, cost the labourer more than 6*d.* a bushel. Then, again, fine flour need not ever be used, and ought not to be used. This adds six pounds of bread to the bushel, or nearly another quartern loaf and a half, making nearly fifteen quartern loaves out of the bushel of wheat. The finest flour is by no means the most wholesome; and, at any rate, there is more nutritious matter in a pound of household bread, than in a pound of baker's bread. Besides this, rye, and even barley, especially when mixed with wheat, make very good bread. Few people upon the face of the earth live better than the Long Islanders. Yet,

nine families out of ten, seldom eat wheaten bread. Rye is the flour that they principally make use of. Now, rye, is seldom more than two-thirds the price of wheat, and barley is seldom more than half the price of wheat. Half rye and half wheat, taking out a little more of the offal, make very good bread. Half wheat, a quarter rye and a quarter barley; nay, one-third of each make bread that I could be very well content to live upon all my lifetime; and, even barley alone; if the barley be good, and none but the finest flour taken out of it, has in it, measure for measure, ten times the nutrition of potatoes. Indeed the fact is well known, that our forefathers used barley bread to a very great extent. Its only fault, with those who dislike it, is its sweetness, a fault which we certainly have not to find with the baker's loaf, which has in it, no more of the *sweetness* of grain than is to be found in the offal which comes from the sawings of deal boards. The nutritious nature of barley is amply proved by the effect, and very rapid effect of its meal, in the fattening of hogs and of poultry of all descriptions. They will fatten quicker upon a meal of barley than upon any other thing. The flesh, too, is sweeter than that proceeding from any other food, with the exception of that which proceeds from *buck wheat*, a grain little used in England. That proceeding from Indian Corn is, indeed, still sweeter and finer, but this is wholly out of the question with us.

83. I am by and by to speak of the *cow* to be kept

by the labourer in husbandry. Then there will be *milk* to wet the bread with, an exceedingly great improvement in its taste as well as in its quality! This, of all the ways of using skim milk is the most advantageous; and, this great advantage must be wholly thrown away, if the bread of the family be bought at the shop. With milk, bread with very little wheat in it, may be made far better than baker's bread; and, leaving the milk out of the question, taking a third of each sort of grain, you would get bread weighing as much as fourteen quartern loaves, for about 5s. 9d. at present prices of grain; that is to say, you would get it for about 5d. the quartern loaf, all expences included; thus you have nine pounds and ten ounces of bread a day for about 5s. 9d. a week. Here is enough for a very large family. Very few labourers' families indeed can want so much as this, unless indeed there be several persons in it capable of earning something by their daily labour. Here is cut and come again. Here is bread always for the table. Bread to carry afield; always a hunch of bread, ready to put into the hand of a hungry child. We hear a great deal about "*children crying for bread*," and objects of compassion they and their parents are, when the latter have not the means of obtaining a sufficiency of bread. But I should be glad to be informed, how it is possible for a labouring man, who earns, upon an average, 10s. a week, who has not more than four children (and if he have more some ought to be doing something;)

who has a garden of a quarter of an acre of land (for that makes part of my plan;) who has a wife as industrious as she ought to be; who does not waste his earnings at the alehouse or the tea shop. I should be glad to know how such a man, while wheat shall be at the price of about 6s. a bushel, *can possibly have children crying for bread!*

84. Cry, indeed, they must if he will persist in giving thirteen shillings for a bushel of bread instead of 5s. 9d. Such a man is not to say that the bread which I have described is *not good enough*. It was good enough for his forefathers who were too proud to be paupers, that is to say, abject and willing slaves. "Hogs eat barley." And hogs will eat wheat, too, when they can get at it. Convicts in condemned cells eat wheaten bread; but we think it no degradation to eat wheaten bread, too. I am for depriving the labourer of none of his rights; I would have him oppressed in no manner or shape; I would have him bold and free; but to have him such, he must have bread in his house, sufficient for all his family, and whether that bread be fine or coarse must depend upon the different circumstances which present themselves in the cases of different individuals.

85. The married man has no right to expect the same plenty of food and of raiment that the single man has. The time before marriage is the time to lay by, or, if the party choose, to indulge himself in the absence of labour. To marry is a voluntary act, and it is attended, in the result, with great pleasures

and advantages. If, therefore, the laws be fair and equal ; if the state of things be such, that a labouring man can, with the usual ability of labourers, and with constant industry, care and sobriety ; with decency of deportment towards all his neighbours, cheerful obedience to his employer, and a due subordination to the laws : if the state of things be such, that such a man's earnings be sufficient to maintain himself and family with food, raiment and lodging needful for them ; such man has no reason to complain, and no labouring man has reason to complain, if the numerousness of his family should call upon him for extraordinary exertion, or for economy uncommonly rigid. The man with a large family, has, if it be not in a great measure his own fault, a greater number of pleasures and of blessings, than other men. If he be wise, and just as well as wise, he will see that it is reasonable for him to expect less delicate fare than his neighbours, who have a less number of children or no children at all. He will see the justice as well as the necessity of his resorting to the use of coarser bread, and thus, endeavour to make up that, or, at least, a part of that which he loses in comparison with his neighbours. The quality of the bread ought, in every case, to be proportioned to the number of the family and the means of the head of that family. Here is no injury to health proposed ; but, on the contrary, the best security for its preservation. Without bread, all is misery. The Scripture truly calls it the staff of life ; and it may be called, too, the

pledge of peace and happiness in the labourers' dwelling.

86. As to the act of making bread, it would be shocking indeed, if that had to be taught by the means of books. Every woman, high or low, ought to know how to make bread. If she do not, she is unworthy of trust and confidence; and, indeed, a mere burthen upon the community. Yet, it is but too true, that many women, even amongst those who have to get their living by their labour, know nothing of the making of bread; and seem to understand little more about it than the part which belongs to its consumption. A Frenchman, a Mr. CUSAR, who had been born in the West Indies, told me, that till he came to Long Island, he never knew *how the flour came*; that he was surprised when he learnt that it was squeezed out of little grains that grew at the tops of straw; for that he had always had an idea that it was got out of some large substances, like the yams that grow in tropical climates. He was a very sincere and good man, and I am sure he told me truth. And this may be the more readily believed, when we see so many women in England, who seem to know no more of the constituent parts of a loaf than they know of those of the Moon. Servant women in abundance appear to think that loaves are made by the baker, as knights are made by the king; things of their pure creation, a creation, too, in which no one else can participate. Now, is not this an enormous evil? And whence does it come? Servant

women are the children of the labouring classes : and they would all know how to make bread and know well how to make it, too, if they had been fed on bread of their mother's and their own making.

87. How serious a matter, then, is this, even in this point of view ! A servant that cannot make bread is not entitled to the same wages as one that can. If she can neither bake nor brew ; if she be ignorant of the nature of flour, yeast, malt and hops, what is she good for ? If she understand these matters well ; if she be able to supply her employer with bread and with beer ; she is really *valuable* ; she is entitled to good wages, and to consideration and respect into the bargain ; but if she be wholly deficient in these particulars, and can merely dawdle about with a bucket and a broom, she can be of very little consequence : to lose her is merely to lose a consumer of food, and she can expect very little indeed in the way of desire to make her life easy and pleasant. Why should any one have such desire ? She is not a child of the family. She is not a relation. Any one as well as she can take in a loaf from the baker, or a barrel of beer from the brewer. She has nothing whereby to bind her employer to her. To sweep a room any thing is capable of that has got two hands. In short, she has no useful skill, no useful ability, she is an ordinary drudge and she is treated accordingly.

88. But, if such be her state in the house of an employer, what is her state in the house of a *hus-*

band? The lover is blind ; but the husband has eyes to see with. He soon discovers that there is something wanted besides dimples and cherry cheeks ; and I would have fathers seriously to reflect, and to be well assured, that, the way to make their daughters to be long admired, beloved and respected by their husbands, is to make them skilful, able and active in the most necessary concerns of a family. Eating and drinking come three times every day ; the preparations for these, and all the ministry necessary to them belong to the wife, and I hold it to be impossible, that, at the end of two years, a really ignorant, sluttish wife, should possess any thing worthy of the name of love from her husband. This, therefore, is a matter of far greater moment to the father of a family, than whether the Parson of the parish or the Methodist Priest be the most "*Evangelical*" of the two ; for, it is here a question of the daughter's happiness or misery for life. And I have no hesitation to say, that if I were a labouring man, I should prefer teaching my daughters to bake, brew, milk, make butter and cheese, to teaching them to read the Bible till they had got every word of it by heart ; and I should think, too ; nay, I should know, that I was in the former case doing my duty towards God as well as towards my children.

89. When we see a family of dirty, ragged little creatures, let us enquire into the cause, and ninety-nine times out of every hundred we shall find, that the parents themselves have been brought up in the

same way. But a consideration which ought of itself to be sufficient, is the contempt in which a husband will naturally hold a wife that is ignorant of the matters necessary to the conducting of a family. A woman who understands all the things above-mentioned is really a skilful person; a person worthy of respect, and that will be treated with respect, too, by all but brutish employers or brutish husbands; and such, though sometimes, are not very frequently found. Besides, if natural justice and our own interests, had not the weight which they have, such valuable persons will be treated with respect. They know their own worth; and, accordingly, they are more careful of their character, more careful not to lessen by misconduct the value which they possess from their skill and ability.

90. Thus, then, the interest of the labourer; his health; the health of his family; the peace and happiness of his home; the prospects of his children through life; their skill, their ability, their habits of cleanliness, and even their moral deportment; all combine to press upon him the adoption and the constant practice of this branch of domestic economy. "Can she *bake*?" Is the question that I always put. If she can, she is *worth a pound or two a year more*. Is that nothing? Is it nothing for a labouring man to make his four or five daughters worth eight or ten pounds a year more; and that, too, while he is by the same means, providing the more plentifully for himself and the rest of his family? The reasons on

the side of the thing that I contend for are endless ; but if this one motive be not sufficient, I am sure all that I have said, and all that I could say, must be wholly unavailing.

91. Before I dismiss, however, this subject, let me say a word or two to those persons, who do not come under the denomination of labourers. In London, or in any very large Town, where the space is so confined, and where the proper fuel is not handily to be come at and stored for use, to bake your own bread may be attended with too much difficulty ; but, in all other situations there appears to me to be hardly any excuse for not baking bread at home. If the family consist of twelve or fourteen persons, the money actually saved in this way (even at present prices) would be little short of from twenty to thirty pounds a year. At the utmost here is only the time of one woman occupied, one day in the week. Now mind, here are twenty-five pounds to be employed in some way different from that of giving it to a baker. If you add five of these pounds to a woman's wages. Is not that full as well employed as giving it in wages to the baker's men ? Is it not better employed for you ; and is it not better employed for the community ? It is very certain, that, if the practice were as prevalent as I could wish, there would be a large deduction from the regular baking population ; but, would there be any harm if less alum were imported into England, and if some of those youths were left at the plough who are now bound in apprentice-

ships to learn the art and mystery of doing that which every girl in the kingdom ought to be taught to do by her mother? It ought to be a maxim with every Master and every Mistress, never to employ another to do, that which can be done as well by their own servants. The more of their money that is retained in the hands of their own people the better it is for them all together. Besides, a man of a right mind must be pleased with the reflection that there is a great mass of skill and ability under his own roof. He feels stronger and more independent on this account, all pecuniary advantage out of the question. It is impossible to conceive any thing more contemptible than a crowd of men and women living together in a house and constantly looking out of it for people to bring them food and drink, and to fetch their garments to and fro. Such a crowd resemble a nest of unfledged birds, absolutely dependent for their very existence on the activity and success of the old ones.

92. Yet, on men go from year to year in this state of wretched dependence, even when they have all the means of living within themselves, which is certainly the happiest state of life that any one can enjoy. It may be asked, where is the mill to be found; where is the wheat to be got? The answer is, where is there not a mill; where is there not a market? They are every where, and the difficulty is to discover what can be the particular attractions contained in that luminous manuscript, a baker's half-yearly bill.

93. With regard to the Mill, in speaking of families of any considerable number of persons, the mill has, with me, been more than once a subject of observation in print. I for a good while experienced the great inconvenience and expence of sending my wheat and other grain to be ground at a mill. This expence, in case of a considerable family, living at only a mile from a mill is something; but the inconvenience and uncertainty, are great. In my "Year's Residence in America," from paragraphs 1031 and onwards, I give an account of a horse-mill, which I had in my farm-yard; and I showed, I think very clearly, that corn could be ground cheaper in this way than by wind or water, and that it would answer well to grind for sale in this way as well as for home use. Since my return to England I have seen a mill, erected in consequence of what the owner had read in my book. This mill belongs to a small farmer, who, when he cannot work on his land with his horses, or, in the season when he has little for them to do, grinds wheat, sells the flower; and he takes in grist to grind as other millers do. This mill goes with three small horses; but, what I would recommend to gentlemen with considerable families, or to farmers, is a mill, such I myself have at present.

94. With this mill, turned by a man and a stout boy, I can grind six bushels of wheat in a day, and dress the flour. The grinding of six bushels of wheat at ninepence a bushel comes to four and sixpence, which pays the man and the boy, supposing them

(which is not and seldom can be the case) to be hired for the express purpose, out of the street. With the same mill you grind meat for your pigs; and of this you will get eight or ten bushels ground in a day. You have no trouble about sending to the mill; you are sure to have your *own wheat*; for, strange as it may seem, I used sometimes to find that I sent white Essex wheat to the mill, and that it brought me flour from very coarse red wheat. There is no accounting for this, except by supposing that wind and water power has something in it to change the very nature of the grain; as, when I came to grind by horses, such as the wheat went into the hopper, so the flour came out into the bin.

95. But mine now is only on the petty scale of providing for a dozen of persons and a small lot of pigs. For a farm-house, or a gentleman's house in the country, where there would be *room* to have a walk for a horse, you might take the labour from the men, clap any little horse, poney, or even ass to the wheel; and he would grind you off eight or ten bushels of wheat in a day, and both he and you would have the thanks of your men into the bargain.

96. The cost of this Mill is twenty pounds. The Dresser is four more; the horse path and wheel might, possibly, be four or five more; and I am very certain, that to any farmer living at a mile from a mill (and that is less than the average distance, perhaps;) having twelve persons in family; having forty pigs to feed and twenty hogs to fatten,

the savings of such a mill would pay the whole expences of it the very first year. Such a farmer cannot send less than *fifty times* a year to the mill. Think of that, in the first place ! The elements are not always propitious. Some times the water fails, and sometimes the wind. Many a farmer's wife has been tempted to vent her spleen on both. At best, there must be horse and man or boy, and, perhaps, cart, to go to the mill ; and that, too, observe, in all weathers, and in the harvest as well as at other times of the year. The case is one of imperious necessity : neither floods nor droughts, nor storms, nor calms will allay the cravings of the kitchen, nor quiet the clamorous uproar of the sty. Go, somebody must, to some place or other, and back they must come with flour and with meal. One summer many persons came down the country more than fifty miles to a mill that I knew in Pennsylvania ; and I have known farmers in England, carry their grist more than fifteen miles to be ground. It is surprising that, under these circumstances, hand-mills and horse mills, should not, long ago, have become of more general use ; especially when one considers that the labour, in this case, would cost the farmer next to nothing. To grind would be the work of a wet day. There is no farmer, who does not, at least fifty days in every year, exclaim, when he gets up in the morning, " What shall I set *them* at to-day ! " If he had a mill, he would make them pull off their shoes, sweep all out clean, winnow up some corn if he had not it already done, and grind and

dress, and have every thing in order. No scolding within doors about the grist; no squeaking in the stye; no boy sent off in the rain to the mill.

