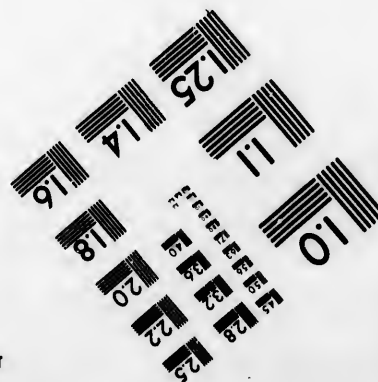
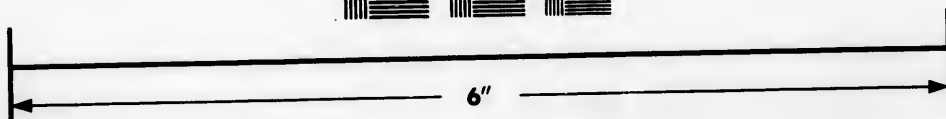
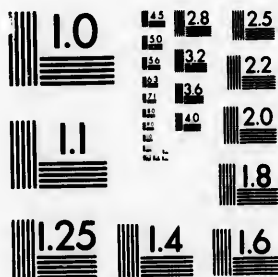


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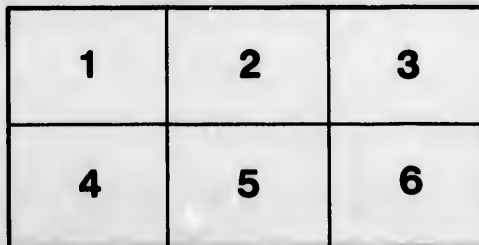
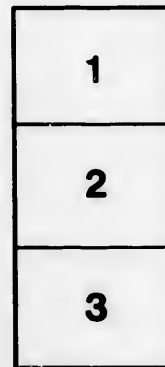
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To the Right Honourable the LORDS COMMISSIONERS
of the ADMIRALTY.

The humble Memorial of THOMAS BRIDGE of
Bread-street, London, Merchant,

Sheweth,

THAT your memorialist, and Dr. Henry Taylor of the city of Quebec in North America, having-taken into consideration the surprizing effects the Spruce Beer of that country had on the Soldiers and Seamen, when they came there, almost emaciated with the Scurvy; and also, the effect it has always had in keeping the Seamen in health, when on the Newfoundland station. And taking also the opinion of Dr. John Fothergill and other eminent men of the faculty, who joined in thinking, that if an Essence of the Spruce could be made to contain all its virtues, and that could be made into well-fermented Beer, that it would be the best, and most efficacious preventative, and most sovereign remedy for the Scurvy.

That your Memorialist in consideration of such opinions did join the said Dr. Taylor, and after great expence and pains, did make an Essence so perfect that one pound and a quarter will make 63 gallons of double Spruce Beer, and yet it retains all the native virtues and flavour of the fresh-cut Spruce; and his Majesty was pleased to grant them his Royal Letters Patent for the same.

That your Memorialist did in the year 1772, by the advice of many gentlemen in the Army, the Navy, &c. apply to the then Right Honourable Lords of the Admiralty, offering a small quantity of

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the said Effence by way of trial, which their Lordships were pleased to accept. And some of it was sent on board the Rainbow man of war, Captain Collingwood, going to the Coast of Guinea, whose report I crave leave to subjoin.

Extract of a Letter from Captain COLLINGWOOD of the Rainbow Man of War to Mr. STEPHENS, Secretary of the Admiralty, dated September 8, 1773.

“ SIR,

“ I desire you will acquaint their Lordships, that
 “ I complied with their orders of the 6th of November, 1772, respecting Spruce Beer made from the
 “ Effence of Spruce and Molloffes, and followed the
 “ directions which the Commissioners of the Victualing sent me, to make them into Beer, and serve
 “ the ship’s company; but as I am no judge of its
 “ physical qualities, I thought proper to send the
 “ opinion of the surgeon thereon as well as my own.
 “ My opinion of Spruce Beer is, that it is a good
 “ wholesome drink, and that the Effence of Spruce
 “ may be very serviceable to people in the Scurvy.”

The Surgeon’s opinion is as follows.

