The present state of the manufacture of salt explained: and a new mode suggested of refining British salt ... to which is subjoined, a plan for abolishing the present duties ... on the manufacture of salt ... / [Archibald Cochrane Dundonald].

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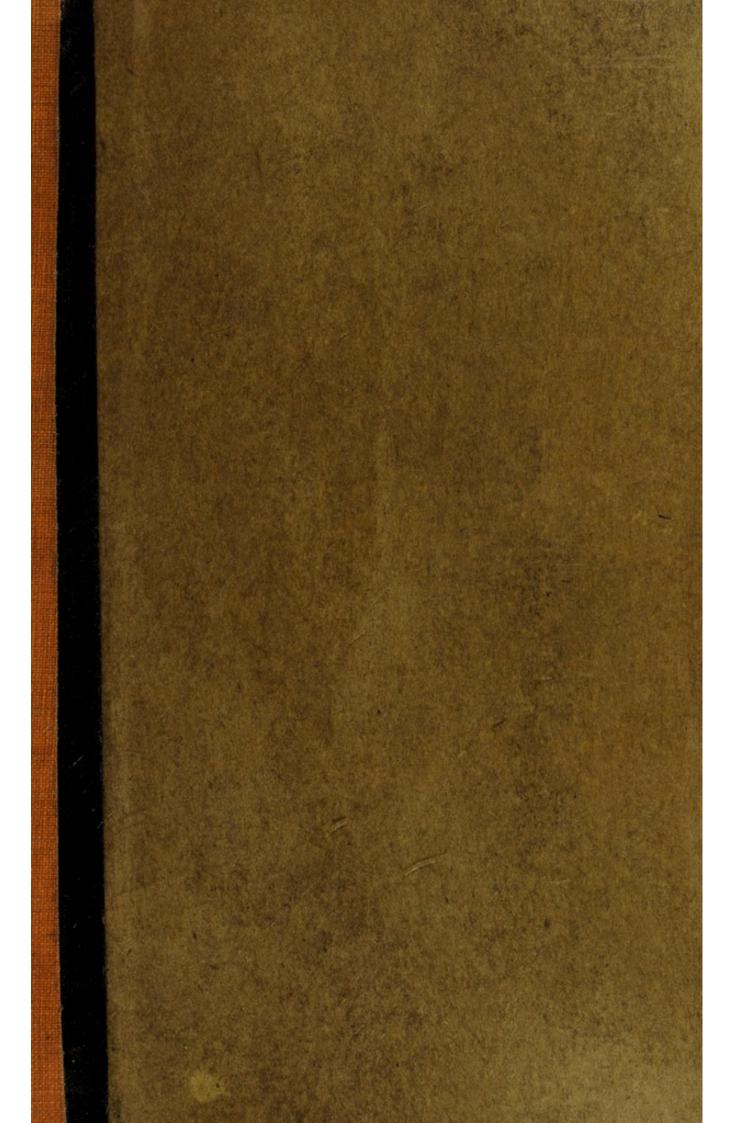
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COCHRANE, Archibald

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# PRESENT STATE

OFTHE

# Manufacture of Salt explained;

## AND

A new Mode suggested of refining British Salt, fo as to render it equal, or superior to the finest Foreign Salt.

# To which is subjoined,

A PLAN for abolishing the present Duties and Restrictions on the Manufacture of Salt, and for substituting other Duties, less burthensome to the Subjects, more beneficial to the Revenue, and better qualified to promote the Trade of GREAT BRITAIN.

# By the Earl of DUNDONALD.

The SECOND EDITION,
With an APPENDIX, 17th May, 1785.

## LONDON:

Printed by W. and A. STRAHAN:

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and W. RICHARDSON, Royal Exchange.

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HISTORICAL MEDICAL MEDICAL

By the Hear of DUNDONALD.

SECOND EDITION

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# THOUGHTS

ONTHE

Manufacture and Trade of Salt, &c. &c.

HERE were formerly upwards of two hundred falt-pans at North and South Shields; at present there are but twenty.

The decrease of the salt manufacture on the east coast, is owing to the superior advantages of making salt, by the assistance of the sun, on the south coast, and the making of it from rock-salt on the west.

The places from whence London is chiefly fupplied with falt, are Lymington and Liverpool.

At Lymington the sea water is let into shallow ponds or reservoirs, where it evaporates to a certain degree. It is afterwards boiled down in pans, with coals got from Newcastle and Sunderland, which coals pay a duty of 5s.  $4\frac{7}{2}$  d. per chalder; so that the salt made at Lymington may be said to pay duty twice; first, on the coals used in making

making the falt; and, secondly, on the falt when made.

At Liverpool, which is a principal place for the manufacture and export of falt made from rock-falt, the last-mentioned falt is diffolved in sea-water, making therewith the strongest possible brine or solution of sea-salt; when the brine has deposited the impurities of the rock-falt, it is boiled down in pans, in much the same manner as at Lymington.

The vein or stratum of rock-salt hitherto discovered, is near Norwich in Cheshire. It is upwards of 50 feet in thickness; but, from salt springs being so common in different parts of that county, there is reason to believe that this stratum extends through a great tract of country, and will, for ages, surnish an inexhaustible supply of that valuable article, to the inhabitants of this island.

But the inhabitants of Great Britain are fubject to various restrictions in the use of rock-salt.

By I Ann. stat. 1. cap. 21. sect. 10. 'No 'rock-salt shall be refined into white salt, except within ten miles of the pits, or at such places as, upon or before the 10th of May 1702, shall have been used for the refining of rock-salt, under the pain of forty shillings for every bushel.'

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By 6 Ann. cap. 12. sect. 2. Rock-salt may be used in making salt from seawater in the salt works near Holyhead in Anglesea.

By stat. 5 Geo. 2. cap. 6. sect. 17. 'It shall be lawful for the Commissioners of his 'Majesty's duties on salt to license any perfons to make use of any building for the refining of rock-salt, and making it into white salt, so as the number to be licensed do not exceed one at each of the following places, viz. at Heybridge, Colfichester, Maningtree, Ipswich, Woodbridge, 'Walderswick, and Southwold, upon request from the justices of peace at the quarter fessions nearest to the places afore-mention-sed, so as his Majesty's duties be daily paid.'

The refining of rock-salt being thus particularly restricted by acts of parliament, the consequence is, that the whole of Scotland, and every part in England, excepting the few places named or described in these acts, are excluded from the benefit of using and refining the valuable raw material of rocksalt.

At the same time the exportation of rockfalt to foreign countries, and to every part in Ireland, is permitted. By statute 9 Ann, cap. 23. sect. 44. "it was "enacted, that during thirty-two years there should be paid to her Majesty nine shillings for every ton of rock-salt put on board any ship in Great Britain, and exported to Ireland, over and above the present duties to be paid by the exporter upon entry out for exportation, to the officer of the port where such rock-salt shall be put on board before any cocket shall be granted for the same."

It appears, also, that the duties granted by this act were made perpetual by act 3 Geo. 1. cap. 7. but it is presumed that the duty of nine shillings per ton on rock-salt exported to Ireland has been repealed by some subsequent statute, as the fact is, that the Irish receive rock-salt from England duty free.

Many places in England and Scotland, befides being deprived of the benefit of rockfalt, fuffer additional disadvantages in their manufactory of salt from the high duties they are obliged to pay upon coals carried coastways.

Coals confumed in Great Britain and carried coastways pay a duty of 5s. 4-7 d. per chalder.

Coals imported into the Port of London pay 8 s. 7 d. per chalder.

Coals exported to foreign countries in British bottoms pay  $8s.\frac{3}{4}$  per chalder, coals exported in foreign bottoms pay  $14s.4\frac{3}{4}$  d. per chalder.

But coals exported to Ireland pay a duty only of 1 s. 1 4 d. per chalder.

The consequence of these inequalities is, that a great quantity of rock-salt refined in Ireland, is smuggled from thence to the west coasts of England and Scotland, where, from the superior duties on coal carried coastways, and from being denied the benefit of the raw material of rock-salt, the fair trader in salt cannot possibly afford salt near so cheap, as it can be had by means of the illicit trade from Ireland.

These observations are made, not with a view to suggest any additional duties on coal exported to Ireland, or any restrictions upon the exportation of Rock Salt, for the benefit of the inhabitants of that country; for, on the contrary, the Author declares himself a warm friend to the operation of every liberal principle in the arrangements between Great Britain and Ireland, and his persuasion is, that the prosperity of the empire will best be promoted by encouraging the manufactures and commerce of both countries, and by exciting a laudable

laudable emulation between them upon fair grounds of competition.

It is not the smallness of the duty paid by the Irish for their coals imported from Britain, nor the benefit they enjoy from the importation of British Rock Salt, that the Author complains of; but he complains that the inhabitants of Great Britain should be subjected to fuch a diffreffing duty on coals carried coastways, and that they are so much reftricted, and in many parts of this island totally excluded from the benefit of the raw material of Rock Salt. Without wishing to vary the benefits which have been granted to Ireland, he cannot help thinking that the disadvantages to which the inhabitants of Great Britain are subjected, have been founded on bad policy, and ought to be removed.

If the maxim in trade holds good, that the exportation of a raw unmanufactured commodity, which can be manufactured at home to advantage, is improper, the exportation of Rock Salt to foreign Nations, ought strictly to be prohibited, and the salt trade with the sister kingdom of Ireland ought to be so arranged, as to place the inhabitants of both countries upon an equal footing, and to prevent that destructive trade of smuggling, which now exists to an enormous extent, from

from that country into Great Britain, and which must continue to exist while there are such encouragements, or temptations at least for refining the British Rock Salt in Ireland, and smuggling it into the most convenient parts of England and Scotland.

The Author will now attempt to shew how the salt manufacture of Great Britain may be carried on to the greatest advantage; how the importation of Foreign Salt for curing sish, and meat will be rendered unnecessary; and how salt from this kingdom may be rendered a staple article of export trade to Flanders, Holland, part of Germany, Prussia, Norway, Denmark, Sweden, and Russia.

It has been observed, that the manufacture of salt at Shields, and on the east coast of this island, had decreased ever since the discovery and the working of the stratum of rock-salt in Cheshire. Trade will always go to those places where it can be carried on to the greatest advantage. It should be there principally encouraged and promoted, and not, from motives of bad policy, laid under restraint.

The legislature should in these respects regard the interest of the whole, not of a part. The proprietors of the rock-salt have reason to complain, that the sale of it has been prohibited to those places where coals are in abundance,

abundance, and where it could be refined to

advantage.

The author has been informed that it was proposed, about forty years ago, to allow the importation of rock-salt into Scotland. That measure was promoted by Archibald Duke of Argyle; but it seems the proprietors of salt-works on the Forth signified to the Duke, how much it would (as they thought) hurt their interest: in consequence of which the idea was at that time laid aside.

Sea-water on the Frith of Forth yields, on an average of the year, \frac{1}{3.5} of falt; 100 tons, therefore, contain

Of falt 2 17 0 16

Of water 97 2 3 12

A hundred tons of faturated folution of rock-falt in sea-water, contain

Of falt 23 0 I 20
Of water 76 19 2 8

The improper expenditure of fewel in making falt from sea-water, without the aid of rock-salt, cannot be more fully shown than by the above states. By the former, upwards of 97 tons of water must be evaporated to procure 2 tons 17 cwt. of salt, equal to 114 bushels; by the latter 77 tons of water nearly, to obtain 23 tons, equal to 920 bushels

of falt; a quantity (with 20 tons less evaporation) eight times greater than is procured from sea-water.

From the above facts it may safely be concluded, that, to procure the same quantity of salt from sea-water as from salt brine, it will require eight times the sewel, and eight times the labour;—an object of less importance to the salt manufacturers, than to the country in general, which ultimately pays, by an advanced price on salt, for the extra charge of manufacture.

The selling price of salt at Liverpool and on the Forth (exclusive of duties), confirms what is above stated.

At Liverpool, the best salt sells at 8d.

Small salt 6d.

On the Forth, the average price is 15d.

The expence of manufacture on the Forth stands near 11d. per bushel; and the salt-makers at Liverpool, who use rock-salt, have as much profit by selling their salt at 8d. as those on the Forth at 15d.

The heavy duties already laid on this nenessary of life render it an object of moment to the country in general, more especially to the poorer sort of people, that the cheapest mode of manufacture should be adopted. The

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importation, therefore, of rock-falt, under certain restrictions and regulations, should be allowed into all the ports of Great Britain where the manufacture of falt is carried on. Objections may be started, ' That the revenue would ' fuffer thereby, viz. Either by the rock-falt

being made use of in its crude state, or by

' the strong brine being carried away, or dif-

· posed of from the falt-works.'

To the first of these it is a sufficient answer, that rock-falt contains fo many impurities, particularly of a red clay or earthy matter, that it could not be made use of for household purposes, or the falting of meat; and, could it even be made use of, its colour, its fize when whole, and its unformed grains or particles when broken or pounded, will afford an easy method of detection.