97. But, there is one advantage which I have not yet mentioned, and which is the greatest of all; namely, that you would have the power of supplying your married labourers, your blacksmiths' men sometimes, your wheelwrights' men at other times; and, indeed, the greater part of the persons that you employed, with good flour, instead of their going to purchase this flour, after it had passed through the hands of a Corn Merchant, a Miller, a Flour Merchant, and a Huckster, every one of whom, does and must, have a profit out of the flour, arising from wheat grown upon, and sent away from, your very farm! I used to let all my people have flour at the same price that they would otherwise have been compelled to give for worse flour. *Every Farmer* will understand me when I say, that he ought to pay for nothing in *money*, which he can pay for in any thing but money. Their maxim is to keep the money that they take as long as they can. Now here is a most effectual way of putting that maxim in practice to a very great extent. Farmers know well that it is the Saturday night which empties their pockets; and here is the means of cutting off a good half of the Saturday night. The

men have better flour for the same money, and still the Farmer keeps at home those profits which would go to the maintaining of the Dealers in wheat and in flour.

98. The maker of my little mill is Mr. HILL, of Oxford-street. The expense is what I have stated it to be. I, with my small establishment, find the thing convenient, and advantageous; what then must it be to a gentleman, in the country, who has room and horses, and a considerable family to provide for. The Dresser is so contrived as to give you, at once, meal, of four degrees of fineness; so that, for certain purposes, you may take the very finest; and indeed, you may have your flour, and your bread of course, of what degree of fineness you please.

99. In concluding this part of my treatise, I cannot help expressing my hope of being instrumental in inducing a part of the labourers, at any rate, to bake their own bread; and, above all things, to abandon the use of "Ireland's *lazy root*." Nevertheless, so extensive is the erroneous opinion relative to this villanous root, that I really began to despair of all hope of checking its cultivation and use, till I saw the declaration, which Mr. WAKEFIELD had the good sense and the spirit to make before the "AGRICULTURAL COMMITTEE." Be it observed, too, that Mr. WAKEFIELD had, himself, made a survey of the

state of Ireland. What he saw there did not encourage him, doubtless, to be an advocate for the growing of this root of wretchedness. It is an undeniable fact, that, in the proportion that this root is in use, as a *substitute for bread*, the people are wretched; the reasons for which I have explained and enforced, a hundred times over. Mr. WILLIAM HANNING told the Committee that the labourers in his part of Somersetshire were “almost wholly supplied with “potatoes, *breakfast and dinner*, brought them in “*the fields*, and nothing but potatoes; and that they “used, in better times, to get a certain portion of “bacon and cheese, which, on account of their “poverty, they do not eat now.” It is impossible that men can be *contented* in such a state of things: it is unjust to desire them to be contented: it is a state of misery and degradation to which no part of any community can have any shew of right to reduce another part: men so degraded have no protection; and it is disgrace to form part of a community to which they belong. This degradation has been occasioned by a silent change in the value of the Country. This has purloined the wages of the labourer; it has reduced him by degrees to house with the spider and the bat and to feed with the pig. It has changed the habits and, in a great measure, the character, of the

people. The sins of this terrible system are enormous and undescribable; but, thank God! they seem to be approaching to their end! Money is resuming its value, labour is recovering its price; let us hope that the wretched potatoe is disappearing, and that we shall, once more, see the knife in the labourer's hand and the loaf upon his board.

100. In my next number I shall treat of the *keeping of cows*. I have said that I will teach the Cottagers how to keep a cow all the year round, upon the produce of a quarter of an acre, or, in other words, *forty rod*, of land; and, in my next, I will make good my promise.

END OF NO. III.

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MAKING BREAD.

(Concluded from paragraph 100.)

101. IN the last Number, at paragraph 86, I observed, that I hoped it was unnecessary for me to give any directions as to the mere *act* of making bread. But, several correspondents inform me, that, without these directions, a conviction of the utility of baking bread at home is of *no use to them*. Therefore, I shall here give those directions, receiving my instructions here from one, who, I thank God, does know how to perform this act.

102. Suppose the quantity be a bushel of flour. Put this flour into a *trough* that people have for the purpose, or, it may be in a clean smooth tub of any shape, if not too deep, and sufficiently large. Make a pretty deep hole in the middle of this heap of flour. Take (for a bushel) a pint of good fresh yeast, mix it and stir it well up in a pint of *soft* water milk-warm.

Pour this into the hole in the heap of flour. Then take a spoon and work it round the outside of this body of moisture so as to bring into it by degrees flour enough to make it form a *thin batter*, which you must stir about well for a minute or two. Then take a handful of flour and scatter it thinly over the head of this batter, so as to *hide* it. Then cover the whole over with a cloth to keep it *warm*; and this covering, as well as the situation of the trough as to distance from the fire must depend on the nature of the place and state of the weather as to heat and cold. When you perceive that the batter has risen enough to make *cracks* in the flour that you covered it over with, you begin to form the whole mass into *dough*, thus: you begin round the hole containing the batter, working the flour into the batter, and pouring in, as it is wanted to make the flour mix with the batter, soft water milk-warm, or milk, as hereafter to be mentioned. Before you begin this, you scatter the *salt* over the heap at the rate of *half a pound* to a bushel of flour. When you have got the whole *sufficiently moist*, you *knead it well*. This is a grand part of the business; for, unless the dough be *well worked*, there will be *little round lumps of flour in the loaves*; and, besides, the original batter, which is to give fermen-

tation to the whole will not be duly mixed. The dough must, therefore, be well worked. The *fists* must go heartily into it. It must be rolled over; pressed out; folded up and pressed out again, until it be completely mixed, and formed into a *stiff* and *tough dough*. This is *labour*, mind. I have never quite liked baker's-bread since I saw a great heavy fellow, in a bake-house in France, kneading bread with his *naked feet*! His feet looked very *white* to be sure: whether they were of that colour *before he got into the trough* I could not tell. God forbid, that I should suspect that this is ever done *in England*! It is *labour*; but, what is *exercise* other than labour? Let a young woman bake a bushel once a week, and she will do very well without phials and gallipots.

103. Thus, then, the dough is made. And, when made, it is to be formed into a lump in the middle of the trough, and, with a little dry flour thinly scattered over it, covered over again to be kept warm and to ferment; and in this state, if all be done rightly, it will not have to remain more than about 15 or 20 minutes.

104. In the mean while *the oven is to be heated*; and this is much more than half the art of the operation. When an oven is properly heated can be

known only by *actual observation*. Women who understand the matter, know when the heat is right the moment they put their faces within a yard of the oven-mouth; and, once or twice observing is enough for any person of common capacity. But this much may be said in the way of *rule*: that the fuel (I am supposing a brick oven) should be *dry* (not *rotten*) wood, and not mere *brush-wood*, but rather *fagot-sticks*. If larger wood, it ought to be split up into sticks not more than two, or two and a half inches through. Brush-wood that is *strong*, not green and not too old, if it be hard in its nature and has some *sticks* in it may do. The *woody* parts of Furze, or Ling, will heat an oven very well. But, the thing is, to have a *lively* and yet *somewhat strong* fire; so that the oven may be heated in about 15 minutes, and retain its heat sufficiently long.

105. The oven should be hot by the time that the dough, as mentioned in paragraph 103, has remained in the lump about 20 minutes. When both are ready, take out the fire and wipe the oven out clean, and, at nearly about the same moment, take the dough out upon the lid of the baking trough, or some proper place, cut it up into pieces, and make it up into loaves, kneading it again in these separate parcels;

and, as you go on, shaking a little flour over your board, to prevent the dough adhering to it. The loaves should be put into the oven as *quickly* as possible after they are formed; when in, the oven-lid, or door, should be fastened up *very closely*; and, if all be properly managed, loaves of about the size of quartern loaves, will be sufficiently baked in about *two hours*. But, they usually take down the *lid*, and *look* at the bread, in order to see how it is going on.

106. And, what is there, worthy of the name of *plague*, or *trouble*, in all this? Here is no dirt, no filth, no rubbish, no *litter*, no *slop*. And, pray, what can be pleasanter to *behold*? Talk, indeed, of your pantomimes and gaudy shows; your processions and installations and coronations! Give me, for a beautiful sight, a neat and smart woman, heating her oven and setting in her bread! And, if the bustle do make the sign of labour glisten on her brow, where is the man that would not kiss that off, rather than lick the plaster from the cheek of a duchess?

107. And, what is the *result*? Why, good, wholesome food, sufficient for a considerable family, for a week, prepared in three or four hours. To get this quantity of food, fit to be *eaten*, in the shape of potatoes, *how many fires*; what a washing, what a boil-

ing, what a peeling, what a slopping and what a messing ! The cottage everlastingly in a litter ; the woman's hands everlastingly wet and dirty ; the children grimed up to the eyes with dust fixed on by the potatoe-starch ; and ragged as colts, the poor mother's time all being devoted to the everlasting boilings of the pot ! Can any man, who knows any thing of the labourer's life, deny this ? And will, then, any body, except the old shuffle-breeches band of the Quarterly Review, who have, all their lives, been moving from garret to garret, who have seldom seen the sun, and never the dew except in print ; will any body except these men say, that the people ought to be taught to use potatoes as a *substitute for bread* !

BREWING BEER.

108. This matter has been fully treated of in the two first Numbers. But, several correspondents, wishing to fall upon some means of rendering the practice beneficial to those who are *unable to purchase* brewing machines, have recommended the *lending* of the machine, or letting it out, round a neighbourhood. Another correspondent has, therefore, pointed out to me *an act of parliament* which

touches upon this subject ; and, indeed, between Ex-cise-laws and Custom-Laws and Combination-Laws and Libel-Laws, a human being in this country scarcely knows what he dares do or what he dares say. What father, for instance, would have imagined, that, having a brewing-machine, which two men can carry from house to house as easily as they can a basket, *he dared not lend that machine to his son, living in the next street, or at the next door?* Yet such really is the law ; for according to the Act, 5th of the 22 & 23 of that honest and sincere gentleman, Charles II. there is a penalty of 50*l.* for lending or letting brewing utensils. However, it has this limit ; that the penalty is confined to *Cities, Corporate Towns and Market Towns*, WHERE THERE IS A PUBLIC BREW-HOUSE. So that, in the first place, you may let, or lend, in *any* place where there is *no public brew-house* ; and, in all towns not *corporate or market*, and in all villages, hamlets and scattered places.

109. Another thing is, can a man, who has brewed beer at his own house in the country, bring that beer into town to his own house and for the use of his family there? This has been asked of me. I cannot give a positive answer without reading about *seven large vo-*

lumes in quarto of taxing laws. The best way would be to *try it*; and, if any penalty, pay it by *subscription*, if that would not come under the law of *conspiracy*! However, I *think*, there can be no danger here. So monstrous a thing as this can, surely, not exist. If there be such a law, it is daily violated; for nothing is more common than for country gentlemen, who have a dislike to die by poison, bringing their home-brewed beer to London.

110. Another correspondent recommends *parishes to make their own malt*. But, surely, the landlords mean to get rid of the *malt and salt tax*! Many dairies, I dare say, pay 50*l.* a year each in salt tax. How, then, are they to contend against Irish butter and Dutch butter and cheese? And, as to the malt-tax, it is a dreadful drain from the land. I have heard of labourers, living in "*unkent places*," making their *own malt*, even now! Nothing is so easy as to make your own malt, if you were permitted. You soak the barley about three days (according to the state of the weather;) and then you put it upon stones or bricks, and *keep it turned*, till the root *shoots out*; and, then, to know when to *stop*, and to put it to dry, take up a corn (which you will find nearly transparent), and look through the skin of it. You will see

the *spear*, that is to say, the shoot that would come out of the ground, pushing on towards the *point* of the barley-corn. It starts from the bottom, where the root comes out; and it goes on towards the other end; and would, if *kept moist*, come out at that other end when the root was about an inch long. So that, when you have got the *root to start* by soaking and turning in heap, the spear is *on its way*. If you look in through the skin, you will see it; and, now observe; when the *point of the spear* has got along as far as the *middle of the barley-corn*, you should take your barley and *dry it*. How easy would every family, and especially every farmer, do this, if it were not for the punishment attached to it! The persons, in the “unkent places” before mentioned, dry the malt in their *oven*! But, let us hope, that the labourer will soon be able to get malt without exposing himself to punishment as a *violater of the law*.

KEEPING COWS.

111. As to the *use of milk*, and that which proceeds from milk, in a family, very little need be said. At a certain age bread and milk is *all* that a child wants.

At a later age they furnish one meal a day for children. Milk is, at all seasons, good to *drink*. In the making of puddings, and in the making of *bread* too, how useful is it! Let any one who has eaten none but baker's bread for a good while, taste bread home-baked, mixed with milk instead of with water; and he will find what the difference is. There is this only to be observed, that, in *hot weather*, bread mixed with milk will not *keep so long* as that mixed with water. It will of course turn *sour* sooner.

112. Whether the milk of a cow is to be consumed by a cottage-family in the shape of milk, or whether it be to be made to yield butter, skim-milk, and buttermilk, must depend on circumstances. A woman that has no child, or only one, would, perhaps, find it best to make *some butter* at any rate. Besides, skim-milk and bread (the milk being boiled) is quite strong food enough for any children's breakfast, even when they begin to go to work; a fact which I state upon the most ample and satisfactory experience, very seldom having ever had any other sort of breakfast myself till I was more than ten years old, and I was at work in the fields full four years before that. I will here mention that it gave me singular pleasure to see a boy, just turned of *six*, helping his father *reap*, in

Sussex, this last summer. He did little, to be sure ; but it was *something*. His father set him into the ridge at a great distance before him ; and, when he came up to the place, he found a *sheaf* cut ; and, those who know what it is to reap, know how pleasant it is to find now and then a sheaf cut ready to their hand. It was no small thing to see a boy fit to be trusted with so dangerous a thing as a reap-hook in his hands, at an age when “ young masters ” have nursery-maids to [cut] their victuals for them, and to see that they do not fall out of window, tumble down stairs, or run under carriage-wheels or horses’ bellies. Was not this father discharging his duty by this boy much better than he would have been by sending him to a place called a *school* ? The boy is in a school here, and an excellent school too ; the school of useful labour. I must hear a great deal more than I ever have yet heard, to convince me, that teaching children to *read*, tends so much to their happiness, their independence of spirit, their manliness of character, as teaching them to *reap*. The creature that is in *want* must be a *slave* ; and to be habituated to *labour cheerfully* is the only means of preventing nineteen-twentieths of mankind from being in want. I have digressed here ; but observations of this sort can, in my opinion, never

be too often repeated ; especially at a time when all sorts of mad projects are on foot for what is falsely called *educating* the people, and when one projector would do this by a *tax* that would compel the single man to give part of his earnings to teach the married man's children to read and write.