“ I am convinced from experience, that Spruce
 “ Beer is a very great antiscorbutic, for during two
 “ voyages that I have been at Newfoundland, where
 “ his Majesty’s ships are supplied with Spruce Beer,
 “ I never saw one scorbutic patient. I therefore have
 “ no doubt, but that the Effence of Spruce prepared
 “ by the Patentee, when made into well fermented
 “ Beer as they have directed, will prove no less an
 “ antiscorbutic, as it seems to possess fully, the entire
 “ physical properties of the fresh cut Spruce; but
 “ in

“ in this ship I do not think we could make a fair trial of it last voyage, because I have been on the coast of Africa two voyages before, when our people during both of them were very sickly, and not one scorbutic case amongst them.

“ However I am of opinion the Effence of Spruce is an excellent discovery or preparation, and that it would be very serviceable in the Navy.”

That your Memorialist, having heard of the return of the Rainbow, did inform their Lordships that he had made a farther quantity of the effence, and begged to know if their Lordships would be pleased to make any farther experiment thereon, and he was informed, that *at present* they had no farther occasion for his effence.

That your Memorialist did then apply to the Gentlemen, Husbands, and Owners of the ships in the service of the Honourable East India Company, several of whom took some of the Effence for the use of their ships, and from the amazing good effect it produced on board those ships, it gained universal reputation in that service.

That your Memorialist, emboldened by this success, did in the year 1779, once more trouble their Lordships with an offer of the Spruce Beer, when their Lordships were pleased to order me to collect certificates from such gentlemen in the India service as had used it, and were then in London, and lay them before the Commissioners of sick and wounded Seamen: in consequence of such orders, I did procure the following.

First. Extract of a Letter from Captain JOHN LEWIS, on board the Talbot Indiaman, dated Cape of Good Hope, July 10, 1775, to John Raymond, Esq.

“ We have now refitted, and propose to sail tomorrow in company with the Nottingham, Captain Stoakes, who arrived here a few days before us; they have buried a great number of their people, we have been lucky enough not to lose a single man, and have had very few sick during the passage, and now not one, which we impute to the spruce beer, which the people became remarkably fond of, and generally drank about forty gallons per day. JOHN LEWIS.”

NB. The Nottingham had no Spruce on board.

Certificate of JAMES COLLY, Surgeon of the Talbot, Captain Raymond Snow Commander.

“ These are to certify, that the ship Talbot, Captain Snow, in the service of the Honourable East India Company, on her last voyage to India, was supplied with a quantity of Essence of Spruce to make Spruce Beer for the use of the Seamen under my inspection.

It was brewed into beer in the following manner. I ordered the Essence and Molossas and a little yeast to be put into a small tub, with a little water to dilute it, and then put into a cask and filled it up with water, and in two or three days it was fit for use. There is so little trouble or difficulty in brewing, that after a few times I left it to any of the ship's crew to brew, and we had good fresh beer all the rest of the voyage; we used it in the quantity of about a quart per man per day, with which they were well satisfied. And I found the men kept their healths very well

well and became extremely fond of it ; we found that it fermented well in all the climates we went through, and kept so well that we had not a single cask went sour the whole voyage, though we passed the Line and were a long time in very hot and bad weather. On the whole, I do believe it to be a very good, wholesome beer, and excellently well calculated to supply a ship's company in long voyages, as it certainly is the greatest preservative from the scurvy I ever met with, as I have in former voyages used most of the preservatives, such as malt, wort, decoction of bark, acid, &c. but always had the scurvy amongst the crew more or less. But in our last voyage, when we were supplied with Spruce Beer, notwithstanding we had very hot and bad weather, and tedious passages all over India, we had not the least appearance of the scurvy.

Signed JAMES COLLY,
Surgeon of the Talbot.

NB. The men were so fond of it, that when they came to Ireland they preferred it to small beer."

"I have examined the above certificate and do believe it to be strictly true, and am of opinion that Spruce Beer, as used on board the Talbot Indiaman, of which I was commander, was of the greatest service in hindering the appearance and progress of the scurvy, and do recommend it for that purpose.

Signed Raymond Snow,
London, May 9, 1779."

Certificate of Dr. HENRY DUNN, Surgeon of the Hampshire East Indiaman, Captain THOMAS TEMBRELL Commander.

"I do hereby certify, that I did receive on board the Hampshire, Captain Thomas Tembrell Commander, in the East India Company's service, a quantity of
Essence

Effence of Spruce to make Spruce Beer under my inspection.