The last objection, 'That falt brine would be fecreted or carried away from the works,' militates equally against the present mode of making falt from fea water; because, in either case, falt must be in a liquid ere it can be in a folid state. As the law stands at present, the penalty for disposing of, or taking away the brine is very great. Besides, watchmen attend the falt-pans night and day; and, if it should be thought farther necessary, the pump that draws

draws up the brine from the reservoir or pit, in which the falt rock is dissolved by the seawater, may be under the lock and key of the falt-officer, who shall be obliged to attend

when the pans are filled.

It having been clearly proved, that falt made from rock-falt can, at equal profits to the maker, be afforded to be fold at half the price of falt made from fea-water, it now remains to show, first, how home-made falt can, at a small expence, be purified, or rendered of equal or superior quality to bay or foreign falt, for the purpose of curing fish, and falting of meat and butter; 2dly, How fuch purified falt can be made a staple article of trade and export from this kingdom.

The method of purifying home-made falt is fully explained in the following letter, addreffed by the Author to the Secretary of the Royal Society of Scotland: But, previous to the infertion thereof, it will be proper to give the fubstance of what Campbell, a prolix, but well-meaning author, fays, in his Political Survey, of the importance of the manufac-

ture and trade of falt to Great Britain.

' Salts of all kinds are made in Britain, and of some fort or other in almost every part of it. If we confider the extensive use of this

'indispensable necessary of life, we must look upon the abundance of it in this kingdom to be a very great and extensive blessing. From the immense and continual consumption of salt, we may form some idea of the number of families maintained by the making, transporting, and vending of this valuable article. The consumption within this last century has increased amazingly, and is still increasing, as manifestly appears by the public revenue arising from it, which amounts at present in South Britain to 700,000 l. per annum.

'In 1670, in the lands of William Madburry, Esq; of Madburry in Cheshire, was
discovered the mine of rock-salt. There
have been since many more works wrought
by other proprietors, who have most of
them joined in company for that purpose.
This rock-salt is sent to Liverpool and other
places, where, by boiling it in sea-water,
they produce a fine white salt, which they
can sometimes afford at twenty shillings a
ton, equal to sixpence per bushel, exclusive
of the duty, and export it to the plantations.

'Notwithstanding our great plenty of salt, we are obliged to use foreign salt for the sisheries. It is undoubtedly a wise policy

f to

to grant a drawback on the foreign salt employed: But, would it be a less wise policy
to propose a reward for making salt here, as
fit for curing fish as foreign salt, and at a
moderate price?

Copy of a Letter from Lord DUNDONALD to the Secretary of the Royal Society of Scotland.

'SIR,

'YOU will be so good as to return my thanks to the Royal Society for the honour they have done me, in electing me one of their number; and will likewise please to communicate to them the following account of the method I have of late used with success, for freeing home-made salt from the large quantity of magnesia salita and magnesia vitiolata with which it abounds.

'The unfitness of home-made salt for the preserving of fish, meat, and butter, is sufficiently known; and, by a variety of experiments I have made, it seems to be principally owing to the septic power of the magnesia salita.

'A method of purifying common falt without disfolving it in water, and decompounding the falts with earthy basis, by a fixed
alkaline salt, has hitherto been a desideratum,

tum, and is an object of importance to the public in general, more especially to the curers of fish and meat.

'The method already mentioned of diffolv-' ing in water, &c. &c. and afterwards boiling down and granulating the falt, could not, from the expence with which it is attended, be practifed in the large way. Besides, ' there would in the process be formed the following falts, according to the alkali made " use of, viz. If fossile alkali, a common seafalt and a Glauber falt; and, if vegetable 'alkali, a falt of Silvius and a vitriolated " Tartar. The separation of the salt of Silvius from the common falt, if necessary, could not be made; that of the vitriolated 'Tartar, it is true, from its small solubility 'in water, could more easily be made; but it would require the falt brine to be drawn off the subsided crystals of vitriolated Tar-' tar, which would be attended with expence and loss of time. The objection to the other method of decompounding by fossile alkali is, that a proportion of Glauber falt ' would be formed in place of the magnefia "vitriolata decompounded, from which it " would be no less difficult to free the sea-6 falt than from the magnesia salita. It is true, 6 that

that in this process a proportion of sea-salt would be regenerated; but each pound of salt so obtained (fossile alkali supposed at 361. per ton) would cost 2d. instead of ½d. the price (exclusive of the duty) that it may be purchased for at present: And, upon the whole, neither of these processes, including the price of the alkalis used, could be done for less than 15d. per bushel, equal to the original price of the falt. Every objection, however, to the proper purifying of salt, is removed by the following process:

' Take a vessel, of a conical figure, with a hole in the apex or small end of it, put it e near the fire, with the bottom or base upe permost; or fix it in such a manner that it ' may be moderately heated by a stove or stew ' going round it; fill it with falt; take a ' twentieth part of the falt contained in the vessel, dissolve it in its proper proportion of water in an iron pan; let it boil, and ' pour it, when hot, upon the surface of the ' falt in the conical vessel. The hot and fully faturated folution will diffolve no more fea-' falt, but will, as it descends and filtrates through the falt in the vessel, liquify or ' dissolve the magnesia salita, and magnesia ' vitriolata, which will drop out at the aperture in the small end of the conical vessel.
After that the liquor has ceased to drop,
take out a twentieth part more of the salt
contained in the vessel, dissolve it in water,
proceed as aforesaid, pour it on the salt, and
repeat the same with fresh quantities of salt
out of the vessel, until the remaining salt
be of the required purity. Three washings
will render home-made salt equally pure as
bay-salt. Each operation renders the salt
4½ times purer than it was before. Its
purity, throwing off the small fractional parts
in each multiplication, will increase in the
following progression:

First operation - - 4.5

Second ditto - - 20.

Third ditto - - 91.

Fourth ditto - - 410.

Fifth ditto - - 1845. \*

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\* Several persons have attempted to purify salt in the method here recommended; but, from not attending to the principle upon which the purification is effected, had not the success which they expected. The purification, or rather the separation of salt, is effected upon this simple principle: that sea-salt crystallizes by evaporation, or by the loss of the superfluous water, and is not afterwards liquisiable by the heat applied; whereas the magnesia vitriolata crystallizes by cold, or by the abstraction of heat, and will therefore liquify upon acquiring of heat. This shews the necessity that the brine, when poured upon the salt, be boiling hot, and that the salt, while dripping, be kept at a heat at which the magnesia vitriolata does not crystallize.

t The superior quality of salt, thus freed from

the bitter nauseous falts, is no less obvious

· to the taste than its effects are in salting or

preserving of fish, meat, and butter; of

which I have fatisfied myfelf by a variety

of experiments. I am,

· SIR, &c.

'P. S. If a salt perfectly pure is required,

as all falt made by fire contains a small por-

' tion of uncombined magnefia, the falt may

be freed from it, by adding to the first liquor

that the falt is washed with, as much ma-

rine acid as will neutralife and diffolve the

" magnefia."

The separation of the magnesia salita, depends again upon its firong attraction for water; for if the falt, submitted to purification, be previously well dried, the exficcated magnefia falita contained in it, will deprive the falt-brine, or the folution used for purifying the falt, of the water necessary to keep the fea-falt contained in it in folution, will force the fea-falt to crystallize in its paffage, and the magnefia falita, thus disfolved, will drip or run off along with the magnefia vitriolata. In purifying of falt at the falt works, there is no occasion for a scrupulous adherence to the directions given of doing it in a vessel of a conical figure, or of pouring the hot brine upon the top of the falt; for as the process is neither more nor less than the washing of falt in a hot and pure brine, it may either be done by pouring the brine upon the falt, or by putting the falt into the hot brine, which lest method the Author puts in practice at his falt works in the first purification; but the last part of the process, in order to save a superfluous diffolving of falt, he recommends to be done in conical veffels of a fize to contain 50 or more bushels of falt at a time.

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The simplicity of the process for purifying falt here described, and its cheapness, as it can be done for less than 11 d. per bushel, will, it is hoped, recommend it to the attention of the legislature, and the practice of it ought to be enforced by act of parliament at all the falt-works throughout Great Britain. The propriety of such an act of the legislature will not strike those who imagine the purity and quality of falt of little moment, and who are unacquainted with the great quantity of bittern or heterogeneous falts contained in it. The common falt made at Shields, and on the Frith of Forth, is found, by repeated trials, on an average, to contain one-tenth of its weight of those bitter putrescible falts, aiding instead of preventing putrefaction. According to the above proportion, a bushel of falt of 56 pounds, contains 51 pounds of the falts already mentioned.

This plan of purifying common falt must be enforced by act of parliament at all the saltworks in Great Britain, before it would be prudent to prohibit the importation and use of foreign salt; because, were it otherwise, and the purifying of the salt left in the choice of the salt-makers, they might be tempted to save the small expence the process is attended

with, to impose on the Public, by supplying the curers of fish and meat with unpurified falt, who, from outward appearance, could not diftinguish the difference, and who might neither know, nor give themselves the trouble to put the purity of the falt to the test of an alkaline folution. Were the practice here recommended made general, there would be no complaints of the rancid smell and taste of our falted butter, nor in the navy and merchant fervice, of tainted ill-cured meat. The health of our seamen is, of itself, an object of fufficient importance to recommend what is here proposed to the serious attention of government. The Dutch have been long famous for curing fish, meat, and butter, better than any nation in Europe, which, at the fame time that the greatest cleanliness is obferved by them, is principally owing to the superior quality of the salt they make use of. Best Spanish or Portugal salt is, by them, not thought fufficiently pure for many purposes, particularly for falting butter. It is, therefore, made to undergo a purification, which they studiously conceal, but which can confift only in freeing falt from the impurities with which it is mixed.

In the history of the French Academy of Sciences, mention is made, 'That the Dutch 'use sour whey in the purification or refining of salt, and that it is owing to this method that they are samous for having the best falted provisions in Europe.'

Notwithstanding so respectable an authority, there is reason to believe that this is not the method the Dutch use in purifying their salt; for the butter, or oil, contained in the whey, would hinder the crystallization of the salt, and the acid would join with the uncombined magnesia, and form a deliquescent salt, from which it would be no less difficult to free the sea-salt than from the bittern formerly mentioned.

The means of purifying common falt having been sufficiently explained, it now remains to show how falt may be rendered an article of export trade from this kingdom to the northern nations of Europe, who draw their principal supply of that article from Spain, Portugal, and Sardinia. French or Bay salt is reckoned inferior to the above, and as such is prohibited by the Dutch to be used in curing of herring, on penalty of forfeiting the herring so cured.

What is here	proposed wi	ll be best shown
by a comparativ	e state of th	e price of Spa-
nish and Britis	h falt delive	ered at Copen-
hagen.	SECTION TO	

Spanish salt, one ton equal to

40 bushels		-	£.	0	15	0
Freight and infu	rance on	ditto	T. C. A.	2	0	0

Equal to 1 s.  $4^{\frac{1}{2}}$ d. per bushel 2 15 0

British refined falt.

One ton	equal to 40	bushels		I	IO	0.
Freight,	&c. on ditt	0	100	0	12	0

Equal to 12 d. per bushel 2 2 0

The last mentioned freight to Copenhagen will appear high rated, when it is considered that two-thirds of all the east country ships go out in ballast, making their freight upon their homeward bound voyage; and it is not doubted, that vessels may be had to freight at half the above sum, choosing rather to accept of it than incur the expence of going out in ballast. So that, whatever they get on an outward-bound voyage, however small, may be deemed as clear gain, and, at six shillings per ton, is equal to one-third of the homeward-bound freight.

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The example given here of the freight and price of falt delivered at Copenhagen, will answer for any of the following ports, viz. Gottenburgh, Christianstadt, Stockholm, Lubec, Dantzic, Memel, Riga, Peters-

burgh, &c.

Where large quantities of Spanish and Portugal salt are imported, from its superior quality, it sells at a higher rate than British unpurified salt, which is found, at home as well as abroad, unsit for the sisheries, or for salting of meat. But, were it purified, as proposed, its quality and colour, independent of its low price, would give it a decided superiority over any foreign salt in these markets.

The Author hopes he has proved the three propositions he set out with: That salt may be made one half cheaper from rock-salt dissolved in sea-water, than from sea-water alone: That home salt may be made of equal or superior purity to foreign salt: And that salt may become a great article of export trade from this kingdom.

He is unconnected with the proprietors of the rock-falt, and the manufacturers of falt on the west coast. He is himself a con-

fiderable

fiderable manufacturer of falt on the east coast, and though the manufacturers of falt on that coast have entertained apprehensions that their interest would suffer from the importation and use of rock-salt, yet the Author is fully convinced that there is no just foundation for those apprehensions; and that, on the contrary, their trade and profits would receive benefit, instead of injury, from the free importation and use of rock-salt.

Independently of these considerations, he feels it to be the duty of every good subject to point out any means by which the pernicious practice of smuggling may be suppressed, and the trade of Great Britain extended.