113. Before I quit the *uses* to which milk may be put, let me mention, that, as mere *drink*, it is, unless, perhaps, in case of heavy labour, better in my opinion, than any beer, however good. I have drank little else for the last five years, at any time of the day. Skim-milk I mean. If you have not milk enough to wet up your bread with (for a bushel of flour requires about 16 or 18 pints,) you make up the quantity with water, of course ; or, which is a very good way, with water that has been put, boiling hot, upon *bran*, and then drained off. This takes the goodness out of the bran to be sure ; but, *really good bread* is a thing of so much importance, that it always ought to be the very first object in domestic economy.

114. The cases vary so much, that it is impossible to lay down rules for the application of the produce of a cow, which rules shall fit all cases. I content myself, therefore, with what has already been said on this subject ; and shall only make an observation on

the *act of milking*, before I come to the chief matter ; namely, the *getting of the food for the cow*. A cow should be milked *clean*. Not a drop, if it can be avoided, should be left in the udder. It has been proved, that the half pint that comes out *last* has *twelve times* I think it is, as much butter in it, as the half pint that comes out *first*. I tried the milk of ten Alderney cows, and, as nearly as I, without being very nice about the matter, could ascertain, I found the difference to be about what I have stated. The udder would seem to be a sort of milk-pan ; in which the cream is uppermost, and, of course, comes out last, seeing that the drain is at the bottom. But, besides this, if you do not milk clean, the cow will give less and less milk, and will become dry much sooner than she ought. The *cause* of this I do not know, but experience has long established the fact.

115. In providing food for a cow we must look, first, at the *sort of cow* ; seeing that a cow of one sort will certainly require more than twice as much food as a cow of another sort. For a cottage, a cow of the smallest sort common in England is, on every account, the best ; and such a cow will not require above 70 or 80 pounds of good moist food in the twenty four hours.

116. Now, how to raise this food in 40 rods of ground is what we want to know. It frequently happens that a labourer has *more* than 40 rods of ground. It more frequently happens, that he has some *common*, some *lane*, some little out-let or other, for a part of the year, at least. In such cases he may make a different disposition of his ground ; or may do with less than the 40 rods. I am here, for simplicity's sake, to suppose, that he have 40 rods of clear unshaded land, besides what his house and sheds stand upon ; and that he have nothing further in the way of means to keep his cow.

117. I suppose the 40 rods to be *clean* and *unshaded* ; for, I am to suppose, that when a man drinks of 5 *quarts of milk a day*, on an average, all the year round, he will not suffer his ground to be encumbered by apple trees that give him only the means of treating his children to fits of the belly-ache, or with currant and gooseberry bushes, which, though their fruit do very well to *amuse*, really give nothing worthy of the name of *food*, except to the Blackbirds and Thrushes. The ground is to be *clear* of trees ; and, in the spring we will suppose it to be *clean*. Then dig it up *deeply*, or, which is better, *trench* it, keeping, however, the top *spit* of the soil *at the top*. Lay it in

ridges in April or May about 2 feet apart, and made high and sharp. When the weeds appear about three inches high, turn the ridges into the furrows (*never moving the ground but in dry weather*) and bury all the weeds. Do this as often as the weeds get 3 inches high; and, by the fall, you will have really clean ground, and not poor ground.

118. There is the ground, then, ready. About the 26th of August, but *not earlier*, prepare a rod of your ground, and put some *manure* in it (for *some* you must have,) and sow one half of it with Early York Cabbage Seed, and the other half with Sugar-Loaf Cabbage Seed, both of the *true* sort, in little drills at 8 inches apart, and the seeds thin in the drill. If the plants come up at two inches apart (and they should be thinned if thicker) you will have a plenty. As soon as fairly out of ground, hoe the ground nicely, and pretty deeply, and again in a few days. When the plants have six leaves, which will be very soon, dig up, make fine, and manure another rod or two, and prick out the plants, 4000 of each, in rows at 8 inches apart and 3 inches in the row. Hoe the ground between them often, and they will grow fast and be *straight* and strong. I suppose that these beds for plants take 4 rods of your ground. Early in November, or

as the weather may serve, a little earlier, or later, lay some manure (of which I say more hereafter) between the ridges in the other 36 rods, and turn the ridges over in this manure, and then transplant your plants on the ridges, at 15 inches apart. Here they will stand the winter; and you must see that the slugs do not eat them. If any plants fail, you have plenty in the bed where you pricked them out; for your 36 rods will not require more than 4000 plants. If the winter be very hard, and bad for plants, you cannot *cover* 36 rods; but, you may the *bed* where the rest of your plants are. A little litter, or straw, or dead grass, or fern, laid along between the rows and the plants, not to cover the leaves, will preserve them completely. When people complain of *all* their plants being "*cut off*," they have, in fact, nothing to *complain* of but their own extreme carelessness. If I had a gardener who complained of *all* his plants being cut off, I should cut him off pretty quickly. If those in the 36 rods fail, or fail in part, fill up their places, later in the winter by plants from the bed.

119. If you find the ground dry at top during the winter, hoe it, and particularly near the plants, and rout out all slugs and insects. And, when March comes, and the ground *is dry*, hoe deep and well,

and earth the plants up close to the lower leaves. As soon as the plants begin *to grow*, dig the ground with a spade clean and well, and let the spade go as near to the plants as you can without actually *displacing the plants*. Give them another digging in a month; and, if weeds come in the mean while, *hoe*, and let not one live a week. "Oh! what a deal of *work!*" Well! but, it is for *yourself*; and, besides, it is not all to be done in a day; and, we shall, by-the-by, see what it is all together.

120. By the first of June; I speak of the South of England, and there is also some difference in seasons and soils; but, generally speaking, by the first of June you will have *turned-in* cabbages; and soon you will have the Early Yorks *solid*. And, by the first of June you may get your cow, one that is about to calve, or that has just calved, and at this time such a cow as you will want will not, thank God, cost above five pounds.

121. I shall speak of the place to keep her in and of the manure and litter by-and-by. At present I confine myself to her mere food. The 36 rods, if the cabbages all stood till they got *solid*, would give her food for 200 days at 80 pounds weight per day, which is more than she would eat. But, you must use some

at first, that are not solid; and, then some of them will split before you could use them. But, you will have pigs to help off with them, and to gnaw the heads of the stumps. Some of the sugar-loaves may have been planted out in the spring; and thus these 36 rods will get you to some time in September.

122. Now, mind, in March, and again in April, sow more *early Yorks* and get them to be fine stout plants, as you did those in the fall. Dig up the ground and manure it, and, as fast as you cut cabbages, plant cabbages; and in the same manner and with the same cultivation as before. Your last planting will be about the middle of August, with *stout plants*, and these will serve you into the month of November.

123. Now we have to provide from *December to May inclusive*; and that, too, out of this same piece of ground. In November there must be, arrived at perfection, 3000 turnip plants. These, *without the greens*, must weigh, on an average, 5 pounds, and this, at 80 pounds a day will keep the cow 187 days; and there are but 182 days in these six months. The greens will have helped out the latest cabbages to carry you through November; and, perhaps, into December. But, for these six months you must *depend* on nothing but the Swedish turnips.

124. And now how are these to be had *upon the same ground that bears the cabbages*? That we are now going to see. When you plant out your cabbages in the fall, put first a row of Early Yorks, then a row of Sugar-Loaves, and so on throughout the piece. Of course, as you are to use the Early Yorks first you will cut every other row; and the Early Yorks that you are to plant in summer will go into the intervals. By-and-by the Sugar Loaves are cut away, and in their place will come Swedish turnips, you digging and manuring the ground as in the case of the cabbages; and, at last, you will find about 16 rods where you will have found it too late, and *unnecessary* besides, to plant any second crop of cabbages. Here the Swedish Turnips will stand in rows at 2 feet apart (and always a foot apart in the row;) and thus you will have three thousand turnips; and, if these do not weigh 5 pounds each on an average, the fault must be in the *seed* or in the management.

125. The Swedish Turnips are raised in this manner. You will bear in mind the *four rods* of ground, in which you have sowed and pricked out your cabbage plants. The plants that will be left there will, in April, serve you for *greens*, if you ever eat any,

though bread and bacon are very good without greens, and rather better without than with. At any rate, the pig, which has strong powers of digestion will consume this herbage. In a part of these few rods you will, in March and April, as before directed, have sown and raised your Early Yorks for the summer planting. Now, in the *last week of May*, prepare a quarter of a rod of this ground, and sow it, precisely as directed for the Cabbage-seed, with Swedish turnip seed; and, sow a quarter of a rod *every three days*, till you have sowed *two rods*. If the *fly* appear, cover the rows over in the *day time* with cabbage leaves, and take the leaves off at night; hoe well between the plants; and, when they are safe from the fly, *thin* them to 4 inches apart in the row. The 2 rods will give you nearly *five thousand plants*, which is 2,000 more than you will want. From this bed you draw your plants to transplant in the ground where the cabbages have stood, as before directed. You should transplant none much *before* the middle of July, and not much *later* than the middle of August. In the 2 rods, whence you take your turnip plants, you may leave plants to come to perfection, at 2 feet distances each way; and this will give you, *over and above*, 340 pounds weight of

turnips. For the other two rods will be ground enough for you to sow your cabbage plants in at the end of August, as directed for last year.

126. I should now proceed to speak of the manner of harvesting, preserving, and using the crops ; of the manner of feeding the cow ; of the shed for her, the managing of the manure, and several other less important things ; but, these, for want of room here, must be reserved for the beginning of my next Number. After, therefore, observing, that the Turnip plants must be transplanted in the same way that Cabbage plants are ; and that both ought to be transplanted in *dry* weather and in ground just *fresh-digged*, I shall close this Number with the notice of two points which I am most anxious to impress upon the mind of every reader.

127. The first is, whether these crops give an *ill taste* to milk and butter. It is very certain, that the taste and smell of certain sorts of cattle-food will do this ; for, in some parts of America, where the wild *garlick*, of which the cows are very fond, and which, like other bulbous rooted plants, springs before the grass, not only the milk and butter have a strong taste of garlick, but even the *veal*, when the calves suck milk from such sources. None can be more com-

mon expressions, than, in Philadelphia market, are those of *Garlicky Butter* and *Garlicky Veal*. I have distinctly tasted the *Whiskey* in milk of cows fed on distiller's wash. It is also certain, that if the cow eat *putrid* leaves of cabbages and turnips, the butter will be offensive. And the white-turnip, which is, at best but a poor thing and often half putrid, makes miserable butter. The large *cattle-cabbage*, which, when loaved hard, has a strong and even an offensive smell, will give a bad taste and smell to milk and butter, whether there be putrid leaves or not. If you boil one of these rank cabbages the water is extremely offensive to the smell. But, I state upon positive and recent experience, that Early York and Sugar-loaf Cabbages will yield as sweet milk and butter as *any food that can be given to a cow*. During this last summer I have, with the exception about to be noticed, kept, from the 1st of May to 22nd October, *five cows* upon the grass of *two acres and a quarter of ground*, the grass being generally cut up for them and given them in the stall. I had in the spring 5,000 cabbage plants, intended for my pigs, eleven in number. But, the pigs could not eat *half* their allowance, though they were not very small when they began upon it. We were compelled to

resort to the aid of the cows ; and, in order to see *the effect on the milk and butter*, we did not *mix* the food ; but gave the cows two *distinct spells* at the cabbages, each spell about 10 *days in duration*. The cabbages were cut off the stump with little or no care about *dead leaves*. And sweeter, finer butter, butter of a finer colour, than these cabbages made, never was made in this world. I never had better from cows feeding in the sweetest pasture. Now, as to *Swedish turnips*, they do give a little taste, (unless *completely ripe*, for which reason they ought not to be given till the spring;) especially if boiling of the milk pans be neglected, and if the greatest care be not taken about *all* the dairy tackle. Yet, we have, for months together, had the butter so fine from Swedish turnips, that nobody could well distinguish it from grass-butter. But, to secure this, there must be no *sluttishness*. Churn, pans, pail, shelves, wall, floor, and all about the dairy must be clean ; and, above all things, the pans must be *boiled*. However, after all, it is not here a case of delicacy of smell so refined as to faint at any thing that meets it except the stink of perfumes. If the butter do taste a little of the Swedish turnip, it will do very well where there is plenty of that sweet sauce which early rising and bodily labours are ever sure to bring.

128. The *other point* (about which I am still more anxious) is, the *seed*; for, if the seed be not *sound*, and especially if it be not *true to its kind*, all your labour is in *vain*. It is best, if you can do it, to get your seed from some friend, or some one that you know and can trust. If you save seed, observe all the precautions mentioned in my book on *gardening*. This very year I have some Swedish turnips, *so called*, about 7,000 in number, and should, if my seed had been *true*, have had about *twenty tons* weight; instead of which I have about *three*! Indeed they are not *Swedish turnips*, but a sort of mixture between that plant and *rape*. I am sure the seedsman did not wilfully deceive me. He was deceived himself. The truth is, that seedsmen are compelled to *buy* their seed of this plant. *Farmers* save it; and, they but too often pay very little attention to the manner of doing it. The best way is to get a dozen of fine turnip plants, perfect in all respects, and plant them in a situation where the smell of the blossoms of nothing of the cabbage or rape or turnip or even *charlock* kind can reach them. The seed will keep perfectly good for *four years*.

END OF NO. IV.

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KEEPING COWS.

(Concluded from paragraph 123.)

129. I HAVE now, in the conclusion of this article, to speak of the manner of *harvesting* and *preserving* the *Swedes*; of the *place to keep the cow in*; of the *manure* for the land; and of the *quantity of labour*, that the cultivation of the land and the harvesting of the crop will require.

130. *Harvesting and preserving the Swedes.* When they are ready to take up, the tops must be cut off, if not cut off before, and also the *roots*; but, neither tops nor roots should be cut off *very close*. You will have room for ten bushels of the *bulbs* in the house, or shed. Put the rest into ten-bushel heaps. Make

the heap *upon* the ground, in a *round form*, and let it rise up to a point. Lay over it a little litter, straw, or dead grass, about three inches thick; and then earth upon that about six inches thick. Then cut a thin round *green turf* about eighteen inches over, and put it upon the crown of the heap to prevent the earth from being washed off. Thus these heaps will remain till wanted for use. When given to the cow, it will be best to *wash* the Swedes and cut each into two or three pieces with a spade or some other tool. You can take in ten bushels at a time. If you find them *sprouting* in the spring, open the remaining heaps, and expose them to the sun and wind; and cover them again slightly with straw or litter of some sort.