I began to use it as soon as I perceived the scurvy made its appearance amongst the men, and I found it fully answered my expectation in stopping the progress of that disorder, and preventing its appearance on the rest of the crew. I had it brewed in the following manner :

I mixed the melasses and effence with a little grounds of porter, or any other beer, and some water to dilute it, and fill the cask up with water, and let it work two or three days and it was quite fit for use. The yeast from the fresh brewed beer answered afterwards ; I gave it the men from a quart to two quarts per day, and they were soon very fond of it ; we generally had three casks in use at a time, one older than the other, and found that it kept extremely well in all the climates we passed, not having any go sour, but drank fresh and good the whole voyage while we had any left.

And I do believe it to be a very wholesome good liquor, and an excellent antiscorbutic, and very well adapted for the supply of a ship's company at sea in all climates.

Signed HENRY DUNN.

I have examined the above, and believe it to be strictly true.

Signed THOMAS TIMBREL."

Abstract of a letter from Capt. Mowtray of the Warwick man of war, to Philip Stephens, esq. Secretary to the Admiralty, dated August 5, 1778.

" I think it my duty to let you know how much I am obliged to Capt. Newte of the Ceres Indiaman (as is his country) for his goodness in supplying me with Spruce Beer and Effence of Spruce, which has enabled me

me to give the men in the scurvy a quart of Spruce Beer a day for 12 days, which has saved the lives of a great many."

Certificate of Captain William Applegarth, Commander of the Europa Indiaman.

"These are to certify, that I did receive on board the Europa, in the service of the Honourable East India Company, whereof I am commander, a quantity of Essence of Spruce to make Spruce Beer for the use of the Seamen and Soldiers. I gave the men a pint of beer per day per man at dinner, and they kept their healths remarkable well, and we had not one scorbutic case the whole voyage. It is brewed with very little trouble, and keeps well in all climates; and I am convinced it is a very wholesome good Beer, and a most excellent antiscorbutic, and must be very beneficial to ship's crews crews in long voyages.

Signed WILLIAM APPEGARTH."

Certificate of Captain THOMAS NEWTE, Commander of the Ceres Indiaman.

This is to certify, that I ordered a quantity of Spruce to be sent on board the Ceres Indiaman, on my last voyage to India, in the years 1777 and 1778, which was made into Beer, and constantly given to my ship's company at the rate of a pint per man per day. I can with great truth assert, that its effects were very salutary, especially as an antiscorbutic. I was eighteen months in performing the voyage, and the greatest part of that time at sea, yet I lost only two men. In my passage home from the island of St. Helena, I had still greater proofs of its excellency; Captain Moutray, of his Majesty's ship Warwick, acquainted me that many of his people were afflicted

afflicted with that dreadful disorder the Scurvy, in consequence of which, I sent him a sufficient quantity of Spruce to give each man a pint a day until they arrived at Portsmouth, which stopped the progress of the Scurvy, and enabled him to bring most of them to England, where they recovered.

Signed THOMAS NEWTE.

Commander of the Ceres Indiaman.

London, Aug. 30, 1779."

Copy of a Letter from Captain ROBERT MAW, Commander of the Duke of Kingston East Indiaman.

SIR,

In consequence of your application to me relative to the efficacy of the Essence of Spruce, which you supplied the ship Duke of Kingston with on her late voyage to Bengall; I am to inform you that I made use of it during the whole time of my being at sea, giving to each man one pint in the morning, which answered according to the account given me by Captain Raymond Snow. The Scurvy never made its appearance, notwithstanding I was thirteen weeks on my passage from Madras to the Cape of Good Hope, and in that time experienced very bad weather; it is to be understood the Beer was made according to directions given to my surgeon. I am. &c.

ROBERT MAW.

New Inn, Sept. 1, 1779."

Copy of a Letter from Captain CHARLES MEARS, Commander of the Egmont East Indiaman.

"Blackheath, August 30, 1779.