It is with this view, in particular, that the author has suggested the improvements which may be made in the mode of manufacturing salt, and the inducements to those improvements; but he will now beg leave to submit to the public consideration some ideas, and propositions of a different nature, which could not sail to produce an extension of the trade of Great Britain, and the infallible extinction of the smuggling trade in the article of salt, and he hopes to be able to shew, that

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the innovation to be proposed, would be attended with much real benefit and convenience to the subjects of this kingdom; and, at the same time, without any possible prejudice to the interests of the public revenue.

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PLAN

# PLAN

## FOR

Abolishing the present Duties and Restrictions on the Manufacture of Salt, and for substituting other Duties less burthensome to the Subjects, more beneficial to the Revenue, and better qualified to promote the Trade of Great Britain.

THE gross nominal amount of the duties on falt extends to many hundred thousand pounds annually; but the net produce to the revenues of the public, after deducting the charges of management, drawbacks and bounties, does not amount to one-third of the nominal description of the annual duties on salt.

For shewing the gross receipt of the annual duties upon salt in England, the amount of the drawbacks, bounties, and discounts, the gross produce after these deductions, the charges of management, and the remaining net produce; the Author has had recourse to the reports of the Commissioners of Accounts, as the accuracy and authenticity of the calculations and facts reported by these gentlemen is universally admitted.

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The branch of the revenue arising from falt, together with many other branches of the public revenue, came under the consideration of the commissioners of the public accounts in the year 1780; and mention is made of it in their second Report, which is dated 31st January 1781. To that Report there is subjoined, in an Appendix, No. 28, the following account, relating to the gross and net produce of the salt duties for the year 1776, viz.

Groß receipts for the year 1. s. d.

1776, - 895,489 8 11\frac{3}{4}

To be deducted, drawbacks,
bounties, and discount, 622,865 6 2\frac{3}{4}

Groß produce remaining, £272,624 2 9

Deduct charges of management, - 26,410 15 7

Remains net produce, £246,213 7 2

Though the preceding Report was made by the commissioners of accounts in the month of January 1781, they had not then been able to get an account of the gross and net produce of the salt down to any later period than the year 1776; neither has the Author Author of these sheets been able to get, for any later period, an account of the gross recepts of the salt duties, and of the sum paid for bounties, drawbacks, &c. but he has learnt that there was given in to Parliament, upon the 2d of February last, 1785, an account of the net produce of all the taxes, from Michaelmas 1783, to Michaelmas 1784, in which the net produce of the salt duties was stated thus:

Salt, 5th April 1759,	l. 221,363	12	5
Ditto, 10th May 1780, Ditto, 22d June 1782,	55,340 56,031		*
Alling the brought saterness	332,735	16	8

This increased produce of the salt revenue, was owing to additional duties which had been imposed on that article in the years 1780 and 1782.

It is presumable, however, that the proportions between the gross and net produce for the year, from Michaelmas 1783 to Michaelmas 1784, would not differ very widely from the proportions of these in the year 1776; and therefore the Author may be allowed to argue from the statements of the

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year

year 1776, made up by the commissioners of accounts, as affording sufficient materials for the observations and reasonings in the subsequent part of this enquiry:

It appears from the statement of the year 1776, that while the gross receipts from the salt duties were 895,489 l. 8 s. 11 d. there remained for the use of the Public, of net produce, only 246,213 l. 7 s. 2 d. The difference therefore amounting to 649,276 l. 1 s. 9 d. was consumed by drawbacks, bounties, discounts and charges of management.

There is reason likewise to believe, that the amount of articles falling under that description in the year, ending Michaelmas 1784, exceeded 700,000 l. while the public revenue was benefited only to the extent of 332,735 l. 16s. 8d.

The present mode of collecting a revenue from salt is liable to various objections: is, Without producing adequate benefits to the public revenue, it is burthensome to the manufacturer and trader, both from the extent of those duties which must be paid in money, and of those for which bond must be granted, likewise from the various restrictions in the progress and sale of the commodity, as well as from the attendance requisite for

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fatisfying the different forms required by law for intitling to drawbacks, bounties, difcounts, &c.

2dly, It is expensive in the collection; for while the duties on salt remain, there must necessarily be a great number of salt officers employed to make effectual that revenue, and to guard against the various frauds to which it is liable, in different stages of the manufactory, as well as in the claims for drawbacks, bounties, and discounts.

3dly, Supposing all the salt officers in the kingdom to be very attentive to their duty, which is perhaps more than can be expected from great numbers of persons where much vigilance is requisite, without corresponding benefit to the officer; still, from the nature of the commodity and the manufacture, and from the modes of ascertaining the duties, drawbacks, and bounties, it is liable to many impositions and abuses; and experience proves that great quantities of salt, without paying any duties at all, can be easily smuggled from Ireland to the west coast of Great Britain, to the great prejudice of the fair trader, as well as of the public revenue.

Such are the effects of the present system of falt duties, and of the laws made on that sub-

ject, which, when feriously considered, call loudly for redress.

All these mischiefs would be prevented, and, at the same time, many advantages, in other respects, would be acquired by abolishing the duties on salt, leaving that manufacture perfectly free from all obstacles, and allowing salt to be transported coastways to whatever situation might be found most proper.

It is understood, however, that the public revenue must not suffer from this innovation; and therefore, whatever sum has hitherto been made effectual, during any one year, to the public revenue of this country, from the produce of the salt duties, that sum, at least, must continue to be levied from the subject under some other denomination, and upon some other article of use or consumption, such as may be best suited for a just and equal distribution of it amongst the inhabitants of the country; all of whom have hitherto, in a greater or lesser degree, contributed to the duties on salt.

The Author is well aware of the prejudices in favour of old establishments in matters of revenue; and that the difficulties of innovation are encreased, where the interests of fome individuals may possibly be affected by the change proposed. But the experiment lately made, of a material alteration in one branch of the Revenue, and the good consequences of that alteration, must serve to diminish the prejudices which at other times might have been entertained against speculations and experiments of this sort.

The late law for lowering the duties of tea, was made with the evident hazard, or rather the certain knowledge, that a great deficiency would thence arise in the amount of the duties which Government had been accustomed to receive from the article of tea; but to supply that deficiency, it was judged proper to substitute an additional duty on windows; and it was argued upon that occasion, that as the use of tea was become almost a necessary of life in this island, every family would receive benefit from the diminished duties on tea, which would compensate at least to a certain extent the additional duties paid by them on window lights.

The fystem thus adopted, whether it pass under the name of a commutation plan, or by whatever other name it may be described, has been productive of one very important benefit to Great Britain, since it has had the effect of giving a rapid and severe blow to the illicit trade of smuggling teas;— a trade which, while it drained the country of a great share of its wealth, thus transferred to foreign smugglers, served also as an encouragement to these foreigners to suck the vitals of this country, by other articles of illicit trade, the basis or best ingredient of which was the article of teas, a commodity of great value, but of small bulk.

At the fame time, the community at large has derived a real benefit from the diminution upon the price of teas of all descriptions. Without entering into a minute disquisition, whether the benefits accruing to families or to individuals, from the diminished prices of tea, have, upon an average, been commenfurate with the additional burthen from the tax upon windows, it is sufficient to say, that in the classes of those who have been subjected to the additional tax on windows, there will be found very few families in the kingdom who have not found some benefit at least from the diminished prices of tea, excepting those who, before passing that act, consumed only the tea which was fold, without paying any part of the duties justly due to the Public,

and to that class of consumers, in this question, there is little or no attention due.

What has happened in the consequences of this commutation all respecting tea, will serve as the best illustration in what is now proposed with regard to salt.

In the commutation of the duties upon falt, as in that of the duties upon tea, one great object will be the suppression of smuggling, and the proposed commutation respecting salt will enjoy some advantages over that which related to tea in the following respects:

In the first place, it is to be remembered, that in the experiment about the tea, where the duties were not abolished but only lowered, some doubts were on that account entertained, whether the measure would be effectual for the suppression of the smuggling of tea; but there can be no doubt of the suppression of the suppression of the smuggling trade in salt, if the plan proposed is adopted, as that plan goes to the total abolition of the duties on salt.

2dly, The commutation law respecting tea could not produce any saving to the Public in the mode of collecting the duties, as the same establishment of custom-house and other officers was necessary for collecting the lowered

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duties, as what were required for the higher duties. But where the plan is to abolish all duties on falt, an evident and certain saving will arise to the Public, by rendering the prefent extensive establishment for the collection and management of the salt revenues unnecessary.

3dly, In the substitution of the additional tax on window lights for supplying the deficiencies arising from the diminished duties on tea, it was assumed as a principle, that tea was now so generally used in this island, as to have become almost a necessary of life.

One of the great objections, however, which has been been made against that tax is, that it falls unequally; that the use of tea is not so general over the kingdom as was pretended, and that a great number of the subjects are made liable to the new tax on windows, without receiving any benefit at all from the diminished duties on tea.

What is now proposed with regard to the commutation of the salt duties will be totally free from these objections; for it cannot be denied that salt is a necessary of life, and that in a greater or lesser degree it is consumed by every family, and every individual in the kingdom. Therefore, when the price

of falt is lowered by the abolition of the duties, and also by the encreased numbers of falt works, and the competition amongst them, which will be a consequence of that measure, there can be no room for dispute that every family and every individual in the kingdom will receive benefit in proportion to the quantity consumed by him.

For the establishing therefore a commutation tax for salt, founded on just and solid principles, there seem to be only two things requisite.—The first is, that an estimate should be made with as much accuracy as possible of the quantity of salt consumed upon an average by every family or every individual in the kingdom, and that being ascertained, it will then be self-evident how much each family or individual will gain at the same rate of consumption from the abolition of the duties on salt, which at present constitute so material a part of the price of that commodity.

The second requisite is, that for compenfating to the public revenue the desiciency arising from the abolition of the duties on falt, some other tax should be substituted, which may, with certainty, produce to the public revenue a sum fully equal to the produce

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of the falt duties, and at the same time may be so equitably distributed amongst the different classes of the subjects of this island, as to correspond to the benefits which they will derive from the abolition of the duties upon salt.

For attaining the object of the first branch of the enquiries above fuggefted, it will be necessary to draw our information from France; because it is the country where every thing relating to the confumption of falt, and the revenue thence arifing to the Public, has been investigated with the greatest precision; there; the gabelle, or the duties on falt, form a most essential part of the revenue; and as that mode of taxation has been longer eftablished in France than in any other part of Europe, having been adopted in that country ever fince the year 1342, fo the attention and experience of ages have brought that branch of revenue in France to a science, founded on more accurate calculations than in any other country.

Every person therefore who wishes to acquire just ideas and information with regard to the circumstances attending a tax upon salt; the extent and consequences of a revenue derived from that source; and the proportions

portions of that tax paid by each family or individual of the community, will be most likely to attain his object, by perusing the works of the best French authors on these

subjects.

There are evident reasons, why the calculations on these subjects, made by wellinformed persons in France, must be more accurate than any fimilar calculations in Great Britain. For in most parts of France, the king has an exclusive right of supplying the inhabitants of the country with that necessary of life; therefore, the books kept by the revenue officers, and the various cheques upon that branch, afford an accurate knowledge of the quantity of falt confumed. by each province; and as it has been a very meritorious object of attention in the French government to acquire an accurate knowledge of the population of France, fo the numbers of inhabitants in each province have been ascertained with more precision than in Great Britain, or any other European state; and from this knowledge of the number of inhabitants, and of the quantity of falt confumed in each province, it has been more practicable in that country, than in any other, to make an average estimate of the quantity of falt confumed by each individual in the different

different provinces, as well as of the general confumption of the whole kingdom.

It appears from the Compte rendû au roi, par M. Necker, directeur général de finances, in the month of January 1781, that the produce of the duties on falt, over the kingdom of France, yielded at that time the net Sum of 54 millions of livres French, which is equal to 2,362,500 l. sterling.

In a later publication of the same respectable Author, entitled, "Del' Administration des "Finances de la France," published in the year 1784, he mentions, that at that time the king received at least 60 millions of livres from the gabelle, or the revenue on salt, comprehending therein a late additional duty on that article since the Year 1781; of which sum he remarks, that 40 millions and upwards was paid from the provinces of the grandes gabelles, which he reckoned equal to about one-third of the kingdom of France.

Sixty millions of French livres, is two millions fix bundred and twenty-five thousand pounds sterling money;—this is a prodigious revenue raised upon one article of consumption.—Mr. Necker acknowledges, that the gabelle is one of the most productive sources of revenue that is known in France—At the

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fame time he has, with great good sense and humanity, pointed out the severities, hard-ships, and inconveniencies, which attend this mode of levying money from the subjects.

In his Compte Rendû, addressed to the king of France, he expresses himself thus: "Un "cri universel s'éleve, pour ainsi dire, contre "cet impôt, en même temps, qu'il est un des "plus considérables revenus de votre roy-"aume.

"Il sussit de jetter les yeux sur la carte des gabelles, pour concevoir rapidement pourquoi cet impôt dans son état actuel, présente des inconvéniens, et pourquoi, dans quelques parties du royaume, on doit l'avoir en horreur."