131. *As to the place to keep the cow in*, much will depend upon *situation* and circumstances. I am always supposing that the cottage is a real *cottage*, and not a house in a town or village street; though, wherever there is the quarter of an acre of ground, the cow *may* be kept. Let me, however, suppose that which will generally happen; namely, that the cottage stands by the side of a road, or lane, and

amongst fields and woods, if not on the side of a common. To pretend to tell a country-labourer how to build a shed for a cow, how to stick it up against the end of his house, or to make it an independent erection; or, to dwell on the materials, where poles, rods, wattles, rushes, furze, heath, and cooper-chips are all to be gotten by him for nothing or next to nothing, would be useless; because a man, who, thus situated, can be at any loss for a shed for his cow, is not only unfit to keep a cow, but unfit to keep a cat. The warmer the shed is the better it is. The floor should *slope*, but not too much. There are *stones*, of some sort or other, every where, and about six wheel-barrow-fuls will *pave* the shed, a thing to be by no means neglected. A broad trough, or box, fixed up at the head of the cow is the thing to give her food in; and she should be fed three times a day, at least; always at *day-light* and at *sun-set*. It is not *absolutely necessary* that a cow ever quit her shed, except just at calving time, or when taken to the bull. In the former case the time is, nine times out of ten, known to within forty-eight hours. Any enclosed field or place, will do for her during a day or two; and, for such purpose,

KEEPING COWS.

if there be not room at home, no man will refuse place for her in a fallow field. It will, however, be good, where there is no *common* to turn her out upon, to have her led by a string, two or three times a week, which may be done by a child five years old, to graze, or pick, along the sides of roads and lanes. Where there is a *common*, she will, of course, be turned out in the day time, except in very wet or severe weather; and, in a case like this, a smaller quantity of ground will suffice for the keeping of her. According to the present practice, a miserable "*tallet*" of bad hay is, in such cases, the winter provision for the cow. It can scarcely be called food; and, the consequence is, the cow is both *dry* and *lousy* nearly half the year; instead of being dry only about fifteen days before calving, and being sleek and lusty at the end of the winter, to which a *warm lodging* greatly contributes. For, observe, if you keep a cow, any time between September and June out in a field, or yard, to endure the chances of the weather, she will not, though she have food precisely the same in quantity and quality, yield above *two-thirds* as much as if she were lodged in house; and in *wet* weather, she will not yield *half* so much.

It is not so much the *cold* as the *wet* that is injurious to all our stock in England.

132. *The Manure.* At the *beginning* this must be provided by collections made on the road; by the results of the residence in a cottage. Let any man clean out *every place* about his dwelling; rake and scrape and sweep all into a heap; and he will find, that he has a *great deal*. Earth of almost any sort that has long lain on the surface and has been trodden on is a species of manure. Every act that tends to neatness round a dwelling tends to the creating of a mass of manure. And, I have very seldom seen a cottage, with a plat of ground of a quarter of an acre belonging to it, round about which I could not have collected a pretty large heap of manure. Every thing, of animal or vegetable substance, that comes into a house, must *go out of it again*, in one shape or another. The very emptying of vessels, of various kinds, on a heap of common earth, makes it a heap of the best of manure. Thus goes on the work of *reproduction*; and thus is verified the words of the Scripture: "*Flesh is grass*; and there is *nothing new under the*

sun." Thus far as to the *out-set*. When you have *got the cow*, there is no more care about manure ; for, and especially if you have a *pig* also, you must have enough annually for *an acre* of ground. And, let it be observed, that, after a time, it will be unnecessary, and would be injurious, to manure *for every crop* ; for that would produce more stalk and green than substantial part ; as it is well known, that wheat-plants, standing in ground too full of manure, will yield very thick and long *straws*, but grains of little or no substance. You ought to depend more on the spade and the hoe than on the dung-heap. Nevertheless, the greatest care should be taken to preserve the manure ; because you will want *straw*, unless you be by the side of a common which gives you rushes, grassy furze, or fern ; and to get straw you must give a part of your dung from the cow-stall and pig-stye. The best way to preserve manure, is to have a pit of sufficient dimensions close behind the cow-shed and pig-stye, for the run from these to go into, and from which all runs of *rain-water* should be kept. Into this pit would go the emptyings of the shed and of the stye, and the produce of all sweepings and cleanings round the house ; and

thus a large mass of manure would soon grow together. Much too large a quantity for a quarter of an acre of ground. One good load of wheat or rye straw is all that you would want for the winter, and half a one for the summer; and you would have more than enough dung to exchange against this straw.

133. Now, as to *the quantity of labour* that the cultivation of the land will demand *in a year*. We will suppose the whole to have *five complete diggings*, and say nothing about the little matters of sowing and planting and hoeing and harvesting, all which are a mere trifle. We are supposing the owner to be *an able labouring-man*; and such a man will dig 12 rod of ground in a day. Here are 200 rods to be digged, and here are a little less than 17 days of work at 12 hours in the day; or, 200 *hours* work, to be done in the course of the long days of spring and summer, while it is light long before *six* in the morning and long after six at night. What *is it*, then! Is it not better than time spent in the ale-house, or in creeping about after a miserable hare? Frequently, and most

frequently, there will be a *boy*, if not two, big enough to help. And (I only give this as a *hint*) I saw, on the 7th of November, a *very pretty woman*, in the village of *Hannington in Wiltshire*, digging a piece of ground and planting it with Early Cabbages, which she did as handily and as neatly as any gardener that I ever saw. The ground was *wet*, and, therefore, *to avoid treading the digged ground in that state*, she had her line extended, and put in the rows as she advanced with her digging, standing *in the trench* while she performed the act of planting, which she did with great nimbleness and precision. Nothing could be more skillfully or beautifully done. Her clothes were neat, clean, and tight about her. She had turned her handkerchief down from her neck, which, with the glow that the work had brought into her cheeks, formed an object which I do not say would have made me *actually stop my chaise*, had it not been for the occupation in which she was engaged; but, all taken together, the temptation was too strong to be resisted. But, there is the *Sunday*; and I know of no law human or divine, that forbi^d

a labouring man to dig or plant his garden on Sunday, if the good of his family demand it; and if he cannot, without injury to that family, find other time to do it in. Shepherds, carters, pigfeeders, drovers, coachmen, cooks, footmen, printers, and numerous others, work on the Sundays. Theirs are deemed by the law, *works of necessity*. Harvesting and haymaking are allowed to be carried on on the Sunday, in certain cases; when they always are carried on by *provident farmers*. And, I should be glad to know the case which is more a *case of necessity*, than that now under our view. In fact, the labouring people *do work on the Sunday* morning in particular, all over the country, at something or other, or they are engaged in pursuits a good deal less religious than that of digging and planting. So that, as to *the 200 hours*, they are easily found, without the loss of any of the time required for constant daily labour.

134. And, what a *produce* is that of a cow! I suppose only an average of *5 quarts of milk a day*. If made into butter it will be *equal every week to 2 days of the man's wages*, besides the value of the

skim milk; and this can hardly be of less value than another day's wages. What a thing, then, is this cow, if she earn half as much as the man! I am greatly under-rating her produce; but I wish to put all the advantages at the lowest. To be sure, there is work for the wife, or daughters, to milk and make butter. But, the former is done at the two ends of the day, and the latter only about once in the week. And, whatever these may subtract from the *labours of the field*, which all country women ought to be engaged in whenever they conveniently can; whatever the cares created by the cow may subtract from these is amply compensated for by the *education* that these cares will give to the children. They will *all* learn to milk, and the girls to make butter. And, which is a thing of the very first importance, they will all learn, from their infancy, to *set a just value upon dumb animals*, and will grow up in the *habit* of treating them with gentleness and feeding them with care. To those who have not been brought up in the midst of rural affairs, it is hardly possible to give an adequate idea of the importance of this part of *education*. I

should be very loath to entrust the care of my horses, cattle, sheep or pigs to any one, whose father never had cow or pig of his *own*. It is a general complaint that servants, and especially farm-servants, are not *so good as they used to be*. How should they? They were formerly the sons and daughters of *small farmers*; they are now the progeny of miserable property-less labourers. They have never seen an animal in which they had any interest. They are careless by habit. This monstrous evil has arisen from causes which I have a thousand times described; and which causes must now be speedily removed; or, they will produce a dissolution of society, and give us a *beginning afresh*.

135. The circumstances vary so much, that it is impossible to lay down precise rules suited to all cases. The cottage may be on the side of a forest or common; it may be on the side of a lane or great road distant from town or village; it may be on the skirts of one of these latter: and, then, again, the family may be few or great in number,

the children small or big: according to all which circumstances the extent and application of the cow-food and also the application of the produce will naturally be regulated. Under some circumstances half the above crop may be enough; especially where good commons are at hand. Sometimes it may be the best way to sell the calf as soon as calved; at others, to fat it; and, at others, if you cannot sell it, which sometimes happens, to knock it on the head as soon as calved; for, where there is a family of small children, the price of a calf at 2 months old cannot be equal to the half of the value of the two months' milk. It is pure weakness to call it "*a pity.*" It is a much greater pity to see hungry children crying for the milk that a calf is sucking to no useful purpose; and as to the cow and the calf, the one must lose her young and the other its life after all, and the respite only makes an addition to the sufferings of both.

136. As to the pretended *unwholesomeness* in certain cases; as to its not being adapted to *some constitutions*, I do not believe one word of the matter.

When we talk of the *fruits*, indeed, which were formerly the chief food of a great part of mankind, we should recollect, that those fruits grew in countries that had a *sun to ripen* the fruits and to put nutritious matter into them. But, as to *milk*, England yields to no country upon the face of the earth. Neat cattle will touch nothing that is not wholesome in its nature ; nothing that is not wholly innoxious. Out of a pail that has ever had grease in it they will not drink a drop, though they be raging with thirst. Their very breath is fragrance. And how, then, is it possible, that unwholesomeness should distil from the udder of a cow ! The milk varies, indeed, in its quality and taste according to the variations in the nature of the food ; but, no food will a cow touch that is in any way hostile to health. Feed young puppies upon *milk from the cow*, and they never die with that ravaging disease called "*the distemper*." In short, to suppose that milk contains any thing essentially unwholesome is monstrous. When, indeed, the appetite becomes vitiated ; when the organs have been long accustomed to food of a more stimulating nature ; when it has been resolved to eat ragouts at dinner and drink wine, and to swallow a "devil" and a glass of strong grog at

night ; then milk for breakfast may be “ *heavy* ” and disgusting, and the feeder may stand in need of tea or laudanum, which differ only as to degrees of strength. But, and I speak from the most ample experience, milk is not “ *heavy*,” and much less is it *unwholesome*, when he who uses it rises early, never swallows strong drink, and never *stuffs* himself with flesh of any kind. Many and many a day I scarcely taste of meat, and then chiefly at *breakfast*, and that, too, at an early hour. Milk is the natural food of *young people* : if it be too rich, *skim* it again and again till it be not too rich. This is an evil easily cured. If you are now to *begin* with a family of children, they may not like it at first. But, *persevere* ; and the parent who does not do this, having the means in his hands, shamefully neglects his duty. A son who prefers a “ devil ” and a glass of grog to a hunch of bread and a bowl of cold milk, I regard as a pest ; and for this pest the father has to thank himself.

137. Before I dismiss this article, let me offer an observation or two to those persons, who live in the

vicinity of towns, or in towns, and who, though they have *large gardens*, have “*no land to keep a cow*,” a circumstance which they “*exceedingly regret*.” I have, I dare say, witnessed this case at least a thousand times. Now, how much garden ground does it require to supply even a large family with *garden vegetables*? The market gardeners round the metropolis of this wen-headed country; round this wen of all wens; round this prodigious and monstrous collection of human beings: these market gardeners have about *three hundred thousand families to supply with vegetables*, and these they supply well too, and with summer-fruits into the bargain. Now, if it demanded *ten rods to a family*, the whole would demand, all but a fraction, *nineteen thousand acres of garden ground*. We have only to cast our eyes over what there is, to know, that there is not a *fourth* of that quantity. A *square mile* contains, leaving out parts of a hundred, 700 acres of land; and 19,000 acres occupy more than *twenty-two square miles*. Are there 22 square miles covered with the Wen’s market gardens? The very question is absurd. The whole of the market gardens from Brompton to Hammersmith, ex-

tending to Battersea Rise on the one side and to the Bayswater road on the other side, and leaving out roads, lanes, nurseries, pastures, cornfields, and pleasure grounds, do not, in my opinion, cover *one square mile*. To the north and south of the Wen there is very little in the way of market garden; and if, on both sides of the Thames, to the eastward of the Wen, there be *three square miles* actually covered with market gardens, that is the full extent. How, then, could the Wen be supplied, if it required *ten rods* to each family? To be sure, potatoes, carrots and turnips, and especially the first of these, are brought, for the use of the Wen, from a great distance, in many cases. But, so they are for the use of the persons I am speaking of; for a gentleman thinks no more of raising a large quantity of these things in his *garden* than he thinks of *raising wheat there*. How is it, then, that it requires half an acre, or 80 rods, in a *private* garden to supply a family, while these market-gardeners supply all these families (and so amply too) from ten, or more likely, five rods of ground to a family? I have shown, in the last Number, that nearly fifteen tons of vegetables can be raised in a

year upon forty rods of ground ; that is to say *ten loads* for a *wagon and four good horses*. And is not a fourth, or even an eighth, part of this weight, sufficient to go down the throats of a family in a year ? Nay, allow that only *a ton* goes to a family in a year, it is more than *six pounds weight a day* ; and what a sort of family must that be that really *swallows* six pounds weight a day ; and this a market-gardener will raise for them upon less than *three rods* of ground ; for he will raise, in the course of the year, even more than fifteen tons upon forty rods of ground. What is it, then, that they *do* with the eighty rods of ground in a private garden ? Why, in the first place, they have *one crop* where they ought to have *three*. Then they do not half *till* the ground. Then they grow things that are *not wanted*. Plant cabbages and other things, let them stand till they are good for nothing, and then wheel them to the rubbish heap. Raise as many radishes, lettuces, and as much endive and as many kidney-beans as would serve for ten families ; and finally throw nine-tenths of them away. I once saw not less than three rods of ground, in a garden of this sort, with lettuces all bearing *seed*. Seed enough for

half a county. They cut a cabbage *here* and a cabbage *there*, and so let the whole of the piece of ground remain undug, till the *last* cabbage is cut. But, after all, the produce, even in this way is so great, that it never could be gotten rid of, if the main part were not *thrown away*. The rubbish heap always receives four-fifths even of the *eatable* part of the produce.

138. It is not thus that the market-gardeners proceed. Their rubbish heap consists of little besides mere cabbage-stumps. No sooner is one crop *on* the ground than they settle in their minds what is to follow it. They *clear as they go* in taking off a crop, and, as they clear they dig and plant. The ground is never without seed in it or plants on it. And thus in the course of the year, they raise a prodigious bulk of vegetables from 80 rods of ground. Such vigilance and industry are not to be expected in a *servant*; for, it is foolish to expect, that a man will exert himself for another as much as he will for himself. But, if I were situated as one of the persons is that I have spoken of in paragraph 137;

that is to say, if I had a garden of 80 rods, or even of 60 rods, of ground, I would, out of that garden, draw a sufficiency of vegetables for my family, and would make it yield enough for a cow besides. I should go a short way to work with my gardener. I should put *Cottage Economy* into his hands, and tell him, that, if he could furnish me with vegetables and my cow with food, he was my man; and, that, if he could not, I must get one that could and would. I am not for making a man toil like a slave; but, what would become of the world, if a well-fed healthy man could exhaust himself in tilling and cropping and clearing half an acre of ground! I have known many men dig 30 rods of garden-ground in a day; I have, before I was fourteen, digged 20 rods in a day for more than ten days successively; and I have heard of, and believe the fact, of a man, at Portsea, who digged 40 rods in one single day, between day-light and sun-set. So that it is no slavish toil that I am here recommending.