SIR,

I have the favour of yours of the 27th instant, desiring I will say what I know concerning the Essence
of

of Spruce Beer. I can with great truth say, that my people were exceeding fond of the Beer made from it, and that it was very easy to make it; the ship's steward had the management of it, and with two 60 gallon casks made on purpose, he kept a constant succession of it; but whether it was particularly beneficial to the healths of the Seamen, I must refer you to my surgeon Mr. Michael Reiley, who may be heard of at Mr. Plunkett's, Chapple-street, May-fair. The Seamen were very healthy all the voyage, and I think it very reasonable to suppose, that the Spruce Beer greatly contributed in keeping them so. I had the pleasure of giving Sir Edward Hughes at St. Helena as much Essence and Molosses as served to make Beer for his own and his officers table from thence to England, and have often heard him speak of it in very high terms, and say that he hoped it would soon be introduced into the Navy. I am, &c.

CHARLES MEARS, Commander of the Egmont.

Copy of a Letter from Mr MICHAEL REILEY, Surgeon of the Egmont, Captain CHARLES MEARS.

SIR,

In compliance with your request and my duty to the public, I think your Spruce Beer a happy invention, it being a good liquor and powerful antiscorbutic; and by giving the men a pint a day, of which they were very fond, it preserved them from all Scorbutic complaints during the voyage. It was brewed by the ship's steward, and is attended with no manner of inconvenience, will keep for any length of time needful in any climate whatever. I do not only recommend, but look upon it as a very valuable acquisition to ships on long voyages. I am, &c.

Signed MICHAEL REILEY.
Surgeon of the Egmont.

B

Certificate

Certificate of Mr. THOMAS BRAE, Surgeon of the
Ceres Indiaman.

These are to certify, that the ship Ceres, in the service of the East India Company, was supplied with a quantity of Essence of Spruce to make Spruce Beer for the use of the Seamen. We began to use it when we had been out about two months, and continued to supply the men with from a pint to a quart a day per man for the voyage; and the men were in general very fond of it, and kept their healths remarkably well; and I am convinced from experience, it is an exceeding good wholesome Beer, and one of the best antiscorbutics yet discovered; it was brewed with very little trouble; and keeps extremely well in all climates we went through.

Signed THOMAS BRAE.

Certificate of JOHN EVANS, Surgeon of the Duke of
Kingston Indiaman.

I do hereby certify, that I have had a quantity of Essence of Spruce sent on board to make Spruce Beer for the use of the Seamen in both my last voyages to India; and I do assert that I never met with any thing so efficacious in preserving the healths of the men. We gave it in the quantity of a quart a day per man, and both officers and men were very fond of it; and we had not one scorbutic case except one man we took on board in India almost emaciated with the Scurvy, and he was soon cured by drinking the Spruce Beer, and we brought him home in good health. It is brewed with very little trouble, and kept well in all climates we passed, and I do believe it to be a very wholesome good beer, and excellently
calculated

calculated to supply ships at sea, as we brewed it every four or five days without any inconvenience.

Signed JOHN EVANS.

I have examined the above certificate, and believe it to be strictly true.

JUSTINIAN NUTT,
Commander of the Duke of Kingston.

Copy of a Letter from D. James Hutton, Surgeon of the Earl Mansfield, Captain Frazer, and witnessed by him.

SIR,

In compliance with your request, and in duty to the public, I do hereby declare, that during my last voyage in the Earl of Mansfield, William Frazer, Esq. Commander, to China, when the ship's company were attacked and reduced to the greatest distress by the scurvy; I found the most happy effects to arise from the use of your Essence of Spruce, as only one man, who had been previously weakened by a flux of some weeks standing, out of upwards of seventy who were afflicted, fell a victim to this disease, which raged with great violence for seven weeks. The antiscorbutic powers of the Spruce Beer were remarkable; many it cured, in many more it prevented its farther progress, and even those who were reduced to the last and most painful stage of the disease, had their complaints relieved, and were enabled to prolong, with some degree of comfort, an existence which must have been otherwise wretched, till our arrival at the cape of Good Hope, after a passage of eighteen weeks, and put an entire stop to the ravages of this disease. Upon the whole, I regard it in this instance to have been the principal means, under God, of preserving many valuable lives; and I sincerely hope, that future experience will confirm

my sentiments in considering Spruce Beer not only as a most excellent and efficacious preventative from the Scurvy, but in a powerful manner restraining the violence, and preventing the fatality that so generally attends that disorder after it makes its appearance.

WILLIAM FRASER,
Commander of the Earl
of Mansfield.

JAMES SUTTON,
Surgeon.

Copy of a Certificate from JOHN MOUAT, Esq. Purser
of his Majesty's Ship the Warwick, — COLLINS,
Esq. Commander.