From the whole tenor of Mr. Necker's writings on the subject of the gabelle, it is easy to perceive, that the bias of his opinion and inclinations would have led him to recommend to his majesty the total abolition of the gabelle, or the revenue from salt, were it not on account of the difficulty of finding any commutation tax sufficient to replace to the public revenue so very large a sum as that which in France arises from the salt.

After having stated to his majesty the hardships and inequalities which now exist from that tax, he expresses himself thus:

"Il n'y auroit, Sire, que deux moyens de remedier aux inconvéniens dont je viens de rendre compte à votre majesté—L'abolition de tout impôt sur la gabelle, en le remplaçant par quelque autre: ou une modification salutaire de ce même impôt.

"Le remplacement paroît difficile, quand on observe que cet impôt procure actuellement à votre majesté un revenu net de cinquante quatre millions, &c.

"Je crois donc, que si l'on considère l'é"tendue actuelle des impôts, et en même
"temps les besoins extraordinaires aux"quels une grande puissance est exposée,
"on ne pensera pas, qu'il convienne à votre
"majesté de supprimer, en entier, la gabelle
"pour ajouter aux autres impôts un poids
"immense de 54 millions."

To the same purpose Mr. Necker expresses himself in his last publication, that of the year 1784:

"On ajouteroit peut être qu'il faut encore "se proposer d'éteindre absolument l'impôt des gabelles. J'en conviendrai facilement; "mais " mais j'ai déjà montré que c'étoit à des pro-" jets proportionnés aux circonstances, et aux " besoins de l'etat, qu'il falloit necessairement " se borner, si l'on vouloit indiquer des " idées susceptibles d'exécution."

These extracts from the writings of a very able and respectable minister of the sinances in France, clearly indicate his sentiments about the abolition of the salt duties, and that he was restrained only by the difficulty of replacing such an immense revenue as that which arose from these duties; hence it may fairly be argued, that if the produce of the salt revenue in France, instead of being near three millions sterling, had been only between three and sour hundred thousand pounds, as in England, the French minister of sinance would have had no hesitation in abolishing that tax entirely, and substituting another in its place.

This inference will perhaps be denied by those who suppose that the grievance in this matter in France arises solely from the great extent of the revenue, drawn from the article of salt, and who may therefore, with some appearance of reason maintain, that if the produce of that revenue had been a moderate, instead of an exorbitant sum, neither Mr.

Necker, nor any other minister of finance, would, in that case, have entertained a thought of abolishing the salt duties, or of substituting other duties in their place.

But the passages which have been literally copied from Mr. Necker's writings, clearly shew, that the largeness of the revenue, arising from the duties on salt, and the difficulty of supplying these by a commutation tax, were the principal, if not the only reasons against his trying that experiment. This amounts to a declaration, that his opinion would have been for abolishing the salt duties altogether, and for substituting others in their place, if the revenue from salt had been much smaller than it is.

This is further confirmed by other passages in Mr. Necker's writings, for he admits the objections to the principle of the salt tax in various respects.

rst, That the revenue from falt cannot be made effectual, without incurring great charges in the expences of collection and management, and in supporting an establishment of thousands of persons employed for guarding against the various frauds practised for

for evading the payment of the king's duties.

of France, particularly in the Pays de grandes gabelles, oppressive, from raising to such a height the price of this necessary of life, and that the oppression is the more felt, from the inequality of their situation, compared with that of the inhabitants of other provinces, where the duties upon salt are more moderate.

3dly, That these duties on falt have given rise to a great deal of illicit trade in the smuggling of that commodity, from the provinces where it is cheap, to those where it is dearer, and by that means both defrauding the revenue, and corrupting the morals of the people.

On the subject of this last article Mr. Necker has stated, that every year, on an average, 1100 horses, and about 50 carts or waggons, are seized, either on the high roads or in the passages from one province to another, while employed in the contraband trade of salt. He surther states, that the number of persons annually detected and seized on the high roads and passages, while

fo employed amounts to above 10,000 perfons, men, women, and children; that the number of men fent annually to the gallies for the contraband trade of falt and tobacco exceeds 300; that the constant and usual number of persons in prison for these offences, is from 1700 to 1800; and that the smuggling of salt occasions annually, upon an average, 3700 seizures in the houses of persons guilty of that offence.

That one of Mr. Necker's principal objections to the gabelle was founded on the encouragement it gave to the fmuggling trade, and on his opinion of the train of pernicious consequences thence arising, is evident from one part of his Address to the King of France in the Compte Rendu, where he expresses himself in strong and pathetic terms, such as deserve to be recorded:

"Des milliers d'hommes sans cesse attirés par l'appât d'un gain facile, se livrent con"tinuellement à un commerce contraire aux loix: l'agriculture est abandonnée, pour suivre une carrière qui promet de plus grands & de plus prompts avantages, les enfans se forment de bonne heure, & sous enfans se forment de bonne heure, & sous devoirs, & il se prepare ainsi par le seul "effêt,

"effêt d'une combinaison siscale, une géné"ration d'hommes dépravés: on ne sauroit
"évaluer le mal qui dérive de cette école
"d'immoralité; le peuple, cette classe nom"breuse de vos sujets, qui par leur peu de
"fortune, sont dénués des secours de l'edu"cation, ne sont contenus dans le devoir, que
"par des ressorts simples, & qui tiennent à
"la religion; & du moment qu'ils les ont
"rompus, on ne sait, où peut les conduire
"l'intérêt, ou l'occasion."

It is a matter of interesting curiosity, and perhaps of real utility likewise, in questions of revenue, and on political subjects, to trace the sentiments of a person so eminent, and so able a financier; but the more immediate view with which the Author had recourse to the writings of Mr. Necker, remains now to be stated.

It appears that Mr. Necker, while at the head of the finances, had bestowed infinite pains for enabling himself to form a just estimate of the population of France in all its different provinces, and of the quantity of taxes payable by each province, and even by each individual subject upon an average. The object of his researches was laudable, and his writings on these subjects, afford, perhaps,

perhaps, the best materials that are any where to be met with.

In his last publication of the year 1784 he has divided the kingdom of France into six great divisions, corresponding to the different rates of the gabelle, or falt tax, which take place in these different parts of France. Then he shews the number of inhabitants in each division, the quantity of salt consumed by them, the price of salt in each district, and the average quantity consumed by each individual, reckoning at a certain rate per head for persons of either sex and of all ages.

The whole of these estimates, so full of useful information, have been drawn up with great clearness and precision; and Mr. Necker has accompanied that information with a good deal of detail, shewing the grounds on which his calculations were formed. The following short Abstract, composed from the materials afforded by Mr. Necker, may serve, however, to give, at one view, a general idea of the result of his researches, in so far as relates to the population of France, and the consumption of salt.

## ABSTRACT, Bewing the Refult of Mr. NECKER's Investigations relating to the Salt Duties in France.

Quantity of quintals Price in each of the of falt confumed in quintal of falt.	760,000 62 Livres.	640,000 33 L. 10 Sous.	275,000 21 L. 10 Sous.	830,000 from 6 to 12 Livres.	830,000 from 2 to 9 Livres.	· 115,000 16 Livres.	3,450,000
Number of O Inhabitants. of	8,300,000	4,600,000	1,960,000	4,625,000	4,730,000	585,000	24,800,000 3
Divisions of France.	Les Provinces de Grandes Gabelles 8,300,000	Les Provinces de Petites Gabelles 4,600,000	Les Provinces de Salines	Les Provinces Rédimées -	Les Provinces Franches	Les Pays de Quart Bouillion -	

N. B. A quintal of falt is equal to 100 pounds weight French, which is equal to 108 pounds English weight.

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Mr. Necker, at the same time, has given the average quantity of salt consumed by each individual, comprehending men, women, and children in each of the six divisions above mentioned; from which it appears, as might naturally be expected, that where the salt is dearest, there the quantity consumed by each individual is the smallest; and that the largest quantities are in general consumed where the price is lowest. Thus,

Divisions as before.		Average con- fumption by each person.
Les Provinces de Grandes Gabelles }	62 Livres.	9 tlb.
Les Prov. de petites Ga-	33 10 Sous	113 lb.
Les Prov. de Salines	21 10 Sous.	14 lb.
Les Prov. Redimées -	from 6 to 12 Liv	7. 18 lb.
Les Prov. Franches	from 2 to 9 Liv	. 18lb.
Le Pays de Quart Bouillion	- 16 Livres.	19½ lb.

These materials, collected with so much much care by one who had so good opportunities of knowledge, must assist us greatly in forming an estimate of the quantity of salt that may be allotted for the consumption of each individual in England.

It appears that in some parts of France, where the price of salt was at a moderate rate, the allowance to each individual was 18 pounds of salt; and Mr. Necker observes,

that,

that, in a considerable part of Normandy, which composes the Pays de Quart Bouillion, the distribution of the salt in the greatest part of the parishes there, was made at the rate of 25 pounds weight of salt to every person above the age of eight years; but, from estimating the total number of inhabitants in that part of Normandy, and the total quantity of salt sold there, he assumed 19½ pounds weight salt, as the average consumption per head of persons of all ages in the Pays de Quart Bouillion.

From all these premises it is reasonable to infer, that as the price of salt in Great Britain is every where lower than in France; and as there is reason also to believe, that the English use more animal food, and consequently consume more salt than the French, it may be reckoned a fair estimate, to allot for the consumption of each individual in England 25 English pounds weight of salt, which is little more than 23 French pounds weight.

The calculation then adapted to England will stand thus:

Supposing only six millions of inhabitants, men, women, and children, in England and Wales, and allotting 25 pounds of salt to each individual, the total quantity consumed would be 150 millions pounds weight of salt, which,

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at 56 pounds per bushel, amounts to 2,678,571 bushels.

The amount of the old duties upon falt confumed in England was 3 s. 4 d. per bushel, to which there was added, in the year 1780, one additional duty of ten pence, and in the year 1782, another additional duty of ten pence per bushel; making thus, in all, the present duties on falt in England, five shillings per bushel. Therefore the amount of the king's duties on the above quantity of 2,678,571 bushels, should be 669,642 l. 15s. sterling.

If these premises are well founded, the salt duties, at present established in England, ought to produce to the public revenue the above sum, deducting from it only the expences of collection and management.

It has already been shewn, that according to the report of the commissioners of accounts, the gross produce of the salt duties to the public revenue for the year 1776, was only

£ 272,624 2 9

From which deducting the charges of management that year, - 26,410

26,410 15 7

There remained of net produce to the Public, £ 246,213 7 2

It has also been noticed, that, from an account given in to the House of Commons, in February 1785, the amount of the net produce of the salt duties, from Michaelmas 1783 to Michaelmas 1784, including the additional duties imposed in the years 1780 and 1782, was 332,735l. 16s. 8d. sterling.

But according to the estimate which has now been made of an average allowance at 25 pounds of salt to each individual in England and Wales, the salt-duties, if collected without any frauds on the revenue, ought to produce - £669,642 15 0

Deduct charges of management, supposed the same as in 1776 - -

26,410 15 7

Remains fum which the falt-duties, at the present rate, ought to have produced - - -

643,231 19 5

Sum which they actually have produced, from Michaelmas 1783 to Michaelmas 1784

332,735 16 8

Difference, or deficiency £310,496 2 9

Thus it appears, that the sum actually produced from the duties on falt in this country, is deficient to the amount of above three hundred thousand pounds sterling of the sum which these duties ought to produce, if there were no smuggling, and no fraud upon the revenue in this article.

This material deficiency must, in some degree, be ascribed to the great difficulty of making a salt-tax effectual and productive to its just amount; for besides the prejudice which the revenue suffers from the enormous height to which the smuggling of salt from Ireland and other countries has been carried, it is not easy to prevent many abuses even in the collection and management of the salt-duties, as well as in the claims brought forward for bounties, drawbacks, &c.

Where a tax, from the nature of it, requires great numbers of persons to be employed for guarding against frauds and abuses, and where there exist so many interested motives for evading the vigilance and attention of these officers in a branch of revenue of itself sufficiently complicated, it can never be expected that taxes of this fort will bear the same proportion to their just value, as taxes of a more simple construction.

In the preceding estimates, neither the numbers of inhabitants in Scotland, nor the quantity of salt consumed there, have been brought into the calculation, because the report of the Commissioners of Accounts concerning the salt produce for the year 1776, and the account given to the House of Commons of the salt-produce from Michaelmas 1783 to Michaelmas 1784, related only to England.

But it may be assumed as a fact, that the quantity of salt smuggled from Ireland to Scotland, and consumed by the inhabitants there, without paying any duties, is not less in proportion than the quantity of salt smuggled into England without paying duties. The great facility of conveying salt from the Irish to the Scots coast, situated so near each other, serves greatly to promote that illicit trade.

With regard to the whole of the preceding estimates, relating to the quantities of salt confumed either in France or in England, it is to be observed, that they do not comprehend either the quantities of salt destined for the fisheries, nor the salt exported to foreign countries, as there is no duty in either France or

England levied from falt falling under those descriptions.