KEEPING PIGS.

139. Next after the *cow* comes the *pig*; and, in many cases, where a cow cannot be kept a pig or pigs may be kept. But, these are animals not to be ventured on without due consideration as to the means of *feeding* them; for, a starved pig is a great deal worse than none at all. You cannot make bacon, as you can milk, merely out of the garden. There must be *something more*. A couple of flitches of bacon are worth fifty thousand methodist sermons and religious tracts. The sight of them upon the rack tends more to keep a man from poaching and stealing than whole volumes of penal statutes, though assisted by the terrors of the hulks and the gibbet. They are great softeners of the temper and promoters of domestic harmony. They are a great blessing; but, they are not to be had from *herbage* or *roots* of any kind; and, therefore, before a *pig* be attempted, the means ought to be considered.

140. *Breeding sows* are great favourites with Cot-

tagers in general; but, I have seldom known them to answer their purpose. Where there is an outlet, the sow will, indeed, keep herself by grazing in summer, with a little *wash* to help her out; and, when her pigs come, they are many in number; but, they are a heavy expence. The sow must live as well as a *fattening hog*, or the pigs will be good for little. It is a great mistake, too, to suppose, that the condition of the sow *previous to pigging* is of no consequence; and, indeed, some suppose, that she ought to be rather *bare of flesh* at the pigging time. Never was a greater mistake; for, if she be in this state, she presently becomes a mere rack of bones; and then, do what you will, the pigs will be poor things. However fat she may be before she farrows, the pigs will make her lean in a week. All her fat goes away in her milk, and, unless the pigs have a *store* to draw upon, they pull her down directly; and, by the time they are three weeks old, they are starving for want; and then they never come to good.

141. Now, a cottager's sow cannot, without great expence, be kept in a way to enable her to meet the

demands of her farrow. She may *look* pretty well ; but the flesh she has upon her is not of the same nature as that which the *farm yard* sow carries about her. It is the result of grass, and of poor grass, too, or other weak food ; and not made partly out of corn and whey and strong wash, as in the case of the farmer's sow. No food short of that of a fatting hog will enable her to keep her pigs *alive* ; and, this she must have for *ten weeks*, and that at a great expence. Then comes the operation, upon the principle of *Parson Malthus*, in order to *check population* ; and there is some risk here, though not very great. But, there is the *weaning* ; and who, that knows any thing about the matter, will think lightly of the weaning of a farrow of pigs ! By having nice food given them, they seem, for a few days, not to miss their mother. But, their appearance soon shews the want of her. Nothing but the very best food, and that given in the most judicious manner, will keep them up to any thing like good condition ; and, indeed, there is nothing short of *milk* that will effect the thing well. How should it be otherwise ? The very richest cow's milk is poor compared with that of the

sow ; and, to be taken from this and put upon food one ingredient of which is *water*, is quite sufficient to reduce the poor little things to bare bones and staring hair, a state to which cottagers' pigs very soon come in general ; and, at last, he frequently drives them to market, and sells them for less than the cost of the food which they and the sow have devoured since they were farrowed. It was, doubtless, pigs of this description that were sold, the other day at Newbury Market, for *fifteen pence a piece*, and which were, I dare say, dear even as a gift. To get such a pig to *begin* to grow will require *three months*, and with good feeding too, in winter time. To be sure it does come to be a hog at last ; but, do what you can, it is a dear hog.

142. The *Cottager*, then, can hold no competition with the *Farmer* in the *breeding* of pigs, to do which, with advantage, there must be *milk*, and milk, too, that can be advantageously applied to no other use. The cottager's pig must be bought ready weaned to his hand, and, indeed, at *four months old*, at which age, if he be in good condition, he

will eat any thing that an old hog will eat. He will graze, eat cabbage leaves and almost the stumps, Swedish turnip tops or roots ; and such things, with a little wash, will keep him along in very good growing order. I have now to speak of the time of purchasing, the manner of keeping, of fattening, killing and curing ; but these I must reserve till my next Number.

END OF NO. V.

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KEEPING PIGS.

(Concluded from paragraph 142.)

143. AS in the case of cows so in that of pigs, much must depend upon the situation of the cottage; because all pigs will *graze*; and, therefore, on the skirts of forests or commons, a couple or three pigs may be kept, if the family be considerable; and especially if the cottager brew his own beer, which will give him grains to assist the wash. Even in *lanes*, or on the sides of great roads, a pig will find a good part of his food from May to November; and, if he be *yoked*, the occupiers of the neighbourhood must be churlish and brutish indeed, if they give the owner any annoyance.

144. Let me break off here for a moment to point out to my readers the truly excellent conduct of Lord WINCHELSEA and Lord STANHOPE, who, as I read,

have taken great pains to make the labourers on their estates comfortable by allotting to each a piece of ground sufficient for the keeping of a cow. I once proposed to the copy-holders and other farmers in my neighbourhood, that we should petition the Bishop of Winchester, who was Lord of the Manors thereabouts, to grant titles to all the numerous persons called *trespassers on the wastes*; and also to give titles to others of the poor parishioners, who were willing to make on the skirts of the wastes, enclosures not exceeding an acre each. This, I am convinced would have done a great deal towards relieving the parishes then greatly burdened by men out of work. This would have been better than digging holes one day to fill them up the next. Not a single man would agree to my proposal! One, a bull-frog farmer (now, I hear, pretty well sweated down,) said it would only make them *saucy*! And one, a true disciple of *Malthus*, said, that to facilitate their rearing of children *was a harm*! This man had, at the time, in his own occupation, land that had formerly been *six farms*, and he had, too, ten or a dozen children. I will not mention names; but, this farmer will now, perhaps, have occasion to call to mind what I told

him on that day, when his opposition, and particularly the ground of it, gave me the more pain as he was a very industrious, civil and honest man. Never was there a greater mistake than to suppose, that men are made saucy and idle by just and kind treatment. *Slaves* are always lazy and saucy: nothing but the lash will extort from them either labour or respectful deportment. I never met with a *saucy* Yankee (New Englander) in my life. Never servile; always civil. This must necessarily be the character of *free men living in a state of competence*. They have nobody to envy; nobody to complain of; they are in good humour with mankind. It must, however, be confessed, that very little, comparatively speaking, is to be accomplished by the individual efforts, even of benevolent men like the two noblemen before mentioned. They have a strife to maintain against the *general tendency of the national state of things*. It is by general and indirect means, and not by partial and direct and positive regulations, that so great a good as that which they generously aim at can be accomplished. When we are to see such means adopted, God only knows; but, if much longer delayed, I am of opinion, that they will come too

late to prevent something very much resembling a dissolution of society.

145. The cottager's pig should be bought in the spring, or late in winter; and, being then four months old, he will be a year old before killing time; for, it should always be borne in mind, that this age is required in order to insure the greatest quantity of meat from a given quantity of food. If a hog be more than a year old, he is the better for it. The flesh is more solid and more nutritious than that of a young hog, much in the same degree that the mutton of a full-mouthed wether is better than that of a younger wether. The pork or bacon of young hogs, even if fattened on corn, is very apt to *boil out*, as they call it; that is to say, come out of the pot smaller in bulk than it goes in. When you begin to fat, do it by degrees, especially in the case of hogs under a year old. If you feed *high* all at once, the hog is apt to *surfeit*, and then a great loss of food takes place. Peas, or barley-meal, is the food; the latter rather the best, and does the work quicker. Make him *quite fat* by all means. The last bushel, even if he sit as he eats, is the most profitable. If he can walk two hundred yards at a

time, he is not well-fatted. Lean bacon is the most wasteful thing that any family can use. In short, it is uneatable, except by drunkards, who want something to stimulate their sickly appetite. The man who cannot live on *solid fat* bacon, well fed and well cured, wants the sweet sauce of labour, or is fit for the hospital. But, then, it must be *bacon*, the effect of barley or peas (not beans,) and not of whey, potatoes, or *messes* of any kind. It is frequently said, and I know that even farmers say it, that bacon, thus made, *costs more than it is worth!* Why do they take care to have it, then? They know better. They know well, that it is the very *cheapest* they can have; and they, who look at both ends and both sides of every cost, would as soon think of shooting their hogs as of fattening them on *messes*; that is to say, for *their own use*, however willing they might now-and-then be to regale the Londoners with a bit of potatoe-pork.

146. About *Christmas*, if the weather be coldish, is a good time to kill. If the weather be very mild, you may wait a little longer; for the hog cannot be too fat. The day before killing, he should have no food. To kill a hog nicely is so much of a business,

that it is better to pay a shilling for having it done, than to stab and hack and tear the carcass about. I shall not speak of *pork*; for I would by no means recommend it. There are two ways of going to work to make bacon; in the one you take off the hair by *scalding*. This is the practice in most parts of England and all over America. But, the *Hampshire* way, and best way, is to *burn the hair off*. There is a great deal of difference in the consequences. The first method slackens the skin, opens all the pores of it, makes it loose and flabby by drawing out the roots of the hair. The second tightens the skin in every part, contracts all the sinews and the veins in the skin, makes the fitch a solider thing, and the skin a better protection to the meat. The taste of the meat is very different from that of a scalded hog; and to this chiefly it was that Hampshire bacon owed its reputation for excellence. As the hair is to be *burnt off*, it must be *dry*, and care must be taken, that the hog be kept on dry litter of some sort the day previous to killing. When killed he is laid upon a narrow bed of straw, not wider than his carcass, and only two or three inches thick. He is then covered all over thinly with straw, to which, according as the

wind may be, the fire is put at one end. As the straw burns, it burns the hair. It requires two or three coverings and burnings, and care is taken, that the skin be not, in any part burnt, or parched. When the hair is all burnt off close, the hog is *scraped* clean, but never touched with *water*. The upper side being finished, the hog is turned over, and the other side is treated in like manner. This work should always be done *before day-light*; for, in the day-light, you cannot so nicely discover whether the hair be sufficiently burnt off. The light of the fire is weakened by that of the day. Besides, it makes the boys get up very early for once at any rate, and that is something; for boys always like a bonfire.

147. The *inwards* are next taken out, and, if the wife be not a slattern, here, in the mere offal, in the mere garbage, there is food, and delicate food too, for a large family for a week; and hogs-puddings for the children, and some for neighbours' children who come to play with them; for these things are by no means to be overlooked, seeing that they tend to the keeping alive of that affection in children for their parents, which, later in life, will be found absolutely

necessary to give effect to wholesome precept, especially when opposed to the boisterous passions of youth.

148. The butcher, the next day, cuts the hog up ; and then the house is *filled with meat* ! Souse, griskins, blade-bones, thigh-bones, spare-ribs, chines, belly-pieces, cheeks, all coming into use one after the other, and the last of the latter not before the end of about four or five weeks. But, about this time, it is more than possible, that the Methodist parson will pay you a visit. It is remarked in America, that these gentry are attracted by the squeaking of the pigs as the fox is by the cackling of the hen. This may be slander ; but, I will tell you what I did know to happen. A good honest, careful fellow had a spare-rib, on which he intended to sup with his family after a long and hard day's work at coppicing. Home he came at dark with his two little boys, each with a nitch of wood that they had carried four miles, cheered with the thought of the repast that awaited them. In he went, found his wife, the Methodist parson and a whole troop of the sisterhood, engaged in prayer, and on the table lay scattered the clean-polished bones of

the spare-rib ! Can any reasonable creature believe, that, to save the soul, God requires us to give up the food necessary to sustain the body ? Did Saint Paul preach this ? He, who, while he spread the Gospel abroad, *worked himself*, in order to have to give to those who were unable to work ? Upon what, then, do these modern Saints, these Evangelical gentlemen, found their claim to live on the labour of others ?

149. All the other parts taken away, the two sides that remain, and that are called *flitches*, are to be cured for *bacon*. They are first rubbed with salt on their insides, or flesh sides, then placed, one on the other, the flesh sides uppermost, in a salting-trough, which has a gutter round its edges to drain away the *brine* ; for, to have sweet and fine bacon, the flitches must not lie sopping in brine, which gives it that sort of taste barrel-pork and sea-jonck have, and than which nothing is more villanous. Every one knows how different is the taste of fresh dry salt, from that of salt in a dissolved state. The one is savoury, the other nauseous. Therefore, *change the salt often*. Once in four or five days. Let it melt, and sink ; but, let it

not lie too long. Change the flitches. Put that at bottom which was first put on the top. Do this a couple of times. This mode will cost you a great deal more in salt, or rather in *taxes*, than the *sopping* mode; but, without it, your bacon will not be sweet and fine, and *will not keep so well*. As to the *time* required for making the flitches sufficiently salt, it depends on circumstances; the thickness of the flitch, the state of the weather, the place wherein the salting is going on. It takes a longer time for a thick than for a thin flitch; it takes longer in dry than in damp weather; it takes longer in a dry than in a damp place. But, for the flitches of a hog of twelve score, in weather not very dry or very damp, about six weeks may do; and, as yours is to be *fat*, which receives little injury from over-salting, give time enough; for you are to have bacon till Christmas comes again.

The places for salting should, like a dairy, always be cool, but always admit a *free circulation of air*: *confined* air, though *cool*, will taint meat sooner than the mid-day sun accompanied with a breeze. Ice [will not melt in the hottest sun so soon as in a close and damp cellar. Put a lump of ice in *cold water*, [and one of the same size before a *hot fire*, and the

former will dissolve in half the time that the latter will. Let me take this occasion of observing, that an ice-house should never be *under ground*, nor *under the shade of trees*. That the bed of it ought to be three feet above the level of the ground; that this bed ought to consist of something that will admit the drippings to go instantly off; and that the house should stand in a place *open to the sun and air*. This is the way that they have ice-houses under the burning sun of Virginia; and here they keep their fish and meat as fresh and sweet as in winter, when, at the same time, neither will keep for twelve hours, though let down to the depth of a hundred feet in a well. A Virginian, with some poles and straw, will stick up an ice-house for ten dollars, worth a dozen of those ice-houses, each of which costs our men of taste as many scores of pounds. It is very hard to imagine, indeed, what any one should want ice *for* in a country like this, except for clodpole boys to slide upon and to drown cockneys in skaiting-time; but, if people must have ice in summer, they may as well go a right way as a wrong way to get it.