These are to certify, the Honourable the Commissioners for Victualling his Majesty's Navy, that there were received on board his Majesty's ship Warwick, from Mr. Thomas Bridge, by order of Sir Edward Hughes, to Captain Richard Collins, thirty-nine pots of Essence of Spruce, containing one pound and one quarter of a pound each, and thirteen hundred, one quarter and eight pounds of Molosses for the use of the ship's company, in case of the appearance of the Scurvy taking place amongst them, which was all made use of during the passage to St. Helena and home, that was between the 8th of March and the 15th of December 1779, and was allowed by the Surgeon and rest of the officers to have been a great means of eradicating the aforesaid disorder, which several times threatened us in the course of the said voyage.

Given under my hand on board his Majesty's said ship Warwick in Portsmouth harbour, the 30th of January, 1781.

Signed JOHN MOUAT,

Certificate

Certificate of sundry Gentlemen, Husbands of Ships
in the service of the Honourable the East India
Company.

We, whose names are hereunto subscribed, do certify that several of our ships have been supplied with Essence of Spruce to make Spruce Beer, and that our commander, surgeons, and officers, have strongly recommended it as a very wholesome good beer, and an excellent scorbutic, and that the crews were extremely healthy on those voyages that the ships were supplied with it.

Signed by Sir CHALES RAYMOND,
ANDREW MOFFATT, Esq.
WILLIAM DENT, Esq.
H. H. PELLY, Esq.
ROBERT WILLIAMS, Esq.
JOHN RAYMOND, Esq.

That, after the Commissioners of Sick and Wounded had examined these certificates, they were pleased to make the following report on the 14th of September 1779.

To Philip Stephens, Esq.

Office of Sick and Wounded Seamen,
September 14, 1779.

SIR,

In return to your letter of the 19th of last month, accompanied by the inclosed petition to the Right Honourable the Lords Commissioners of the Admiralty, from Thomas Bridge, Patentee of the Essence of Spruce, representing that he had discovered a process of extracting and reducing the properties of the Spruce Tree into an Essence,

from which, with Molasses, a wholesome beer may be made, and of great use in preventing the Scurvy, and desiring it may be introduced into the Navy, as it may be furnished as cheap as the small beer supplied to the King's ships; and in obedience to their Lordships directions, that we should take the same into consideration, and report our opinion what may be proper to be done thereon; we desire you will please to acquaint their Lordships, that we have had Spruce Beer brewed from some of the said extract under our inspection, and find the process easily managed, and the Beer a very good drink. That we have had a variety of evidence of its good effects laid before us, and are of opinion that it may very properly be introduced into the Navy in ships going long voyages, or on long cruizes; and as the process of fermentation can be carried on at sea in any climate, we would humbly propose that the simple ingredients should be provided by the Victualling Board, and delivered to the purfers, and be considered as part of the victualling stores.

With respect to the price at which Beer may be made of the Essence of Spruce, as the price of molasses is fluctuating, that cannot be precisely ascertained, which we mention, as the petitioner seems to think it will be about equal to the price of small beer for the Navy, but we humbly conceive it will not be so high in general as to be any object to affect the supply of it to the King's ships. We are, &c.

Signed J. BELL.
WALLER FARQUHARSON,
ROBERT LULMAN.

That,

That, in consequence of the above, I did receive orders from their Lordships to attend the Victualling Board, to fix with them what quantity it would be necessary to allow each ship according to the number of men, and length of the voyage; that, in consequence of such their Lordship's orders, the Commissioners of Victualling did make the following report.

Victualling Office, October 8, 1779.

SIR,

We received your letter of the 20th of September last, inclosing a Memorial which the Right Honourable the Lords Commissioners of the Admiralty had received from Thomas Bridge, representing that he had discovered a process for extracting and reducing the properties of the Spruce tree into an Essence, from which, with molasses, a wholesome Beer may be made, which may be of great use in preventing the Scurvy, and desiring that it may be introduced into the Navy; and acquainting us of their Lordships having directed the Commissioners for Sick and Hurt to consider and report their opinion what may be proper to be done thereupon; and they having informed their Lordships that they are of opinion it may be very properly introduced into the Navy in ships going long voyages or on long cruizes; and as the process of fermentation can be carried on at sea in any climate, have proposed that the simple ingredients should be provided by our board, and delivered to the pursers as part of the victualling stores; also signifying their Lordships directions to us, to propose what quantities of the said ingredients it may be proper to supply to a ship of each class on the services therein mentioned. Agreeable to their Lordships directions, we have made the following calculations

lations of the quantity for each rate, which we think a full proportion considering the stowage the Molosses will require, viz.