But the average estimate of 25 pounds of salt to each person in England is understood to comprehend the salt used in bread; and this is a more considerable article than most people are aware of; for, according to the information received from various bakers applied to on this subject, the quantity of salt generally used by them in the baking of bread, is one pound of salt to each bushel of stour, consisting of 56 lb. weight; and therefore allowing only 1½ lb. of slour per day to each individual, the proportion of salt so consumed annually, upon 456 lb. of slour made into bread, would be 8lb. of salt by each individual in his consumption of bread.

The estimate of 25 lb. of salt is meant also to comprehend the salt used for salting butter, meat, and sish for internal consumption, which is subject to duty; and it is also meant to comprehend that portion of salt which is made use of in various articles of manufactures; because, in fact, while the duty on salt remains, each individual, or the subjects in general, by their consumption of those articles of manufacture, where salt is an ingredient,

gredient, pay duty for the falt so employed, as well as for the salt consumed by them in articles of food.

When all these particulars are taken into consideration, it will probably be found, that the allowance of 25 pounds English, or 23 pounds French, for the average consumption of each individual in England in the article of salt, is not an immoderate allowance; neither have the numbers of inhabitants in England and Wales been taken at the highest rates of estimation of the population of these countries; if, therefore, the sacts and foundations of the preceding calculations are right, there can be no error in the conclusions which have been drawn from them.

## COMMUTATION TAX.

It now remains to consider what may be the most proper commutation tax for supplying the deficiencies of the public revenue, which would arise from the abolition of the duty on salt.

On this subject it must be confessed, that in countries where, from the exigencies of the state, all sources of taxation have been so much much ransacked as in Great Britain and France, it is much more easy to point out, and to render palpable, the hardships and inconveniencies of any specific tax, than to suggest another tax for replacing it, free from the same or similar objections, or at least from objections which, though of a different nature, might not, by some, be deemed of equal weight with those attending the tax proposed to be suppressed.

All that can be hoped for in matters of this fort is, the choice of a tax liable to the fewest objections; and such as, upon a fair investigation of impartial men, will be found less burthensome to the subjects, and more beneficial to the State, than the tax in the room of which it is meant to be substituted.

In the application of this rule to the present subject, there are some requisites which ought to attend any commutation tax to be proposed for replacing the duties on falt.

It ought, in the first place, to be a tax which, as nearly as possible, would be equally extensive with that meant to be abolished, embracing all the same classes in the community who were liable in payment of the first tax, and affecting them nearly in the same propor-

proportions, according to their different ranks and circumstances.

Secondly, It ought to be a tax attended with less charges of collection and management, and less liable to frauds and abuses, by the temptations to illicit trade.

Those who are intrusted with the administration of the sinances of this country, must, from their situation, and from various channels of information open to them, be presumed best qualified to discover a commutation tax corresponding to these requisites; but there can be no impropriety, or presumption, in an individual submitting to the consideration of ministers, or of the Public at large, such ideas, as, from his more limited sources of information, may have occurred to him on the subject, when his motives for doing so are founded on a sincere desire to take even the chance of suggesting any thing that may be of utility to the Public.

With this apology for the following suggestions, the Author will now beg leave to state his opinion: that, after weighing the objections to additional taxes on articles of consumption already severely taxed, and the objections also to increasing the taxes

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upon land, windows, fervants, horses, &c. it has appeared to him, that the revival of a tax, formerly known in this country, during great part of the reign of Charles the Second, and down to the time of king William, the tax upon hearths would, in many respects, be well calculated to supply the place of a tax so universally diffused as that upon salt.

A tax upon bearths would certainly be qualified to answer the most material of the requisites before mentioned; for no person could be subjected to this tax upon bearths, who had not been a contributor, or liable to the tax on salt; and, at the same time, sew of those who had been liable to the duties on salt, would escape the duty on hearths. In this country, a hearth to a house may be considered to be as much a necessary of life as the use of salt; therefore a a tax on hearths, like that on salt, would extend to all the classes of the community; and this is a material consideration for making a tax productive.

At the same time, it would not bear harder on the poorest classes of the people than the tax on salt; nay, not so much so, for there are no exceptions in favour of any classes of people with regard to the duties on salt, or the the price of that commodity; but, in the hearth tax, while practifed in England, and as at present in force in Ireland, there are exemptions from payment of that tax, in favour of the poorer sort of a certain description.

In the falt tax, the duties paid bore some proportion to the rank and circumstances of the heads of families and individuals, who contributed to that tax; since the consumption of salt must have been in proportion to the nature and extent of their establishments. In the same manner, when the proprietors or possessor houses are taxed, according to the number of hearths in the house occupied by them, this, in general, will be found to bear the same fort of proportion to rank and circumstances, as the consumption of salt in the other case; at least, it will not be easy to find any criterion more similar and corresponding.

A tax on hearths would certainly be well qualified to answer the other requisites before mentioned; for the charges of collection and management of a tax so easily levied and checked, must be greatly inserior to the charges attending the collection and management of the complicated business of the salt duties, especially as the same persons who collect

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the duties on windows, might, without much additional trouble or expence, collect the duties upon hearths.

And, above all, it would enjoy this material advantage over the falt duties, that it would be totally free from the objection of nourishing illicit trade, to the prejudice of the revenue and the fair trader. The fact of the number of hearths in any one, or in every house in the kingdom, is a piece of knowledge eafily obtained, and when attained, requires little vigilance and attention in the preservation of it. Let these conveniencies and advantages be compared with the various opportunities of defrauding the revenue in the falt duties, and the constant vigilance requifite on the parts of hundreds of falt officers for checking or diminishing these frauds, the refult of the comparison must turn out highly in favour of the hearth tax, which is fo fimple in its construction, that it would almost execute itself, and be totally free from the objection of frauds or impositions upon the revenue.

The next points to be considered, are, the mode of establishing the duty on hearths, the rates of the duty, and the probabilities of the productiveness of the tax.

With regard to these particulars, there is an opportunity of deriving benefit from past experience, instead of resting entirely on speculations.

Blackstone, in his Commentaries, observes, that as early as the Conquest, mention is made in Doomsday Book of sumage or suage, vulgarly called smoke farthings, which were paid by custom to the king for every chimney in the house; and that Edward the Black Prince (soon after his successes in France), in imitation of the English custom, imposed a tax of a florin upon every hearth in his French dominions.

The same Author adds, "But the first par"liamentary establishment of it in England
was by statute 13 & 14 Car. II. c. 10.
whereby an hereditary revenue of two shilstates ship lings for every hearth in all houses paying
to church and poor, was granted to the king
for ever; and by subsequent statutes, for
the more regular assessment of this tax,
the constable and two other substantial inshabitants of the parish to be appointed
yearly (or the surveyors appointed by the
crown, together with such constable or
other public officer), were once in every
year empowered to view the inside of every
house in the parish."

It is generally known that the tax of hearth-money was abolished soon after the Revolution; at which period jealousies were entertained of the mode of levying this tax, as not perfectly consistent with liberty. The account which Blackstone gives of the statute in king William's time, by which hearth-money was abolished, and of the declarations or professions in that statute, with his own reslections upon them, are deserving of attention, and will not be thought foreign to the present subject of enquiry.

He tells us, that upon the revolution, by statute I W. & M. c. 10. Hearth-money was declared to be "Not only a great oppression "to the poorer sort, but a badge of slavery "upon the whole people, exposing every man's house to be entered into, and search- ed at pleasure by persons unknown to him; and therefore to erect a lasting monu- ment of their majesties goodness in every house in the kingdom, the duty of hearth- money was taken away and abolished."

These are the words of the statute itself, but the learned and judicious Author of the Commentaries has subjoined, to this recital of the words of the statute, some restections of his own, which sufficiently convey his sentiments

ments on the subject, while at the same time they are expressed with a certain degree of finesse. His words (referring to the above declarations in the statute) are, "this monument " of goodness remains among us to this day, " but the prospect of it was somewhat darken-" ed, when in fix years afterwards, by statute "7 W. 3. c. 18. a tax was laid upon all "houses (except cottages) of two shillings, " now advanced to three shillings per house, " and a tax also upon all windows, if they " exceeded nine in fuch house; which rates " have been from time to time varied, being " now extended to all windows exceeding " fix, and power is given to furveyors, ap-" pointed by the crown, to inspect the outside " of houses, and also to pass through any "house, two days in the year, into any " court or yard, to inspect the windows " there."

These just observations, made by a person of so great eminence as judge Blackstone, supply the true answers to be given to any objections that might now be raised against a hearth-tax, if these objections should be taken up on the same popular ground, which gave rise to the abolition of the hearth duty at the time of the revolution.

In matters of taxation men in general are, in modern times, more free from unreasonable prejudices than they were at former periods; and as they feel the necessity of productive taxes, they are disposed to prefer those which are least burthensome and most effectual, provided they are in reality not inconsistent with the liberties of the subject.

A late Author to whom the Public is indebted for much useful information relating to the history and progress of the public revenue of the British Empire \*, has, with his usual impartiality, taken occasion to shew his opinion, that the popular cry against the tax on hearths is ill-founded; after mentioning that the tax on hearths, established in the time of Charles II. was two shillings for every hearth in all houses paying to church and poor, he adds, "And notwithstanding " the popular objections which have been " urged against it, there is no well-founded se reason to call it either burthensome, or un-" equal, and it is still paid in Ireland without " inconvenience or complaint."

To the same Author we are indebted for an account of the produce of the hearth-tax,

John Sinclair, Efq; Member of Parliament.

both at the time of its first institution, and afterwards, at the time of the Revolution.

He has given an account of the permanent income of the crown, anno 1663, in which the produce of the hearth-money is stated at the sum of 170,603l. 12s. And in a subsequent part of the same work, there is "an "account of the principal branches of the "revenue, anno 1688, clear of all deductions," in which it appears that the hearthmoney then produced the sum of 245,000 l.

From these facts we may now be enabled to approach to the desired conclusions.

If a tax upon hearths, at the rate of two shillings per hearth in England, produced about a hundred years ago the sum of 245,000 l. sterling clear of all deductions, there is surely good reason to presume that the same tax would now produce a much more considerable sum; for it will scarcely be disputed that the number of houses and hearths now in England must be considerably greater than in the year 1688.

From the materials furnished by Mr. Sinclair it appears, that between the years 1663 and 1688, the produce of the hearth-tax increased 74,397l.; upon the whole, therefore, it may not be unreasonable to suppose that a

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hearth-tax, which, in the year 1688, produced 245,000 l. clear of all deductions from England alone, would now be qualified to produce 300,000 l. at least from the same country.

The calculations concerning the produce of the hearth-tax, as well as those employed for ascertaining what the produce of the duties on salt ought to be, and what it really has been, relate solely to South Britain; and by that means we are the better enabled to make just comparisons, and to form an estimate, how far the produce of the one tax may be well qualified to supply that of the other.

But, independent of that consideration, the Author would have found himself under the necessity of confining his calculations to England, both in what relates to the produce of the salt duties, and that of the tax on hearths; because, as to the first of these, the duties on salt are, in consequence of the articles of union, at a different rate in Scotland, from what they are in England; and being appropriated for the payment of the expence of the Courts of Justice, and other purposes, in Scotland, the Author has not been able to get any accurate account of their gross and net produce; and with regard to the

the other branch of the enquiry, the produce of a tax on hearths, the Author has had no proper data to proceed upon with respect to Scotland; for that tax, while it existed in England, did not reach Scotland, which was at that time a separate kingdom.

In pursuing, therefore, the plan of comparing the produce of the salt duties in England, with that of the duties on hearths in the same country, the comparison will stand thus:

The duties on falt, at their highest amount, in the year from Michaelmas 1783 to Michaelmas 1784, including the large additional duties imposed in the years 1780 and 1782; and after deducting charges of management, &c. produced the sum of £332,735 16 8. The duty upon hearths pro-

duced, in the year 1688, 245,000 l. and at the same rate of duty it is supposed would now produce, at least, -

300,000 0 0

Difference only

£ 32,735 16 8

This is the result of a comparison between the actual produce of the duties on salt and the produce of a duty on hearths, estimated

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as above; but if, instead of taking the actual produce of the duties on salt, we were to take the sum which the salt duties ought to have produced, the result, in that mode of estimating, would stand thus:

The falt duties in England, if collected without any frauds on the revenue, ought to produce (as stated in page 50) the sum of - - £, 643,231 19 5 Produce of the hearth-tax, at

the rate of 2 s. per hearth,

estimated at - - 300,000 0 0

Difference in this view £ 343,231 19 5

The Author will not pretend to decide whether the rule in imposing a hearth-tax, in commutation of a falt-tax, should be that of making the produce equal to what the salt-tax ought to have produced, or equal only to what the salt-tax has, at its highest amount, ever actually produced. This is a matter which, on account of the magnitude of the object, and its consequences, deserves to be well weighed by ministers, and by the representatives of the people in parliament.