150. However, the patient that I have, at this

time, under my hands, wants nothing to cool his blood, but something to warm it, and, therefore, I will get back to the flitches of bacon, which are now to be hung up to be *smoked*; for, smoking is a great deal better than merely *drying*, as is the fashion in the dairy-countries in the West of England. When there were plenty of *farm-houses*, there were plenty of places to smoke bacon in; since farmers have lived in gentlemen's houses and the main part of the farm-houses have been knocked down, these places are not so plenty. However, there is scarcely any neighbourhood without a chimney left to hang bacon up in. Two precautions are necessary: first to hang the flitches where no *rain* comes down upon them: second, not to let them be so near the fire as to *melt*. These precautions taken, the next is, that the smoke must proceed from *wood*, not turf, peat, or coal. Stubble, or litter, might do; but the trouble would be great. *Fir*, or *deal*, smoke, is not fit for the purpose. I take it, that the absence of wood, as fuel, in the dairy countries, and in the North, has led to the making of pork and dried bacon. As to the *time* that it requires to smoke a flitch, it must depend a good deal upon whether there be

a *constant fire* beneath, and whether the fire be large or small. A month may do, if the fire be pretty constant and such as a farm-house fire usually is. But, over-smoking, or rather, too long hanging in the air, makes the bacon *rust*. Great attention should, therefore, be paid to this matter. The flitch ought not to be dried up to the hardness of a board, and yet it ought to be perfectly dry. Before you hang it up, lay it on the floor, scatter the flesh-side pretty thickly over with bran, or with fine sawdust other than that of deal or fir. Rub it on the flesh, or pat it well down upon it. This keeps the smoke from getting into the little openings, and makes a sort of crust to be dried on; and, in short, keeps the flesh cleaner than it would otherwise be.

151. To keep the bacon sweet and good and free from nasty things that they call *hoppers*: that is to say, a sort of skipping maggots, engendered by a fly which has a great relish for bacon. To provide against this mischief, and also to keep the bacon from becoming rusty, the Americans, whose country is so hot in summer, have two methods. They smoke no part of the hog except the hams, or gammons. They cover these with coarse linen cloth, such as the

finest hop-bags are made of, which they sew neatly on. They then *white-wash* the cloth all over with *lime* white-wash, such as we put on walls, their lime being excellent stone-lime. They give the ham four or five washings, the one succeeding as the former gets dry; and, in the sun, all these washings are put on in a few hours. The flies cannot get through this; and thus the meat is preserved from them. The *other* mode, and that is the mode for you, is, to sift *fine* some clean and dry *wood-ashes*. Put some at the bottom of a box, or chest, which is long enough to hold a flitch of bacon. Lay in one flitch. Then put in more ashes. Then the *other flitch*; and then cover this with six or eight inches of the ashes. This will effectually keep away all flies; and will keep the bacon as fresh and good as when it came out of the chimney, which it will not be for any great length of time, if put on a rack, or kept hung up in the open air. *Dust*, or even *sand*, very very *dry*, would, perhaps, do as well. The object is, not only to keep out the flies but the *air*. The place where the chest, or box, is kept, ought to be *dry*; and, if the ashes should get damp (as they are apt to do from the salts they contain) they should be put in the fire-place to dry, and

then be put back again. Peat-ashes, or turf-ashes, might do very well for this purpose. With these precautions, the bacon will be as good at the end of the year as on the first day; and it will keep two and even three years perfectly good, for which, however, there can be no necessity.

152. Now, this hog is, altogether, a capital thing. The other parts will be meat for about four or five weeks. The *lard*, nicely put down, will last a long while for all the purposes for which it is wanted. To make it keep well there should be some salt put into it. Country-children are badly brought up, if they do not like sweet lard spread upon bread, as we spread butter. Many a score hunch of this sort have I eaten, and I never knew what poverty was. I have eaten it for luncheon at the houses of good substantial farmers in France and Flanders. I am not now frequently so hungry as I ought to be; but, I should think it no hardship to eat *sweet lard* instead of butter. But, now-a-days, the labourers, and especially the female part of them, have fallen into the taste of *nice-ness* in food and *finery in dress*; a quarter of a belly full and rags are the consequence. The food of their

choice is high-priced, so that, for the greater part of their time, they are half-starved. The dress of their choice is *showy* and *flimsy*, so that, to-day they are *ladies*, and to-morrow ragged as sheep with the scab. But, has not nature made the country girls as pretty as ladies? Oh, yes! (bless their rosy cheeks and white teeth!) and a great deal prettier too! But, are they *less* pretty, when their dress is plain and substantial, and when the natural presumption is, that they have smocks as well as gowns, than they are when drawn off in the frail fabric of Sir Robert Peel, "where taudry colours strive with dirty white," exciting violent suspicions, that all is not as it ought to be nearer the skin, and calling up a train of ideas extremely hostile to that sort of feeling which every lass innocently and commendably wishes to awaken in her male beholders? Are they prettiest when they come through the wet and dirt safe and neat; or, when their draggled dress is plastered to their backs by a shower of rain? However, the fault has not been theirs nor that of their parents. It is *the system* of managing the affairs of the nation. This system has made all *flashy* and *false*, and has put all things out of their place. Pomposity, bombast, hyperbole, redundancy,

and obscurity both in speaking and in writing ; mock-delicacy in manners ; mock-liberality, mock-humanity, and, mock-religion. Pitt's false money, Peel's flimsy dresses, Wilberforce's potatoe diet, Castlereagh and Mackintosh's oratory, Walter Scott's poems, Walter's and Stoddart's paragraphs, with all the bad taste and baseness and hypocrisy which they spread over this country ; all have arisen, grown, branched out, bloomed and borne together ; and we are now beginning to taste of their fruit. But, as the fat of the adder is, as is said, the antidote to its sting ; so in the Son of the great worker of Spinning-Jennies, we have, thanks to the Proctors and Doctors of Oxford, the author of that *Bill*, before which this false, this flashy, this flimsy, this rotten system will dissolve as one of his father's pasted calicoes does at the sight of the washing-tub.

153. "What," says the Cottager, "has all this to do with hogs and bacon ?" Not directly with hogs and bacon, indeed ; but, it has a great deal to do, my good fellow, with your affairs, as I shall, probably, hereafter more fully show, though I shall now leave you to the enjoyment of your flitches of bacon,

which, as I before observed, will do ten thousand times more than any Methodist parson, or any other parson (except, of course, those of *our* church) to make you happy, not only in this world, but in the world to come. *Meat in the House* is a great source of *harmony*, a great preventer of the temptation to commit those things, which, from small beginnings, lead, finally, to the most fatal and atrocious results; and, I hold that doctrine to be *truly damnable*, which teaches, that God has made any selection, any condition relative to belief, which is to save from punishment those who violate the principles of *natural justice*.

154. *Some other meat you may have; but, bacon is the great thing. It is always ready; as good cold as hot; goes to the field or the coppice conveniently; in harvest and other busy times demands the pot to be boiled only on a Sunday; has twice as much strength in it as any other thing of the same weight; and, in short, has in it every quality that tends to make a labourer's family able to work and well off. One pound of bacon, such as that which I have described, is, in a labourer's family, worth four or*

five of ordinary mutton or beef, which are great part *bone*, and which, in short, are gone in a moment. But, always observe, it is *fat bacon* that I am talking about. There will, in spite of all that can be done, be *some* lean, though comparatively very little, in the gammons; and, therefore, you ought to begin at that end of the flitches; for, *old lean bacon* is not good.

155. Now, as to the *cost*. A pig (a *spayed sow* is best) bought, in March, four months old, can be had now for fifteen shillings. The cost till fatting time is next to nothing to a Cottager; and then the cost, at the present price of corn, would, for a hog of twelve score, not exceed *three pounds*; in the whole four *pounds five*; a pot of poison a week bought at the public house comes to *twenty-six shillings* of the money; and more than *three times the remainder* is generally flung away upon the miserable *tea*, as I have clearly shewn in the First Number, at Paragraph 24. I have, indeed there shown, that, if the *tea* were laid aside, the labourer might supply his family well with beer all the year round, and have a fat hog of even *fifteen score* for the *cost of the tea*, which does him and can do him *no good at all*.

156. The feet, the cheeks, and other bone being considered, the *bacon and lard*, taken together, would not exceed *sixpence a pound*. Irish bacon is "*cheaper*." Yes, *lower priced*. But, I will engage, that a pound of mine, when it comes out of the pot (to say nothing of the *taste*) shall weigh as much as a *pound and a half* of Irish, or any dairy or shop-fed bacon, when that comes out of the pot. No, no: the farmers joke, when they say, that their bacon *costs them more than* they could buy bacon for. They know well what it is that they are doing; and besides, they always forget, or, rather, remember not to say, that the fatting of a large hog yields them three or four load of dung, really worth more than ten or fifteen of common yard dung. In short, without hogs, farming *could not go on*; and it never has gone on in any country in the world. The hogs are the great *stay* of the whole concern. They are *much in small space*; they make no *show*; as flocks and herds do; but, without them, the cultivation of the land would be a poor, a miserably barren concern.

SALTING MUTTON AND BEEF.

157. *Very fat* Mutton may be salted to great advantage, and also smoked, and may be kept thus a long while. Not the shoulders and legs, but the *back* of the sheep. I have never made any fitch of *sheep-bacon*; but, I will; for, there is nothing like having a *store* of meat in a house. The running to the butcher's daily is a ridiculous thing. The very idea of being fed, of a *family* being fed, by daily supplies, has something in it perfectly *tormenting*. One-half of the time of a mistress of a house, the affairs of which are carried on in this way, is taken up in talking about what is to be got for dinner, and in negotiations with the butcher. One single moment spent at table beyond what is absolutely necessary is a moment very shamefully spent; but, to suffer a system of domestic economy, which unnecessarily wastes daily an hour or two of the mistress's time in hunting for the provision for the repast, is a shame indeed; and, when we consider, how much time is generally spent in this and in equally absurd ways, it is no wonder, that we see so little performed by

numerous individuals as they do perform during the course of their lives.

158. *Very fat parts of Beef* may be salted and smoked in like manner. Not the *lean*; for that is a great waste, and is, in short, good for nothing. Poor fellows on board of ships are compelled to eat it; but, it is a very bad thing.

N.B. The next Number of this Work, to treat of divers matters, will be the last. The whole will then be bound in a volume, and sold at 2s. 6d.

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MARCH 1, 1822.

159. I NOW proceed to treat of objects of less importance than the foregoing, but still such as may be worthy of great attention. If all of them cannot be expected to come within the scope of the care of a labourer's family, some of them must, and others may; and, it is always of great consequence, that children be brought up to set a just value upon all useful things, and especially upon all *living things*; to know the *utility* of them: for, without this, they never, when grown up, are worthy of being entrusted with the *care* of them. One of the greatest, and, perhaps, the very commonest, fault of servants, is, their inadequate care of animals committed to their charge. It is a well-known saying, that "the *master's eye* makes the horse fat;" and the remissness, to which this alludes, is generally owing to the servant not having been brought up to feel *an interest* in the well-being of animals.

BEES.

160. It is not my intention to enter into a history of this insect, about which so much has been written, especially by the frivolous French naturalists. It is the *useful* that I shall treat of, and that is done in not many words. The best *hives* are those made of clean, unblighted *rye-straw*. Boards are too cold in England. A swarm should always be put into a *new* hive, and the sticks should be *new* that are put into the hive for the bees to work on; for, if the hive be old, it is not so *wholesome*, and a thousand to one but it contains the embyons of *moths* and other insects injurious to bees. Over the hive itself there should be a cap of thatch, made also of clean rye-straw; and it should not only be *new* when first put on the hive; but, a new one should be made to supply the place of the former one every three or four months; for, when the straw begins to get rotten, as it soon does, insects breed in it, its smell is bad, and its effect on the bees is dangerous.

161. The hives should be placed on a bench, the legs of which mice and rats cannot creep up. Tin

round the legs is best. But, even this will not keep down *ants*, which are mortal enemies of bees. To keep these away, if you find them infest the hive, take a green stick and twist it round in the shape of a ring, to lay on the ground, round the leg of the bench, and at a few inches from it ; and cover this stick with *tar*. This will keep away the ants. If the ants come from one home, you may easily *trace them to it* ; and when you have found it, pour *boiling water* on it in the night, when all the family are at home. This is the only effectual way of destroying ants, which are frequently so troublesome. It would be cruel to cause this destruction, if it were not necessary to preserve the honey, and, indeed, the bees too.

162. Besides the hive and its cap, there should be a sort of shed, with top, back, and ends, to give additional protection in winter ; though, in summer, hives may be kept *too hot*, and, in that case the bees become sickly and the produce light. The *situation* of the hive is to face the South-east ; or, at any rate, to be sheltered from the *North* and the *West*. From the North always, and from the West in winter. If it be a very dry season in summer, it contributes greatl to the success

of the bees, to place clear water near their home, in a thing that they can conveniently drink out of; for, if they have to go a great way for drink, they have not much time for work.

163. It is supposed, that bees live only a year; at any rate, it is best never to keep the same stall, or family, over two years, except you want to increase your number of hives. The swarm of *this summer* should always be taken in the autumn of next year. It is whimsical to *save* the bees when you take the honey. You must *feed* them; and, if saved, they will die of old age before the next fall; and though young ones will supply the place of the dead, this is nothing like a good swarm put up during the summer.

164. As to the things that bees make their collections from, we do not know a thousandth part of them perhaps; but of all the blossoms that they seek the most eagerly, that of the *Buck-wheat* stands foremost. Go round a piece of this grain just towards sunset, when the Buck-wheat is in bloom, and you will see the air filled with bees, going home from it in all directions. The Buck-wheat, too, continues in bloom a long while;

for, the grain is dead ripe on one part of the plant, while there are fresh blossoms coming out on the other part.

165. A good stall of bees, that is to say, the produce of one, is always worth about *two bushels of good wheat*. The *cost* is nothing to the labourer. He must be a stupid countryman indeed, who cannot make a bee-hive ; and a lazy one indeed if he *will* not if he can. In short, there is nothing but *care* demanded ; and there are very few situations in the country, especially in the South of England, where a labouring man may not have half a dozen stalls of bees to take every year. The main things are to keep away insects, mice, and birds, and especially a little bird, called the bee-bird ; and to keep all clean and fresh as to the hives and coverings. Never put a swarm into an *old hive*. If wasps, or hornets, annoy you, watch them home in the day time ; and, in the night kill them by fire, or by boiling water. Fowls should not go where bees are, for they eat them.

166. Suppose a man get three stalls of bees in a year. Six bushels of wheat give him bread for an *eighth part of the year*. Scarcely any thing is a greater

misfortune than *shiftlessness*. It is an evil little short of the loss of eyes, or of limbs.

GEESE.

167. They can be kept to advantage only where there are *green commons*, and there they are easily kept; live to a very great age; and are amongst the hardiest animals in the world. If *well kept*, a goose will lay a hundred eggs in a year. The French put their eggs under large hens of common fowls, to each of which they give four or five eggs; or under turkeys, to which they give nine or ten goose-eggs. If the goose herself sit, she must be well and *regularly fed*, at, or near to, her nest. When the young ones are hatched, they should be kept in a warm place for about four days, and fed on barley-meal, mixed, if possible, with milk; and then they will begin to *graze*. Water for them, or for the old ones, to *swim* in, is by no means *necessary*, nor, perhaps, ever even *useful*. Or, how is it, that you see such fine flocks of fine geese all over Long Island (in America) where there is scarcely such a thing as a pond or a run of water?