Rate.	Men.	For long voyages. 1 month.			For channel cruizes. 14 days.		
		Essence Pounds	Molosses C. qr. lb.	Yeast Pounds	Essence Pounds	Molosses C. qr. lb.	Yeast Pounds
1st.	850	127	36 1 20	8½	6½	18 0 24	4½
2	750	112	32 0 16	7½	5½	16 0 8	3½
3	600	90	25 2 24	6	4½	12 3 12	3
4	550	52	15 0 0	3½	26	7 2 0	1½
5	300	45	12 3 12	3	22½	6 1 25	1½
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But at the same time we beg leave to remind their Lordships of our letters of the 4th and 11th of August last, respecting the utility of the Essence of Wort, which is more simple in its process, takes up less stowage, and is productive of more salutary ends, we are returning the papers which came inclosed.

Sir, your most humble servants,
 JONAS HANWAY,
 J. BATES,
 A. CHORLEY.

That, in consequence of this last report, I heard no more of their Lordships.

That your Memorialist still finding that the good effects of the Spruce Beer grew more and more conspicuous, so much so that every ship in the service of the Honourable the East India Company is now supplied with it, and that it was spoke of with universal credit in that service, and being apprehensive that unfavourable sentiments had been introduced to their Lordships, which had caused its hindrance, he did crave leave to have a copy of the said reports, when to his great surprize he found those from the Commissioners

Answer

missioners of Victualling so very unfavourable, and, I most humbly crave leave to say, founded in error.

That your Memorialist humbly hopes he may be permitted to state a comparative view of the difference between the Essence of Malt and the Essence of Spruce, which he doubts not will convince your Lordships, that no liquor whatsoever can be better calculated to supply a ship's crew in all climates than the Spruce Beer, nor is it possible to have any thing that will take less stowage, particularly to supply both the Indias

Spruce Beer from the Essence of Spruce.

As to the efficacy of Spruce Beer in preventing, stopping the progress and cure of the scurvy, I beg to refer to the certificates hereto annexed, or numbers more that I can get if it is required. This Beer answers both as beverage and medicine, and consequently is a great saving to Government, as it does not cost near half the price of spirits; but if half the usual quantity of spirit was given, as is usual, and one quart of Spruce Beer, the saving would then be about 106l. per month per a first rate, and the seamen would be pleased and their health preserved.

Process of making Spruce Beer.

Pump out of the butt 8 gallons of water, pour the ingredients in, stir it with a stick to mix it, and let it stand ~~two~~ days, it is done.

Now

*One Ounce of Sp. Spruce
will make three Gall.
of Beer Stronger than
the Common Small
at 1/4 of the Gall.*

Malt Beer from the Essence of Wort.

As to the efficacy of Malt Wort, I have never heard it spoke of by any person that has used both as in any degree equal to Spruce, and it does not answer any purpose as a beverage, but a simple medicine, and consequently an additional expence to Government, as they have their usual quantity of spirit, &c.

Process of making Wort of the Essence of Malt.

Break the Essence into small pieces, and pour upon it hot or boiling water, and stir it about till it is dissolved.

One pint of the Essence to one gallon of water will make moderately strong and pure Wort: it may be made stronger or weaker, by adding more or less Essence.

But if water should ever be much wanted, half an ounce of the Essence of spruce, with a little honey, Syrup or molasses, given as a medicine, will be found to have a very powerful effect in febrile and bilious complaints; nevertheless it certainly given in beer is much better, and answers a double purpose, both as medicine and drink, comes out as cheap as common small beer in Europe, and greatly cheaper both in the East and West Indies, besides a vast advantage in Rowing, as nothing is necessary to take there, but the Essence, of which one gallon will make 250 gallons of the Beer, and allowing each man a quart of beer a day, will cost in either Indies no more than about 8s. 6d. to 8s. 8d. per man per year, and in Europe about 10s. to 11s. per man per year, so that supposing each man to be 5 months in actual service, 6 months of which it will be necessary to give him Service Beer, it will not cost above 4s. to 4s. per year per man to keep them in health, and allowing every man 2 quarts a day, from 8s. to 10s. and in time of peace much less.