The most expedient solution of this point would, perhaps, be a measure that should avoid the extremes of either branch of the alterna-

tive. Let the commutation-tax be established at such a rate as would produce to the public revenue something more than has ever yet actually arisen from the produce of the salt duties, but not to the utmost extent of what these salt duties ought to have produced.

There are various good reasons why the proposers of a commutation-tax should be intitled to take it at a rate that would produce more than the actual produce of the salt duties, whereof the value had been so much diminished, merely by frauds on the revenue.

But, on the other hand, it might be felt as a severe burthen, and excite a degree of prejudice against the proposed commutation-tax, if it were at once to be made a substitute, not only for duties which had actually been paid, but also for those which had not been paid, especially when it is considered, that the proportion of duties falling under the last description, amounts to a sum of above 300,000 l.

It must be remembered, that there are certain limits beyond which it would be inexpedient to tax any particular species of property; and as the taxes upon houses and windows have already been carried to a great extent, it might not be advisable to increase too much the load upon that species of property,

by imposing a tax upon hearths, equal to near double the amount of what the duties upon falt have ever actually produced.

In fact, it is this very circumstance of houses being so much burthened already by different taxes, which may, with the greatest appearance of reason, furnish an objection against the tax of hearth-money, and therefore it ought not to be strained to its utmost extent.

It must be admitted, that the objections against a bearth-tax would receive great additional force, if that mode of taxation were resorted to merely as a sund for raising additional supplies; but when recourse is had to it, for supplying the place only of another tax to which every description of persons was liable, and which was less productive to the public revenue, without being less burthensome to the people; these are the circumstances which will secure a favourable reception to this commutation-tax, if not pushed too great a length.

As a further inducement to this tax, it may also be proper to declare explicitly, in the act of the legislature which is to establish it, that the bearth-tax is expressly meant to be in commutation of the falt-tax intended

freed from the apprehension of being made liable for both taxes, and may have the security of that parliamentary declaration against the revival of the salt-tax, whereof the abolition had been stated to them, as their inducement for cheerfully submitting to the tax on hearths.

With regard to the precise rate of duty to be imposed on hearths, for raising a given sum, that will not be a difficult matter to ascertain, when once the extent of the sum that ought to be raised shall be settled; but as every method of aiding and alleviating that tax must be deserving of attention, the Author will now beg leave to suggest a plan for aiding the produce of the bearth-tax, which may be adopted with great utility and propriety, whenever that tax shall be established in commutation of the duties on salt.

The plan is, that certain descriptions of persons should be obliged to take out annual licences, and to pay for these licences, at such rates, as without being burthensome to them, will produce a considerable sum of money to the public revenue.

In the first place, That all manufacturers of salt, and all retailers of that commodity,

should be obliged to take out licences; and, at the same time, it would be highly proper and expedient that the manufacturers acting under these licences, should be subject to regulations for manufacturing their salt of a certain sineness and purity, which would conduce much to the establishing the character of the British made salt.

It can be no real hardship either upon manufacturers or retailers of salt, that they should be obliged to take out licences at a moderate annual expence; for when the duties on salt are abolished, they will be able to carry on their business with much smaller capitals, and will reap so many advantages from being freed from the advance of the duties, and other restrictions, to which they are now subject, that it could not be deemed unreasonable to require them to contribute something to the public revenue in the shape of licences for carrying on their business.

2dly. All the bakers in the kingdom ought to be obliged to take out annual licences, and to pay for them at a certain moderate rate, to be regulated according to the number of ovens employed by them, or fome other equitable rule of proportion.

It has already been mentioned, that a very large quantity of falt is made use of in the kingdom annually by the consumption of bread, in which salt is a necessary ingredient.

The proportion of falt employed in making bread is, according to the best information, 1lb. of salt to every bushel of slour, consisting of 56lb. and it is supposed that an allowance of 14lb. of slour made into bread, for the daily consumption of each person, upon an average, is not an extravagant allowance; hence it follows, that each person's consumption of salt in bread annually, is about 8 pounds of salt; and supposing the number of inhabitants in England to be six millions, the quantity of salt thus consumed in bread annually would be 48 millions of pounds, or 857,142 bushels of salt.

The king's duties on that quantity, at the rate of five shillings per bushel, amount to the sum of £214,285. 105.

Upon the abolition of the falt duties, the subjects either will be, or ought to be, freed from payment of any part of the preceding sum; and this would be the case, if every family baked their own bread; or if the bakers, who supply them with bread, should,

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in consequence of the abolition of the salt duties, lower the price of bread exactly in proportion to the diminished price of the salt employed by them in the baking of bread.

But as it would be a difficult matter to lower the price of bread exactly in that proportion, it may be taken for granted, that the bakers will be very confiderable gainers by the abolition of the duties on falt, without lowering the price of bread in proportion, and therefore it would be highly reasonable, that all the bakers in the kingdom should contribute something to the public revenue in the shape of annual licences, so as to diminish the advantage they would gain of the Public by the abolition of the salt duties, and to come in aid of the commutation-tax upon hearths.

For the purpose of giving some notion how much the bakers of bread would save or gain by the abolition of the salt duties, it may be supposed, that the bread consumed by one half of the kingdom, at least, is supplied by bakers; and if so, the saving to the bakers all over England, in the article of salt, would amount to one half of the sum of £214,285. 10s. above-mentioned: that is to say,

fay, upon the supposition of the bakers having hitherto paid duties for all the salt used by them, they would gain, by the abolition of these duties, to the extent of the sum of £107,142. 155. annually.

From such a saving, they could well afford to pay something in the shape of annual licences, though it is not proposed that they should contribute a sum nearly equal to that amount.

3dly. As the different manufactures, where falt is employed as a necessary ingredient, will all be benefited by the abolition of the duties on falt, it may be reasonable, that this plan of licences, at moderate rates, should be extended to some of these manufactures, for reasons similar to those given in the case of the bakers.

The result upon the whole would be, that from the manufacturers and retailers of salt, from the bakers of bread, and from certain of the manufactures, where salt is employed as a necessary ingredient, a considerable sum might be raised by annual licences, without injuring any of the persons alluded to under these descriptions; on the contrary, still leaving them in possession of considerable advantages from the abolition of the salt duties.

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And the sum thus raised by annual licences would serve materially to aid the hearth tax, and to alleviate the burthen of that tax upon the subjects in general.

## CONCLUSION.

In the course of the preceding sheets, the Author has endeavoured to excite the public attention to various matters connected with the manufacture, and trade of salt, which he flatters himself must, on a fair discussion, be deemed objects of great national importance.

He has stated the advantages of the use of the valuable raw material of rock salt, and the disadvantages to which most parts of England, and the whole of Scotland, are subjected, from being denied the benefit of that raw material; while, at the same time, it is allowed to be exported to foreign countries, and to Ireland, duty free.

He has also pointed out the great importance to this country in many respects of improvements in the manufacture of salt; and having applied his mind particularly to the study of improvements in the resining of salt,

he has communicated to the Public the result of his labours and experiments on that subject.—This he has done, fully and freely, without reserve or condition of recompence of any sort, though frequently advised, by particular friends, to secure to himself, by patent, the exclusive benefit of his invention, or to render it public only on the condition of obtaining a parliamentary reward.

He flatters himself that the communication he has thus given to the Public, will enable those salt manufacturers, who shall strictly follow the rules prescribed, to refine at a moderate expense the British salt to a degree of purity hitherto unknown in this island, and, by that means, give it a superiority over the salt of any other country, not only for internal consumption, but even for the use of the sisheries, and for exportation to foreign countries.

In the further profecution of these objects, he has ventured to propose a plan for abolishing the present duties and restrictions on the manufacture of salt, and for substituting other duties, less burthensome to the subjects, more beneficial to the revenue, and better qualified to promote the trade of Great Britain.

In the discussion of the plan thus proposed, he hopes that the reasons already given in support of that plan, are such as may be sufficient to recommend it, from the comparison that has been drawn between the advantages or disadvantages attending the tax on salt, and that proposed to be substituted in its place, the tax on hearths.

It now remains only to bring under view fome additional good confequences, which must result from these plans, if, upon due consideration, it shall be deemed proper and expedient to adopt them.

In the first place, All the frauds which have been practifed against the interests of the revenue, and against those of the fair trader in falt, by the great quantities of that commodity smuggled from Ireland and other countries, would instantly cease, as there could be no further inducement for carrying on that illicit trade; and this consequence, whether confidered in a political, financial, or moral view, would, in fact, be a real advantage both to Great Britain and Ireland; for the gains that may occasionally be acquired by some individuals from the practice of smuggling, feldom prove of any real benefit to the country to which they belong; on the contrary, thofe

those very subjects, whose lives are spent in the pursuits of illicit trade, and in all the pernicious consequences of a depraved course of life, would be much more useful subjects to the state to which they belong, if employed in agriculture, or in the habits of honest industry.

2dly, The smuggling trade of salt, which takes place from Ireland to Great Britain, may, in fact, be called a regular established trade; and while it continues, it will not only be mischievous in itself, but will serve as a basis and encouragement for other branches of smuggling between the two countries; for it will afford daily opportunities of transporting goods from the one country to the other for a trisling freight, and this must prove highly pernicious to any plan of checking the practice of smuggling between these two countries.

3dly, While the duties on falt continue in Great Britain, the smuggling of that commodity from Ireland will certainly continue; the employment of additional numbers of revenue officers, or of additional numbers of cutters for guarding such extensive coasts, would not be sufficient to prevent it; and these expedients, besides being subject to the objection

tion of occasioning additional expence to the revenue, are subject to this further objection, that the vigilance employed in watching the proceedings of the inhabitants of the one country or the other, joined with the variety of the offences, and of disputed cases upon these offences, would most probably give rise to many jealousies and heart-burnings; all these evils will be avoided by the very simple operation of abolishing the duties on falt, which at once cuts up, by the roots, the smuggling trade from Ireland in the article of falt, and in a manner, of which Ireland cannot possibly complain.

Athly, It would place the inhabitants of Great Britain and Ireland, upon an equal footing, with regard to those manufactures where salt is employed as a necessary ingredient; and, consequently, would remove part of the objections which have lately been made by some of the British manufacturers against the arrangements with Ireland, who have expressed apprehensions on this ground, that the inferior duties paid on salt in Ireland would enable the Irish to undersel the English in those manufactures, where salt was a necessary ingredient; this in particular is the language of the glove manufacturers of Worcester, who,

who, at a meeting on the 29th of March last, declared their opposition to the Irish resolutions, and they particularly specify the advantage which the Irish enjoyed in the manufacture of dressing white leather, by being free from the duty on falt, "while, "in England, the article of salt is used in large "quantities in the dressing of white leather, the principal part of the value of which is the duty paid thereon."

and the free use of rock-salt universally permitted in Great Britain, there is reason to think, that the inhabitants of Ireland, instead of prosecuting the trade of smuggling, would become considerable customers to Great Britain in the article of refined salt, as they would find it more to their advantage to purchase refined salt in Britain, than to subject themselves to an extra-expense of transporting from Great Britain to Ireland, both the raw material of rock-salt, and the coals for refining it in that country.

6thly, The abolition of the salt duties would give rise to the erecting of many new salt-works in Great Britain, and at places most convenient for the fisheries; it would give rise also to an emulation amongst the different

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manufacturers of falt, for improving the fineness and purity of that commodity, as the superior quality must then be the principal circumstance which would give one manufacturer an advantage over another.

7thly, As the law stands at present, there are a great many requifites to be fatisfied, and much time is lost before a person can entitle himself to the drawbacks and bounties relating to falt; and these delays and obstructions ferve to create difficulties to the persons employed in the fisheries, and in the curing of fish; they occasion difficulties and delays, likewise in the exporting of falt to foreign countries; all these inconveniencies would be at an end by the abolition of duties on falt, which, of course, would put an end to drawbacks and bounties on that article, and to all the frauds and perjuries, which are too often practifed for obtaining these drawbacks and bounties.

8thly, The facility of employing falt for every useful purpose, without restriction or duties, would be productive of much real advantage to the country, by the unrestrained use of it, both for the purposes of agriculture and of manufactures. Nothing but the duties on salt, and the consequent high price of that article.

article, have prevented it from being much reforted to as an excellent manure for the improvement of land, and for mixing it with the food
given to cattle. And, with respect to manufactures, the article of salt would not only
be more freely employed in these manufactures, where, notwithstanding the height of
the duty, it has hitherto been made use of as
a necessary ingredient; but salt, when free
from duty, would most probably be employed with advantage in various other
branches of manufacture.

One material instance of these probable confequences, will ferve to shew the attention that is due to them: Several hundred thousand pounds are paid annually by Great Britain to foreign countries for the article of barilla alone. Attempts have been made in this country to fave that annual drain of money, by substituting fossile alkali or barilla of home manufacture; but, for the encouragement of a manufacture of that fort in its infancy, it was judged necessary that the falt made use of in the course of the process should be exempted from duty; and, for this purpose, applications have at different times been made, both to the Treasury and to Parliament, but without effect; because it was

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thought that such partial exemptions from the salt duty, might open the door for many frauds upon that branch of revenue. One of the good consequences, therefore, which would result from the abolition of all duties on salt, would be the encouragement it would give to the home manufacture of sossile alkali or barilla, which, on account of the low price of foreign pot and pearl ashes, and barilla, in time of peace, cannot be carried on to advantage, while subject to the present duties on salt.