168. Geese are raised by *grazing*; but, to *fat* them something more is required. Corn of some sort, or boiled swedish turnips. Some corn and some raw swedish turnips, or carrots, or white cabbages or lettuces, make the best fattening. The modes that are resorted to by the French for fattening geese, *nailing* them down by their webs, and other acts of cruelty, are, I hope, such as Englishmen will never think of. They will get fat enough without the use of any of these unfeeling means being employed. He who can deliberately inflict *torture* upon an animal in order to heighten the pleasure his palate is to receive in eating it, is an abuser of the authority which God has given him, and is, indeed, a tyrant in his heart. Who would think himself safe, if at the *mercy* of such a man?

DUCKS.

169. No water, to *swim* in, is necessary to the old, and is *injurious* to the very young. They never should be suffered to swim (if water be near) till *more than a month old*. The old Duck will lay, in the year, if *well kept*, ten dozen of eggs; and that is her best employment; for common hens are the best mothers. It is

not good to let young ducks out in the morning to eat *slugs* and *worms*; for, though they like them, these things kill them if they eat a great quantity. Grass, corn, white cabbages and lettuces, and especially Buckwheat, cut up, when half ripe, and flung down in the haulm. This makes fine ducks. Ducks will feed on garbage and all sorts of filthy things; but, their flesh is *strong* and bad in proportion. They are, in Long Island, fattened upon a coarse sort of *crab*, called a horse-foot fish, prodigious quantities of which are cast on the shores. The young ducks grow very fast upon this, and very fat; but, woe unto him that has to *smell* them when they come from the spit; and, as for *eating* them, a man must have a stomach indeed to do that!

170. When young they should be fed upon barley-meal, or *curds*, and kept in a warm place in the night time, and not let out *early* in the morning. They should, if possible, be kept from water to *swim* in. It always does them harm; and, if intended to be sold to be killed *young*, they should never go near ponds or ditches or streams.

TURKEYS.

171. These are *flying* things, and so are *common fowls*. But, it may happen, that a few hints respecting them may be of use. To raise turkeys in this chilly climate is a matter of much greater difficulty than in the climates that give great warmth. But, the great enemy to young turkeys (for old ones are hardy enough) is *the wet*. This they will endure in *no climate*; and so true is this, that, in America, where there is always "*a wet spell*" in April, the farmers' wives take care never to have a brood come out, until that spell is passed. In England, where the wet spells come at haphazard, the first thing is, to take care that young turkeys never go out, on any account, even in dry weather, till the *dew is quite off the ground*; and this should be adhered to, till they get to be of the size of an old partridge, and have their backs well covered with feathers. And, in wet weather, they should be kept under cover all day long.

172. As to the *feeding* them, when young, various nice things are commended. Hard eggs, chopped

fine with crumbs of bread, and a great many other things; but, that which I have seen used, and always with success, and for all sorts of young poultry, is, milk *turned into curds*. This is the food for young poultry of all sorts. Some should be made *fresh every day*; and, if this be done, and the young turkeys kept warm, and especially *from wet*, not one out of a score will die. When they get to be strong, they may have meal and grain; but still they always love the curds.

173. When they get their *head feathers* they are hardy enough; and what they then want, is, *room*, to prowl about. It is best to breed them under a *common hen*; because she does not *ramble* like a hen-turkey; and, it is a very curious thing, that the turkeys, bred up by a hen of the common fowl, *do not themselves ramble much when they get old*; and for this reason, when they buy turkeys for *stock*, in America (where there are such large woods and where the distant rambling of turkeys is inconvenient,) they always buy such as have been bred under hens of the common fowl; than which a more complete proof of the great powers of *habit* is, perhaps, not to be found.

And, ought not this to be a lesson to fathers and mothers of families ? Ought not they to consider, that the habits which they give their children, are to stick by those children during their whole lives ?

174. The *hen* should be fed *exceedingly well* too, while she is *sitting* and *after* she has hatched ; for, though she does not give *milk*, she gives *heat* ; and, let it be observed, that, as no man ever yet saw healthy pigs with a poor sow ; so no man ever saw healthy chickens with a poor hen. This is a matter much too little thought of in the rearing of poultry ; but it is a matter of the greatest consequence. Never let a poor hen sit ; feed the hen well while she is sitting ; and feed her most abundantly when she has young ones ; for then her *labour* is very great ; she is making exertions of some sort or other during the whole twenty-four hours ; she has no rest ; is constantly doing something or other to provide food or safety for her young ones.

175. As to *fattening* turkeys, the best way is, never to let them be poor. *Cramming* is a nasty thing, and quite unnecessary. Barley-meal, mixed with skim-

milk, given to them, fresh and fresh, will make them fat in a short time, either in a coop, in a house, or running about. Boiled carrots and Swedish turnips will help, and it is a change of sweet food. In France they sometimes *pick turkeys alive* to make them *tender*; of which I shall only say, that the man that can do this, or order it to be done, ought to be skinned alive himself.

FOWLS.

176. These are kept for two objects; their *flesh* and their *eggs*. As to *rearing them*, every thing said about rearing turkeys is applicable here. They are best *fatted* too in the same manner. But, as to *laying hens*, there are some means to be used to secure the use of them in *winter*. They ought not to be *old hens*. Pullets, that is, birds hatched in the foregoing spring, are, perhaps, the best. At any rate, let them not be more than *two years old*. They should be kept in a *warm* place; and not let out, even in the day time, in *wet* weather; for one good sound wetting will keep them back for a fortnight. The dry cold, even the severest cold, if *dry*, is less injurious than even a

little *wet*, in winter time. If the feathers get wet, in our climate, in winter, or in short days, they do not get dry for a long time; and this it is that spoils and kills many of our fowls.

177. The French, who are great egg-eaters, take great pains as to the *food* of laying hens, in winter. They let them out very little, even in their fine climate, and give them very stimulating food: barley boiled, and given them warm; curds. *Buck-wheat* (which, I believe, is the best thing of all, except curds); parsley and other herbs chopped fine; leeks chopped in the same way; also apples and pears chopped very fine; oats and wheat cribbled; and sometimes they give them hemp-seed, and the seed of nettles; or dried nettles, harvested in summer, and boiled in the winter. Some give them ordinary food, and, once a day, toasted bread sopped in wine. White cabbages chopped up are very good, in winter, for all sorts of poultry.

178. This is taking a great deal of pains; but, the produce is also great and very valuable in winter; for, as to *preserved* eggs, they are things to run *from* and not after. All this supposes, however, a proper *hen-*

house, about which we, in England, take very little pains. The *vermin*, that is to say, the *lice*, that poultry breed, are their greatest annoyance. And, as our wet climate furnishes them, for a great part of the year, with no *dust* with which to get rid of these vermin, we should be very careful about *cleanliness* in the hen-houses. Many a hen, when sitting, is compelled to quit her nest to get rid of the lice. They torment the young chickens. And, in short, are a great injury. The fowl-house should, therefore, be very often cleaned out; and sand, or fresh earth, should be thrown on the floor. The nests should not be on *shelves*, or on any thing fixed; but, little flat baskets, something like those that the gardeners have in the markets in London, and which they call *sieves*, should be placed against the sides of the house upon pieces of wood nailed up for the purpose. By this means the nests are kept perfectly clean, because the baskets are, when necessary, taken down, the hay thrown out, and the baskets washed; which cannot be done, if the nest be made in any thing forming a part of the building. Besides this the roosts ought to be cleaned every week, and the hay changed in the nests of laying hens. It is good to *fumigate* the house frequently by burning dry herbs, juniper wood,

cedar wood, or with brimstone; for nothing stands so much in need of cleanliness as a fowl-house, in order to have fine fowls and plenty of eggs.

179. The *ailments* of fowls are numerous, but they would seldom be seen, if the proper care were taken. It is useless to talk of *remedies* in a case where you have complete power to prevent the evil. If well fed, and kept perfectly clean, fowls will seldom be sick; and, as to old age, they never ought to be kept more than a couple or three years; for they get to be good for little as layers, and no *teeth* can face them as food.

180. It is, perhaps, seldom that fowls can be kept conveniently about a cottage; but, when they can, three, four, or half a dozen, hens, to lay *in winter*, when the wife is at *home* the greater part of the time, are worth attention. They would require but little room, might be bought in November and sold in April, and six of them, with proper care might be made to clear every week the price of a gallon of flour. If the labour were great I should not think of it; but, it is *none*; and I am for neglecting nothing in the way of

pains in order to insure a hot dinner, every day in winter, when the man comes home from work. This is the great thing to think about; for, if there be not this, I defy the Methodist Parson, or any other parson, to make the family either happy or good. The laws relative to *poaching* are quite terrible; they make one shudder to think of them; they form a code such as the world never heard of before: but still, as a question of economy, ten times as much is to be gained by time spent in the care of tame animals as by the time spent in the pursuit of wild ones. Several little things amount to a great deal; and nothing, lawfully within our power, ought to be neglected in order to insure comfort at home; for without comfort there is *no home*.

PIGEONS.

181. A few of these may be kept about any cottage; for they are kept even in towns by labourers and artisans. They cause but little trouble. They take care of their own young ones; and they do not scratch, or do any other mischief in gardens. They

want feeding with Tares, Peas or small Beans, and Buck-wheat is very good for them. To *begin* keeping them, they must not have *flown at large* before you get them. You must keep them for two or three days, shut into the place which is to be their home; and then they may be let out, and will never leave you as long as they can get proper food, and are undisturbed by vermin, or unannoyed exceedingly by lice.

182. The common dove-house pigeon is the best to keep. They breed oftenest, and feed their young ones best. They begin to breed at about *nine months* old, and, if well kept, they will give you eight or nine pair in the year. Any little place, a shelf in the cow shed; a board or two under the eaves of the house; or, in short, any place under cover on the ground floor, they will sit and hatch and breed up their young ones in.

183. It is not supposed, that there could be much *profit* attached to them; but, they are of this use; they are very pretty creatures, very interesting in their manners; they are an object to delight *children* and to give them the *early habit* of fondness for animals and of *setting*

a *value* on them, which, as I have often had to observe, is a very great thing. A very considerable part of all the *property* of a nation consists of animals. Of course a proportionate part of the cares and labours of a people appertain to the breeding and bringing to perfection those animals; and, if you consult your experience, you will find, that a labourer is, generally speaking, of value in proportion as he is worthy of being entrusted with the care of animals. The most careless fellow cannot *hurt* a hedge or ditch; but, to trust him with the *team*, or the *flock*, is another matter. And, mind, for the *man* to be trust-worthy in this respect, the *boy* must have been in the *habit* of being kind and considerate towards animals; and nothing is so likely to give him that excellent habit as his seeing, from his very birth, animals taken great care of and treated with great kindness by his parents, and now-and-then having a little thing *to call his own*.

RABBITS.

184. In this case, too, the chief use, perhaps, is to give children those habits of which I have been just speaking. Nevertheless, Rabbits are really profitable. Three does and a buck will give you a rabbit to eat for

every three days in the year, which is a much larger quantity of food than any man will get by spending half his time in the pursuit of *wild* animals, to say nothing of the toil, the tearing of clothes, and the danger of pursuing the latter.

185. Every body knows how to knock up a rabbit hutch. The does should not be allowed to have more than *seven litters* in a year. Six young ones to a doe is all that ought to be kept; and then they will be fine. *Abundant food* is the main thing; and what is there that a rabbit will *not eat*? I know of nothing *green* that they will not eat; and, if hard pushed, they will eat *bark* and even wood. The best thing to feed the young ones on, when taken from the mother, is the *carrot*, wild or garden. Parsnips, Swedish Turnips, roots of Dandelion; for, too much green or *watery* stuff is not good for the *weaning* rabbits. They should remain as long as possible with the mother. They should have oats once a-day; and, after a time they may eat any thing with safety. But, if you give them too much *green* at first when they are weaned, they *rot* as sheep do. A *variety* of food is a great thing; and, surely, the fields and gardens and hedges furnish this variety! All

sorts of grasses, strawberry-leaves, ivy, dandelions, the *hog-weed*, or *wild parsnip*, in root, stem, and leaves. I have fed working horses, six or eight in number, upon this plant for weeks together. It is a tall bold plant that grows in prodigious quantities in the hedges and coppices in some parts of England. It is the *perennial parsnip*. It has flower and seed precisely like those of the parsnip; and hogs, cows, and horses are equally fond of it. Many a half-starved pig have I seen within a few yards of cart-loads of this pig-meat! This arises from want of the early habit of attention to such matters. I, who used to get hog-weed for pigs and for rabbits when a little chap, have never forgotten that the wild parsnip is good food for pigs and rabbits.

186. When the doe has young ones, feed her most abundantly with all sorts of greens and herbage and with carrots and the other things mentioned before, besides giving her a few oats once a-day. That is the way to have fine healthy young ones, which, if they come from the mother in good case, will very seldom die. But, do not think, that, because she is a small animal, a little food is sufficient! Rabbits eat a great deal more than cows or sheep in proportion to their bulk.

187. Of all animals rabbits are those that *boys* are most fond of. They are extremely pretty, nimble in their movements, engaging in their attitudes, and always completely under immediate controul. The produce has not long to be waited for. In short they keep an interest constantly alive in a little chap's mind ; and, they really *cost nothing* ; for, as to the *oats*, where is the boy that cannot, in harvest time, pick up enough along the *lanes* to serve his rabbits for a year ? The *care* is all ; and the habit of taking care of things is, of itself, a most valuable possession.

188. To those gentlemen who keep rabbits for the use of their family (and a very useful and convenient article they are) I would observe, that when they find their rabbits die, they may depend on it, that, ninety-nine times out of the hundred, *starvation* is the malady. And particularly short feeding of the doe, while, and before, she has young ones ; that is to say, short feeding of her *at all times* ; for, if she be poor, the young ones will be good for nothing. She will *live* being poor, but she will not, and cannot, breed up fine young ones.

GOATS AND EWES.

189. In some places, where a cow cannot be kept a goat may. A correspondent points out to me, that a Dorset ewe or two might be kept on a common near a cottage to give milk; and certainly this might be done very well; but, I should prefer a goat, which is hardier, and much more domestic. When I was in the army, in New Brunswick, where, be it observed, the snow lays on the ground seven months in the year, there were many goats that *belonged to the regiment*, and that went about with it on ship-board and every where else. Some of them had gone through nearly the whole of the *American War*. We *never fed* them. In summer they picked about wherever they could find grass; and in winter they lived on cabbage-leaves, turnip-peelings, potatoe-peelings, and other things flung out of the soldiers' rooms and huts. One of these goats belonged to me, and, on an average throughout the year, she gave me more than three half pints of milk a day. I used to have the kid killed when a few days old; and, for some time, the goat would give nearly, or quite, two quarts of milk a day. She was seldom dry more than three weeks in the year.