Quantum of Stowage.

Less than 8 gallons of all the necessary materials makes one butt of beer.

It must be made fresh twice in twenty-four hours, and to cool the Wort as soon as possible after the Essence is dissolved.

When a few pounds of the Essence is only to be used, it may be cut out of the cask with a chisel. When a cask is to be used at a time, the whole of the Essence contained in the cask may be separated from it in a solid body. If the head is taken out and the hoops loosened, it may then be placed in a clean tub, large enough for the purpose, broken to pieces with a hatchet, &c. and dissolved.

Quantum of stowage.

15 gallons of Essence of Malt will make one butt of Wort. But as this Wort is only used as a medicine, consequently its whole bulk is extra stowage as well as an extra waste of water.

To supply 100 Men 1 Month on the Voyage giving each man a quart of Spruce Beer p^r. Day will require
 13 to 14 of Spruce 6l - 3.18 -
 3.2.14 - Molasses - 3.12.6
 7.10.6

To supply 100 Men one month with Wort giving each Man a quart p^r. day will require
 700 lb of Malt 9.26.5 -
 7.10.6

Saved by the use of Spruce p^r. Month - 18.14.6

Quart.

Comparative of Expence between the Supply of Spruce Beer and Rum.

To supply a first rate; 850 men, giving each man 2 quarts a day, will require 237lb. of
 Essence 71 2 0
 Do. 76C. of Moloffes 87 8 0
 Yeast 12lb. 1 4

To supply a first rate, 850 men, giving each man half a pint of rum per day, will require 1085 gallons $\frac{1}{2}$ at 5s. 372 2 6

£.159 14 0

Stowage.

The materials to make the above will take the room or stowage of 714 gallons.

Stowage.

The spirit takes up the stowage of 1485 gallons $\frac{1}{2}$, which is more than double the stowage of Spruce.

Health.

In upwards of 100 voyages to the East Indies and back, where the ships have been supplied with Spruce, I have not known two men loſt by the scurvy, and very few by fevers or bilious disorders.

Health.

I believe it is generally acknowledged that rum afflicts the scurvy, and brings on rather than stop that dreadful disorder, that causes such daily ravages on board most ships that are long at sea.

That your Memorialist most humbly prays your Lordships to take the premises into consideration; that, as your Memorialist and the said Dr. H. Taylor have always had the most flattering hopes that the great merit of the Essence would most undoubtedly gain it an introduction into the navy, and being encouraged to such hopes by most of the officers of both Army and Navy they have had the honour to converse with on the subject, have been at great expence to have a sufficient stock by them to answer the demands of Government if called upon, the loss by such disappointment has been very heavy, to the great hurt of their fortunes; nevertheless, so conscientious are they of the success of the Spruce Beer, if fairly made use of, that he is willing to supply the

Navy

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giving
11. day

26.5
7.10.6
18.14.6

Navy with any quantities for experiments that your Lordships chuse to order; and as he by no means wishes to put the nation to unnecessary expence, he is willing to take back whatever is not used, in case it does not answer the end proposed.

And your petitioner, as in duty bound, shall ever pray.

As I do not know what Quantity of the
Lbs of Malt is given daily I shall calculate
as giving the same Quantity as they
give of the Spruce Beer

To supply 100 Men one Month in
India giving each Man a Quart of Spruce
Beer ^{per} day will require

1300 lb of Spruce at 6/ per lb . . . 3.18.0

2.0 lb of Brown Sugar or Syrup 10/ . . . 1.8.0

F I N I S.

5.6.9

the freight of 1300 only . . .

But to supply the same Number of Men
for the same time giving each Man a Quart
of the Malt wort ^{per} Day will require

700 lb of Lbs of Malt 29/ per lb . . . 26.5.0

Consequently 700 lb Freightage

So that there will be saved by sending
the Lbs Spruce to India as under

Money . . . Freight

Lbs Malt 26.5.0 . . . 700 lb

Lbs Spruce 5.6.9 . . . 13

Saved Cash 20.18.3 Freight 687

Beside a very great labour in trucking &
Barling the Lbs of Malt

lande 12/33

0
2
9

Men
part

5.0

ing 8