Lastly, The northern countries of Europe draw the greatest part of their supplies of falt at present from the southern parts of Europe; but when the falt trade of Great Britain shall be freed from those duties and fetters which have hitherto cramped its progress; and shall also be freed from the hazards to which the fair trader is now exposed by the interference of fmugglers; when the number of falt works fhall, in consequence, be encreased; and a spirit of emulation take place amongst the falt manufacturers for excelling each other in the quality of the commodity; and particularly, when the mode fuggested for refining British salt to a degree of purity hitherto unknown shall be generally adopted;

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the certain consequence of all these improvements, must be, a great and beneficial extension of the commerce of Great Britain, by the exportation of large quantities of salt to foreign countries, and particularly to those in the northern parts of Europe.

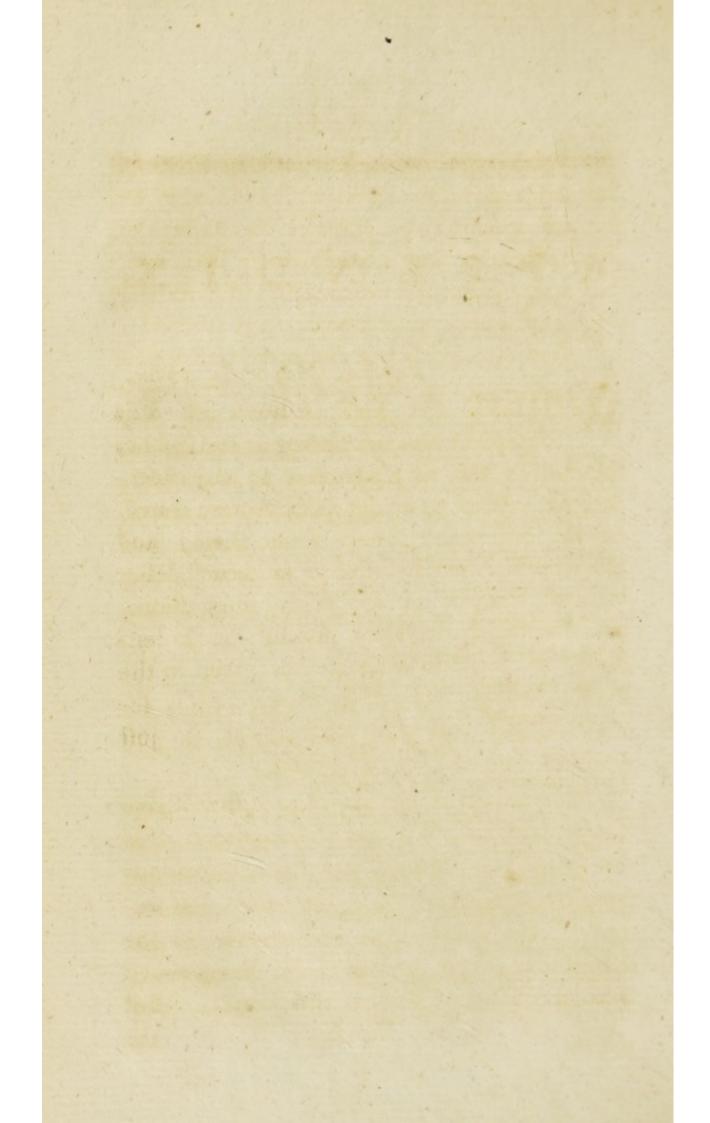
APPEN-

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## APPENDIX.

London, May 17th, 1785.

WHILST the First Edition of this Pamphlet was circulating in the Public, the Author was very attentive to any observations, either upon the facts therein stated, or the inferences drawn from them; and this attention was founded on an earnest desire to avail himself of any useful suggestions, whether their tendency should be to enforce, or to refute what he had given to the Public, being resolved to correct, in a second edition, any thing that might, on just grounds, appear to be erroneous.

Observations of an opposite nature have reached his ears. To some it has appeared, that the principles assumed, and the calculations employed for establishing the reality and extent of the frauds upon the revenue in the salt duties, have produced an exaggerated account of the amount of these frauds. But

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the more general and prevailing observation has been, that the Author has over-rated the population of France, and greatly underrated that of England; and as a material part of the calculations depended upon the justness of these computations, that the over-rating the population of France, and the under-rating the numbers in England, must have had a double effect in leading to an erroneous conclusion, by stating the frauds upon the revenue in the salt duties at a sum greatly below the extent of their real amount.

These observations, though counteracting each other from their opposite tendency, have induced the Author carefully to revise every thing he had stated in the first edition; and he will now beg leave to submit to consideration, the result of his repeated attentions to this important subject.

The suspicion of exaggeration cannot long remain with those who are willing to take the trouble of investigating this matter with accuracy and impartiality.

Instead of exaggerating, the Author, upon mature reslection, is at this moment fully persuaded, that he has considerably underrated the amount of the sums which the salt

duties in England ought to have produced, if fairly and completely collected, and consequently has under-stated the amount of the frauds upon the revenue.

In proof of this proposition, he must begin with two general observations, the truth of which will not be denied.

The ift is, That if the number of inhabitants in France has been over-rated, as is fuspected, the consequence of reducing the number of inhabitants in the different provinces of that kingdom will be, that of encreafing in the calculation the quantity of falt confumed by each individual in these provinces; because the quantity of falt confumed in each province is known with certainty, and the doubt relates only to the number of the confumers.

The second observation is, That if the number of inhabitants in England has been under-rated in the first edition of this Pamphlet, the consequence of increasing the number of inhabitants, must be that of increasing in the calculation the amount of the fums which the falt duties ought to have produced, because the calculation respecting England was formed upon an estimate of the quantity of falt used by each individual, N 2

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upon an average, and by multiplying that quantity by the number of inhabitants in England.

With respect to the number of inhabitants in France, the Author took for his guide Mr. Necker, who, from his fituation of Director General of the Finances of France, and from his well-established reputation, appeared to be the best authority that could be appealed to on this fubject. His publications declare, that he had employed much labour and industry to acquire a perfect knowledge of the number of inhabitants in each Province; and the refult of the whole, according to his statements, was, that the kingdom of France contained 24,800,000 inhabitants, and that the consumption of the several provinces, was 3,450,000 quintals of falt.

Many persons who have read this account given by Mr. Necker of the population of France, are disposed to doubt of its accuracy; and by comparing it with the accounts generally received of the population of that kingdom, are inclined to think, that in his statements the numbers have been exaggerated. This opinion is generally entertained, not from any want of reliance

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on Mr. Necker's candour and accuracy, but from a perfuation, that in the reports made to him of the population of the feveral provinces, a matter in itself extremely difficult to be ascertained with precision, there must have been error and exaggeration on the part of the persons employed to make these reports.

But at the same time it is allowed, that however much the estimate made of the population of France, may, from various causes, be supposed to be exaggerated, and liable to the suspicion of error, yet there is no reason to suspect any error with respect to the quantity of falt confumed in the feveral Provinces of France; for, as the King has, in most of the Provinces, the exclusive privilege of supplying the article of falt, and as regular books are kept, and various checks eftablished for ascertaining the produce of this capital branch of the revenue, Mr. Necker must have had in his possession complete evidence of the quantity of falt confumed in each province, and in the kingdom of France in general.

The Author, from all he has heard on this subject, is inclined to think, that the population of France may have been over-

rated; but if this supposition of error in that particular is well founded, the effect of it on the calculations in the preceding Pamphlet, must be that of supporting or increasing the averages made of the quantity of falt confumed by each individual. The diminution of the number of confumers in France would, for the reason already given, increase each individual's proportion of the total quantity confumed in that country; but it would also have the effect of supporting or increafing the Author's estimates of the average confumption of each individual in England: For, in order to attain the knowledge of what quantity of falt ought to be allotted to each individual in England upon an average, the Author was obliged to transfer his enquiries on that fubject to France in the first instance; because there the quantity of salt consumed could be learnt with much more certainty than in England; and having fixed the average quantity to each individual in the feveral provinces of France, he assumed that as a basis for his calculations, with regard to the average quantity confumed by each individual in England, making the proper allowances for the difference of circumstances in the two countries.

The next point to be confidered, is, Whether the Author, in the first Edition of this Pamphlet, has over or under-rated the population of England, and the consequences of

any error in that respect?

From a defire of avoiding the imputation of over-strained calculations, the Author was induced to estimate the population of England and Wales at the moderate rate of six millions of persons, including in that number persons of all ages; but, on a more precise and particular attention to that subject, he is now convinced, that in the estimate abovementioned he has greatly under-rated the number of inhabitants in England and Wales, and that they ought to be estimated at the rate of eight millions at least.

Without entering into the discussion of the various facts and arguments, which, to every candid enquirer, must afford a strong degree of conviction, that the computation of the inhabitants, at the above rate of eight millions, is reasonable and moderate; it may be sufficient for the present purpose to observe, that above half a century ago, and in the times of the keenest contests in Parliament, during Sir Robert Walpole's Administration, it was admitted on both sides of the House, and as-

fumed as a principle of calculation, both by ministers and their opponents, in questions relating to taxation, that the number of inhabitants in England and Wales ought to be estimated at eight millions of persons at least.

Thus, in a question which was keenly agitated in Parliament in the year 1732, relating to this very subject, the propriety or impropriety of the duties on falt \*, Sir Robert Walpole expressed himself as follows:—
"We may modestly reckon that the whole people of England amount to at least eight millions of persons, every one of whom contributes his share to this duty on falt."

The measure at that time proposed by Sir Robert Walpole for reviving the duties on salt, which, for the benefit of the people in general, and in consequence of a speech from the throne, had been abolished in the year 1730, was recommended to Parliament by the Minister, on the footing of its enabling him to relieve the landed interest to the extent of one shilling in the pound land-tax; but notwithstanding the allurement thus hung out to a powerful part of the representatives,

<sup>\*</sup> Chandler's Parliamentary Debates, vol. vii. page 186.

the revival of the falt duties was strongly opposed on public grounds, and even on the ground of the landed interest losing more by the establishment of the one tax, than they would fave by the diminution of the other; in particular it was strenuously opposed by Sir William Wyndham, Mr. Pulteney, and Mr. Dundas, then Lord Advocate for Scotland; and it is to be remarked, that though they keenly attacked Sir Robert's arguments and calculations upon that occasion in other respects, yet they seem to have admitted his calculation with regard to the population of England; Mr. Pulteney, in particular, founded part of his arguments and calculations upon the same number of eight millions of inhabitants \*.

The Author being convinced of his error in rating the population of England so low as six millions, proposes now to correct it, by adapting his calculations to eight instead of six millions of persons; and it will appear that the arguments made use of in the first Edition of the Pamphlet will from thence acquire additional force.

Upon the supposition of six millions of inhabitants only in England, and allotting

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Chandler's Parliamentary Debates, vol. vii. page 198.

25 pounds of falt to each individual for his annual consumption, the result (as stated on pages 49 and 50) was, that the salt duties at the present rate of five shillings per bushel, if collected without any frauds upon the Revenue, ought to produce £ 669,642 15 0

But reckoning the inhabitants of England at eight instead of fix millions, the account will stand thus:

Sum as above corresponding to fix millions, - £ 669,642 15 0

To be added 1-3d more, on account of the additional

two millions of inhabitants, 223,214 5 o

Sum, - £892,857 0 0

Deduct charges of management, - 26,410 15 7

Remains net, - 866,446 4 5
Sum of the net actual
produce from Michaelmas
1783 to Michaelmas 1784, 332,735 16 8

Difference or deficiency, £ 533,710 7 9

Thus it appears, that instead of estimating the amount of the frauds upon the Revenue at about 300,000 l. annually, as stated in the first Edition, it ought to have been estimated at a sum exceeding 500,000 l.; for the sum actually produced from the duties on salt salls short to that amount of what they ought to produce, if there were no smuggling and no frauds upon the Revenue in this article.

These particulars will, it is hoped, afford a satisfactory answer to the criticisms of those who have been disposed to think that the Author, in the first Edition of the preceding Pamphlet, had given an exaggerated account of the frauds upon the Revenue in the article of the salt duties.

The additional sum of 223,3141. 5s. above stated as corresponding to the additional number of two millions of inhabitants, affords ample room for correcting the effect of mistakes, if any such should be supposed to have happened in reckoning the consumption of each individual at 25 pounds of salt at an average.

For supposing the average individual confumption to be reduced from 25 pounds even to 20 pounds of salt for each person, still it would remain true, that the frauds upon the Revenue amounted to upwards of 300,000 l.