190. There is one great inconvenience belonging to goats; that is, they bark all young trees that they come near; so that, if they get into a *garden*, they destroy every thing. But, there are seldom trees on commons, except such as are too large to be injured by goats; and I can see no reason against keeping a goat, where a cow cannot be kept. Nothing is so hardy; nothing so little nice as to its food. Goats will pick peelings out of the kennel and eat them. They will eat mouldy bread or biscuit; fusty hay, and almost rotten straw; furze-bushes, heath, thistles; and, indeed, what will they not eat, when they will make a hearty meal on *paper*, brown or white, printed on or not printed on, and give milk all the while. They will lie in any dog-hole. Do very well clogged, or stumped out. And, then, they are very *healthy* things into the bargain, however closely they may be confined. When sea voyages are so stormy as to kill geese, ducks, fowls, and almost pigs, the goats are well and lively; and when a dog of no kind can keep the deck for a minute, a goat will skip about upon it as bold as brass.

191. Goats do not *ramble* from home. They come in regularly in the evening, and, if called, they come,

like dogs. Now, though Ewes, when taken great care of, will be very gentle, and though their milk may be rather more delicate than that of the goat, the Ewes must be fed with nice and clean food, and they will not do much in the milk-giving way upon a common; and, as to *feeding them*, provision must be made pretty nearly as for a cow. They will not endure *confinement* like goats; and they are subject to numerous ailments that goats know nothing of. Then the Ewes are done by the time they are about six years old; for they then lose their teeth; whereas a goat will continue to breed and to give milk in abundance for a great many years. The sheep is *frightened* at every thing, and especially at the least sound of a dog. A goat, on the contrary, will *face a dog*, and, if he be not a big and courageous one, beat him off.

192. I have often wondered how it happened that none of our labourers kept goats; and I really should be glad to see the thing tried. They are pretty creatures, domestic as a dog, will stand and watch, as a dog does, for a crumb of bread, as you are eating, give you no trouble in the milking; and I cannot help being of opinion, that it might be of great use to introduce them amongst our labourers.

CANDLES AND RUSHES.

193. We are not permitted to make Candles ourselves, and, if we were, they ought seldom to be used in a labourer's family. I was bred and brought up mostly by *Rush-light*, and I do not find that I see less clearly than other people. Candles certainly were not much used in English labourer's dwellings in the days when they had meat dinners and Sunday coats. Potatoes and taxed candles seem to have grown into fashion together; and, perhaps, for this reason: that, when the pot ceased to afford *grease* for the rushes, the potatoe-gorger was compelled to go to the chandler's shop for light to swallow the potatoes by, else he might have devoured peeling and all!

194. My grandmother, who lived to be pretty nearly ninety, never, I believe, burnt a candle in her house in her life. I know that I never saw one there, and she, in a great measure, brought me up. She used to get the meadow-rushes, such as they tie the hop-shoots to the poles with. She cut them when they had attained

their full substance, but were still *green*. The rush, at this age, consists of a body of *pith*, with a green *skin* on it. You cut off both ends of the rush, and leave the prime part, which, on an average, may be about a foot and a half long. Then you take off all the green skin, except for about a fifth part of the way round the pith. Thus it is a piece of pith all but a little strip of skin in one part all the way up, which, observe, is necessary to hold the pith together all the way along.

195. The rushes being thus prepared, the *grease* is melted, and put, in a melted state, into something that is as *long* as the rushes are. The rushes are put into the grease; soaked in it sufficiently; then taken out and laid in a bit of bark, taken from a young tree, so as not to be too large. This bark is fixed up against the wall by a couple of straps put round it; and there it hangs for the purpose of holding the rushes.

196. The rushes are carried about *in the hand*; but, to sit by, to work by, or to go to bed by, they are fixed in *stands* made for the purpose, some of which are high, to stand on the ground, and some low, to stand on a

table. These stands have an iron part something like a pair of *pliers* to hold the rush in, and the rush is shifted forward from time to time, as it burns down to the thing that holds it.

197. Now these rushes give a *better light* than a common small dip-candle; and they cost next to nothing, though the labourer may, with them, have as much light as he pleases, and though he must sit the far greater part of the winter evenings *in the dark*, even if he expend *fifteen shillings* a year in candles. You may do any sort of work by this light; and, if reading be your taste, you may read the foul libels, the lies and abuse, which are circulated gratis about *me* by the "Society for promoting *Christian Knowledge*," as well by rush-light as you can by the light of taxed candles; and, at any rate, you would have one evil less; for to be deceived and to pay a tax for the deception are a little too much for even modern loyalty openly to demand.

MUSTARD.

198. Why *buy* this, when you can *grow it* in your garden? The stuff you buy is half *drugs*, and is injurious to health. A *yard square* of ground, sown with common Mustard, the crop of which you would grind for use, in a little mustard-mill, as you wanted it, would save you *some money*, and probably save your *life*. Your mustard would look *brown* instead of *yellow*; but the former colour is as good as the latter; and, as to the *taste*, the *real* mustard has certainly a much better than that of the *drugs* and flour, which go under the name of mustard. Let any one *try* it, and I am sure he will never use the drugs again. The drugs, if you take them freely, leave *a burning at the pit of your stomach*, which the real mustard does not.

DRESS,

HOUSEHOLD GOODS AND FUEL.

199. In paragraph 152 I said, I think, enough to caution you, the English labourer, against the taste,

now too prevalent, for *fine* and *flimsy* dress. It was, for hundreds of years, amongst the characteristics of the English people, that their taste was, in all matters, for things solid, sound, and good; for the *useful*, the *decent*, the *cleanly* in dress, and not for the *showy*. Let us hope, that this may be the taste again; and let us, my friends, fear no troubles, no perils, that may be necessary to produce a return of that taste, accompanied with full bellies and warm backs to the labouring classes.

200. In *household goods* the *warm*, the *strong*, the *durable*, ought always to be kept in view. Oak-tables, bedsteads and stools, chairs of oak or of yew-tree, and never a bit of miserable deal board. Things of this sort ought to last several life-times. A labourer ought to inherit something besides his toil from his great-grandfather. As to bedding, and other things of that sort, all ought to be good in their nature, of a durable quality, and plain in their colour and form. The plates, dishes, mugs, and things of that kind, should be of *pewter*, or even of wood. Any thing is better than crockery-ware. Bottles to carry a-field should be

of wood. Formerly, nobody but the gipseys and mumpers, that went a hop - picking in the season, carried glass or earthern bottles. As to *glass* of any sort, I do not know, what business it has in any man's house, unless he be rich enough to live on his means. It pays a tax, in many cases, to the amount of two-thirds of its cost. In short, when a house is once furnished with sufficient goods, there ought to be no renewal of hardly any part of them wanted for half an age, except in case of destruction by fire. Good management in this way leaves the man's wages to provide an *abundance of good food and good raiment*; and these are the things that make happy families; these are the things that make a good, kind, sincere and brave people; not little pamphlets about "loyalty" and "content." A good man will be contented, fast enough, if he be fed and clad sufficiently; but, if a man be not well fed and clad, he is a base wretch to be contented.

201. *Fuel* should be, if possible, provided in summer, or at least some of it. Turf and peat must be got in summer, and some *wood* may. In the woodland

countries, the next winter ought to be thought of in *June*, when people hardly know what to do with the fuel-wood; and something should, if possible, be saved in the bark-harvest to get a part of the fuel for the next winter. Fire is a capital article. To have no fire, or a bad fire, to sit by, is a most dismal thing. In such a state man and wife must be something out of the common way to be in good humour with each other, to say nothing of colds, and other ailments which are the natural consequence of such misery. If we suppose the great Creator to condescend to survey his works in detail, what object can be so pleasing to him as that of the labourer, after his return from the toils of a cold winter day, sitting with his wife and children round a cheerful fire, while the wind whistles in the chimney and the rain pelts the roof? But, of all God's creation what is so miserable to behold or to think of as a wretched, half-starved family creeping to their nest of flocks or straw, there to lie shivering, till sent forth by the fear of absolutely expiring from want?

HOPS.

202. I treated of them before; but, before I conclude this little Work, it will be necessary to speak of them again. I made a mistake as to the *tax* on the Hops. The positive tax is 2*d.* a pound, and I stated it at 4*d.* However, in all such cases, there falls upon the *consumer* the *expenses* attending the paying of the tax. That is to say, the cost of interest of capital in the grower who pays the tax, and who must pay it, whether his hops be cheap or dear. Then the *trouble* it gives him, and the rules he is compelled to obey in the drying and bagging, and which cause him great *expense*. So that the tax on hops of our own English growth, may *now be reckoned* to cost the *consumer* about $3\frac{1}{4}$ a pound.

YEAST.

203. The *yeast* is a great thing in domestic management. I have once before published a receipt for making *yeast-cakes*, I will do it again here.

204. In Long Island they make *yeast cakes*. A parcel of these cakes is made *once a year*. That is often enough. And, when you bake, you take one of these cakes (or more according to the bulk of the batch) and with them raise your bread. The very best bread I ever eat in my life was lightened with these cakes.

205. The materials for a good batch of cakes are as follows: 3 ounces of good fresh Hops; $3\frac{1}{2}$ pounds of Rye-Flour; 7 pounds of Indian Corn Meal; and one Gallon of water.—Rub the hops, so as to separate them. Put them into the water, which is to be boiling at the time. Let them boil half an hour. Then strain the liquor through a fine sieve into an earthen vessel. While the liquor is hot, put in the Rye-Flour; stirring the liquor well, and quickly as the Rye-Flour goes into it. The day after, when it is working, put in the Indian-Meal, stirring it well as it goes in. Before the Indian-Meal be all in, the mess will be very stiff; and, it will, in fact, be *dough*, very much of the consistence of the dough that bread is made of.—Take this dough; knead it well, as you would for *pie-crust*. Roll it out with a rolling-pin, as you roll out *pie-crust*,

to the thickness of about a third of an inch. When you have it (or a part of it at a time) rolled out, cut it up into cakes with a tumbler-glass turned upside-down, or with something else that will answer the same purpose. Take a clean board (a *tin* may be better) and put the cakes *to dry in the sun*. Turn them every day; let them receive *no wet*; and they will become as hard as ship biscuit. Put them in a bag, or box, and keep them in a place *perfectly free from damp*.—When you bake, take two cakes, of the thickness abovementioned, and about 3 inches in diameter; put them in hot water, *over-night*, having cracked them first. Let the vessel containing them stand near the fire-place all night. They will dissolve by the morning, and then you use them in setting your sponge (as it is called) precisely as you would use the yeast of beer.

206. There are *three things*, which may be considered by the reader as obstacles. *FIRST*, it is directed to put *some yeast* into the liquor. The practice in America is to put in a *yeast-cake*. Even this *may be dispensed with*, and frequently is;—but, as we, in England, have the yeast *to begin with*, it would be

silly not to use it.—SECOND, where are *we* to get the *Indian-Meal*? Indian-Meal is used merely because it is of a *less adhesive* nature than that of wheat. White pea-meal, or even barley-meal, would do just as well. But, to *dry* the cakes to make them; (and *quickly*, too, mind) as *hard as ship biscuit* (which is much harder than the timber of Scotch firs or Canada firs); and to do this *in the sun* (for it must not be *fire*), where are we, in this climate, to *get the sun*? In 1816 we could not; for, that year, melons rotted in the *glazed frames* and never ripened. But, in every nine summers out of ten, we have, in July or in August, a *fortnight of hot sun*; and that is enough. Nature has not given us a *peach-climate*; but we *get peaches*. The cakes, when put in the sun, may have a *glass sash*, or a *hand-light*, put over them. This would make their birth *hotter* than that of the hottest open-air situation in America. In short, to a farmer's wife, or any good housewife, all the little difficulties to the attainment of such an object would appear as nothing. The *will* only is required; and, if there be not that, it is useless to think of the attempt.

SOWING SWEDISH TURNIP SEED.

207. It is necessary to be a little more full than I have been before as to the *manner of sowing* this seed ; and, I shall make my directions such as to be applied on a small or a large scale.—Those that want to transplant on a large scale will, of course, as to the other parts of the business, refer to my larger work.—It is to get plants for *transplanting* that I mean to sow the Swedish Turnip Seed. The *time* for sowing must depend a little upon the nature of the situation and soil. In the north of England, perhaps early in April may be best ; but, in any of these southern counties, any time after the *middle of April* is quite early enough. The ground, which is to receive the seed, should be made very *fine*, and manured with wood-ashes, or with good compost well mixed with the earth. Dung is not so good ; for it breeds the fly more ; or, at least, I think so. The seed should be sown in drills *an inch deep*, made as pointed out under the head of *Sowing* in any book on *Gardening*. When deposited in the drills, *evenly* but *not thickly*, the ground should be raked across the drills, so as to fill them up ;

and then the whole of the ground should be *trod hard*, with shoes not nailed, and not very thick in the sole. The ground should be laid out in four-foot *beds* for the reasons mentioned in the "*Gardener*." When the seed come up, thin the plants to two inches apart as soon as you think them clear from the fly; for, if left thicker, they injure each other even in this infant state. Hoe frequently between the rows even before thinning the plants; and, when they are thinned, hoe well and frequently between them; for, this has a tendency to make them strong, and the hoeing *before thinning* helps to keep them off the fly. A rod of ground, the rows being eight inches apart, and plants two inches apart in the row, will contain about *two thousand two hundred* plants. An acre, in rows four feet apart, and the plants a foot apart in the row, will take ten thousand and about four hundred and sixty plants. So that to transplant an acre, you must sow about *five rod of ground*. The plants should be kept very clean; and, by the last week in June, or first in July, you put them out. I have put them out (in England) at all times between 7th of June, and middle of August. The first is certainly earlier than I like; and

the very finest I ever grew in England, and the finest I ever saw for a large piece, were transplanted on the 14th of July. But, one year with another, the last week in June is the best time.—For size of plants, manner of transplanting, intercultivation, preparing the land, and the rest, see “*Year's Residence in America*,” a new and *cheap* edition of which is now in the press.

CONCLUSION.

208. If, in the foregoing little Work, I shall have contributed, only in the smallest degree, to make one single labourer's family more comfortable than it would have been without this Work, and if the knowledge of having accomplished that end should reach me, I shall think myself amply rewarded for my pains. The *Great* know very well how to take care of themselves; but, who cares for the labourer, who *writes* for him, except for the purpose of making him contented with wretchedness? Thousands upon thousands and millions upon millions of *Tracts*, as they are called,

have been circulated, in order to coax and cajole the miserable labourers of England. Never one to give them instruction, calculated to better their lot. The taxes and the paper-money have, by degrees, brought them down to a state, from which it will be difficult to raise them; but, at any rate, every effort should be made to effect a thing so desirable. I have done my part; let others do theirs.

N. B. Having, in the former Numbers, spoken of *brewing-machines*, I cannot conclude my Work without stating, that further experience has induced me to resolve to *discontinue* the use of all sorts of brewing machines, and to use *the old sort of utensils*.

END OF COTTAGE ECONOMY.

have been circulated in order to cover and explain the
unintelligible labors of England. Now one to give
the information calculated to better their lot. The
taxes and the government have by degrees brought
them down to a state from which it will be difficult to
raise them; but at any rate, they should be
made to effect a thing so desirable. I have done my
best; but others do better.

W. L. Garrison, in the former Number, speaks of
himself as a witness; I cannot conclude my Note without
stating that former experience has induced me to
resort to the same use of all sorts of blowing
machines and to use the old sort of apparatus.

For the Congress of 1847.