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annually, as flated in the first Edition. This will appear from the following statement, where one-fifth is deducted from the total amount of the duties, in order to correspond to the reduction of the average from 25 to 20 pounds of salt:

The fum which the falt duties ought to produce, at the rate of 25 pounds of falt for each person, and reckoning the population of England at eight millions, is, as above £. 892,827 0 stated. 178,565 8 Deduct 1-5th 714,261 12 0 Remains Deduct charges of ma-26,410 15 7 nagement Sum which the falt duties, at the reduced average, ought to produce, £. 687,850 16 5 Sum of their net actual 322,735 16 8 produce only

Difference or deficiency £. 365,114 19 9

Having thus shewn, that the frauds upon the Revenue in the articles of the salt duties in England exceed 300,000 l. annually, even even on the supposition of the average consumption of each person being reduced from twenty-five to twenty pounds of salt, the Author will now briefly state the reasons why he continues of opinion, that the allotment of twenty-five pounds is formed upon a moderate estimate, and must approach nearer the truth, than the allotment of twenty

pounds, or any inferior estimate.

In reckoning the quantity of falt confumed by each individual upon an average, the attention must not be confined merely to the quantity of falt purchased by private persons or families, and by them used daily with food, or employed for domestic purposes; but it must be further considered, that large quantities of falt are used in the formation of bread, cheese, salted butter, pickles, falted beef, pork, and other falted provisions of all kinds, including fish salted for home consumption; and therefore the inhabitants of the kingdom making use of these provisions, confume and pay duty for falt by these means, as effectually as by the daily and direct use of it with the food prepared in their families; and as the articles abovementioned are of very general and extensive confumption, the total quantity of falt fo employed

employed must be to a very great extent indeed, and a proportion of that total quantity must be allotted to each individual, for the purpose of attaining a just notion of each person's annual consumption upon an average.

Upon similar grounds, there must be added to the annual consumption of each perfon, the proportion of salt consumed in the use of those articles of manufactures where salt is employed as a necessary ingredient.

The list of articles falling under this defcription is, perhaps, greater, than most people are aware of, as will appear from the following specimen:

Salt is employed, in a greater or lesser degree, in the following manufactures:

White Leather Dreffing,—Soap,—Sal Ammoniac,—Glauber Salt,—Fossile Alkali,—Glass Manufacture,—Manufactures of Earthen-waxe, in the glazing of which considerable quantities of salt are used.

The above specimens, to which other articles might be added, may be sufficient for shewing, that, in consequence of the con-

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fumption of these manufactures, some proportion of salt should be added to the average annual consumption of each person.

In the estimates made for ascertaining the average consumption of families or individuals, it is a prevailing error, that the quantity of salt purchased and used in private families for their daily use, is the only thing considered; and this fort of inaccuracy seems likewise to have pervaded the calculations and arguments of most of the speakers on the subject of the salt duties, when that matter was contested in Parliament in Sir Robert Walpole's time; estimating the average consumption of each person, in that limited point of view, no doubt twenty-sive pounds of salt annually, would be too large an allowance.

But when we take into the account the various modes by which falt is confumed by individuals or families, it will be found, on the whole, that the allotment of twenty-five pounds of falt to each person on an average, is by no means an immoderate allowance.

If the average confumption of each individual is thus allowed to be well established; and if it is allowed that there are in England and Wales eight millions of persons, which is certainly a moderate computation, the infallible infallible consequence is, that the duties upon salt, at five shillings per bushel, ought, if fairly and completely collected, to produce about five hundred thousand pounds more than they have ever actually produced; and, of course, this deficiency must be owing to the illegal traffic of smuggling, and to the various frauds practised against the Revenue for evading a tax, which, from its nature and construction, never can be made secure against frauds of great magnitude.

In the preceding pamphlet (page 76) it was faid, that the method which the Author has communicated to the Public of purifying British-made salt, "would enable those salt "manufacturers who shall strictly follow the rules prescribed, to refine, at a moderate expense, the British salt, to a degree of purity, such as would give it a superiority over the salt of any other country, not only for internal consumption, but even for the use of the Fisheries, and for exporting ation to foreign countries."

In order to give some notion of the wide field which would thus be opened for the consumption of purified British salt, it may be proper here to mention some circumstances which

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have lately come to the Author's knowledge.

Since 'the first edition of the preceding Pamphlet was published, there has been given in to the House of Commons a Report from a Committee appointed to enquire into the State of the Pilchard Fisheries on the Coasts of Cornwall; from which Report it appears, that in the Pilchard Fishery alone there are used annually from 3 to 4000 ton of foreign salt, brought from France, Spain, Portugal, and Italy.

The foreign falt used in the curing of fish of other sorts caught on the British and Irish coasts, amounts to a very large quantity:—but the money thus sent out of the country for the purchase of foreign salt will be saved, and encouragement given to the home manufactory, when the British made salt shall be carried to that degree of perfection which it cannot sail of attaining, when the method which the Author has communicated, of purifying British salt, shall be carefully and generally pursued.

And, besides thus supplying the salt requisite for the British Fisheries, there is every reason to believe that there will be a great demand for the British salt thus purified, for

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the purpose of serving the Newfoundland fisheries. The quantity of salt there consumed is very great; and the whole, or the greatest part of it, has hitherto been supplied either from foreign countries, or from the West-Indies.

In the preceding pamphlet (pages 20, 21, and 22) some paragraphs were employed in pointing out the prospects of British-made falt becoming also an article of export trade from this kingdom to the northern nations of Europe, who draw their fupply of that article at present from Spain, Portugal, and Sardinia. But as the Author has, upon more accurate investigation, discovered some mistakes in the information he had at first received with regard to the price, expence of freight, and infurance on foreign falt imported into the northern countries of Europe, he thinks it now incumbent on him to correct the mistakes which that gave rise to in the comparative state of the price of Spanish and British salt delivered at Copenhagen, as inserted in page 21 of the preceding Pamphlet.

The price, freight, and insurance on Spanish falt delivered at Copenhagen was there stated at £.2: 15 per ton, and the price, freight, and insurance on British salt delivered there,

at £ 2: 2 per ton. Both these estimates were founded on information which the Author had received during the time of war, when the prices of freight and insurance were much higher than in times of peace; but, on enquiry, it is found that these calculations were not quite accurate, even in time of war, and, if adopted at present, would be still more erroneous.

The Author has lately been at considerable pains to acquire satisfactory information with regard to the just medium price at which foreign and British salt ought to be estimated in the markets in the northern parts of Europe in times of peace, including freight and other charges; but he has not yet been able to obtain such certain information in these respects as appears to him satisfactory. He has, however, taken some measures for attaining an accurate knowledge of these particulars; and when attained will take an opportunity of communicating it to the public.

The difficulty arises from this circumstance, that the salt trade from the southern to the northern parts of Europe has never been carried on upon a regular established footing, but has depended frequently, or chiefly, upon

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casual freights, according to the opportunities which offered of ships returning from the southern to the northern countries of Europe, which ships conveyed the salt sometimes as returning cargoes, and sometimes almost in the shape of ballast.

The uncertainty of a supply carried on in this manner occasions great fluctuations in the price, approaching sometimes to the one extreme and sometimes to the other, which makes it difficult to ascertain with precision any steady medium price of foreign salt in the northern countries of Europe.

One fact however is known with certainty, that even during the time of the war, when the price of British rock salt, conveyed to the northern countries of Europe, was increased by the high rate of freight and insurance, the demand from these countries for that salt continued as great as when at the lower rate in time of peace, though some of the countries which share those markets with England, or to which the salt was to be carried, not being concerned in the war, might have had some advantage over England in the expence of freight and insurance.

Hence it may be inferred that the British rock salt was either found indispensably necessary their demand during the time of war, or that it was found to be cheaper on the whole than that with which these countries were supplied from the southern parts of Europe.

The Author is satisfied that British salt can be sent to the northern countries of Europe cheaper than that which they receive from Sardinia, Spain or Portugal, though not so much cheaper, he apprehends, as was stated in page 21 of the preceding Pamphlet.

But, independent of any advantage that may arise from inferior price, the circumstance which will give the British salt the decided preference in these foreign markets will be the superior quality, after the method of purifying British-made salt shall have been adopted, and generally practised.

It will then become an object to the British falt refiners to establish falt stores in these countries; and, by constantly keeping a large supply on hand, they will essectually prevent any cargoes being brought from the southern countries on speculation, as the sale of such cargoes would be excluded both by the inferior price and the superior quality of the British refined salt.

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There is reason likewise to presume, that an established salt trade from Great Britain, in this manner, would meet with approbation and encouragement in the countries thus to be supplied; as it would be for their advantage in various respects to have such constant regular supply in this necessary of life; and it would prevent an inconvenience frequently experienced in their fisheries, which, in times of great success, have had the price of salt greatly raised upon them, or have been obliged to stop the further prosecution of their sisheries, in consequence of their precarious and irregular supply of salt.

It may now be proper to take notice of some new facts and occurrences, which must serve to increase the motives for abolishing the salt duties, and for substituting other duties more consistent with the interests of the Revenue, and of the Trade of Great Britain.

In the first edition of this Pamphlet, the inconveniencies to the British fisheries from the present duties and regulations relating to salt, and the advantages which would ac-

crue to that source of national wealth from the abolition of these duties, were briefly stated in two paragraphs [pages 81 and 82]; but at that time, the Author was not aware of the whole extent of the prejudice and inconveniencies occasioned to the fisheries by the means of the duties, regulations, and restrictions relating to falt; neither did he know that this matter was fo foon to be under the confideration of a Committee of the House of Commons, and to become the subject of a specific Report from them; but he has now had an opportunity of perufing a Report (dated the 11th, and in consequence of an order of the House of Commons, printed on the 14th of this month of May) made by the "Committee appointed to enquire into " the State of the British Fisheries, and " into the most effectual Means for their im-" provement and extension," the facts stated in which Report afford the strongest additional arguments that could possibly be imagined for enforcing the suggestions contained in the preceding Pamphlet.

The Report, in the introductory part of it takes notice, that the Committee had examined a great variety of evidence respecting the present

present state of the British sisheries; and that, "from the concurring testimony of all the "witnesses it appeared, that the present system of the salt laws is peculiarly embarrassing and vexatious to those who are concerned in the sisheries of this kingdom; and that it also appears to your Committee, that the beneficent and wise intentions of the Legislature in allowing the use of salt, duty free, in the curing of sish for exportation, are in a great measure frustrated by the various regulations and restrictions, which from time to time have been judged necessary for the purpose of preventing a fraudulent abuse of the indulgence."

The Report then proceeds to state some of the most important particulars of the evidence

they had received.

Under this description are stated the evidence of two merchants and a ship owner at Yarmouth, two sishermen at Harwich, a perfon concerned in the buss herring sishery at Campbeltown; the evidence also of Dr. Anderson, who was employed last year by Government to examine the state of the sisheries on the western coasts and islands of North Britain; that of Mr. James Hay, who had long

long resided in Shetland, and been concerned in the sisheries there; and that of Mr. John Knox of Richmond; and, to the evidence of all these persons there are added, the observations transmitted to the Committee by Mr. White, collector of the customs of Isle Martin, in the north western coast of Scotland.

The facts established by the concurring testimony of these witnesses, afford most material information on the subject of the British Fisheries, and of the impossibility of carrying them on to advantage, while the present duties, regulations, and restrictions, relating to falt, remain in force. It is impossible, by any abridgment, to do justice to the importance and precision of the evidence thus collected in the Report just now printed; but it cannot be doubted, that every person who feels the consequence of this great national object, the British Fisheries, will have a desire to read the whole of that Report; and having read it, he must concur in the sentiments expressed by the Committee, who, after stating the evidence, conclude their Report in the following words:

"If the laws (relating to falt) are suffered to remain in their present state, your Com-

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"mittee apprehend, it will appear to the House, as it does to your Committee, that few men of property will choose to embark their capitals, and bestow their time and attention on a branch of business, which exposes those employed in it to continual embarrassments, and frequently to vexatious suits with the officers of the revenue. The various remedies suggested by the witnesses examined by your Committee, have all scemed liable to very important objections.

"Under these circumstances, your Com-" mittee must refer the subject to the superior " wisdom of the House; but in doing so, have " no hesitation in reporting their own opinion, " that the present System of the Salt laws is " one of the principal causes that the Fisheries " of Great Britain have never been carried to " the height of prosperity and advantage of " which they are capable. And your Com-" mittee must further state it as their opinion, "that, although the Revenues of this " country ought not to fuffer fo great a de-" falcation from their amount as the produce " of the falt duties affords, still it is well " worthy the attention of the legislature to " confider

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"consider if the same amount of revenue,
"which at present is collected upon an article
of such general consumption, might not
be secured by means equally productive,
but not so embarrassing to the sisheries, and
other articles connected with the wealth
and security of the empire, in some of its
most important interests."

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"confider If the fame tenount of revenue, o which at prefent is collected upon an article the first general contamptions saight not the Lecured by means equally productive, " but not to embarrating to the fitheries, and affect articles connected with the wealth "and feening of the empire, in force of the Just published, Price 15.

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