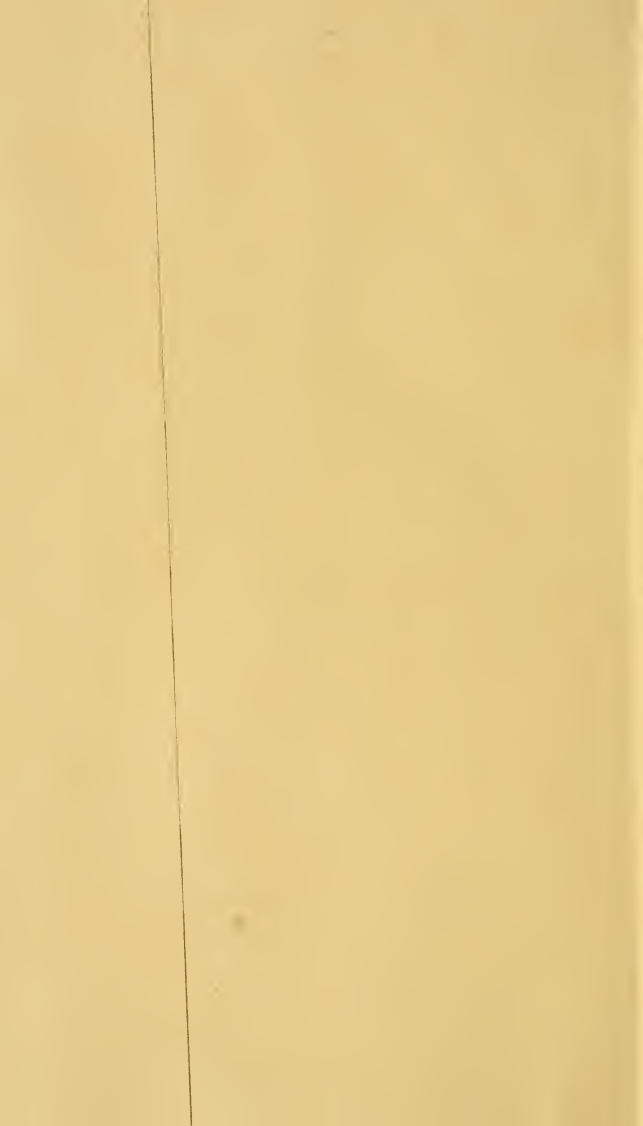


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THE MEAT BISCUIT;

INVENTED, PATENTED, AND MANUFACTURED

BY

GAIL BORDEN, JUN.



J. H. BROWER & Co.

SOLE AGENTS IN NEW-YORK,

45 SOUTH-STREET.

MAY 1, 1851.

NEW-YORK:

PRINTED BY D. FANSLAW, CORNER OF ANN AND NASSAU-STS.

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The nature of this discovery or invention, consists in an improved process of preserving the nutritious properties of meat, or animal flesh of any kind, by obtaining the concentrated extract or essence of it, and combining it with flour or vegetable meal, and by drying or baking the mixture in an oven, in the form of a biscuit or cracker.

One pound of this new and useful preparation of concentrated *meat* and *bread* contains the nutriment or essence of *five* pounds of good meat, or, in other words, all the nutriment (except the oily portions) contained in five hundred pounds of good fresh meat, with seventy pounds of flour, can, by this invention, be packed in a twenty gallon cask. It can be prepared in the shortest time as a *soup, pudding, sauce, &c.*

One word with regard to the invention. Perhaps it may be said that the extracting of the essence of meat is no new thing; I am aware it is

not. Messrs. Munn & Co. in a letter to me on the subject, under date of 24th October, 1849, said that "the mode of preparing the concentrated liquid, or paste beef, has been long known to the world, such as is described in Gray's or Liebig's chemistry; but, as combined with flour, and made into bread, as claimed by you, is entirely new to us, and we do not think any such process has ever been used before your discovery. The plan is, in our opinion, a valuable one."

I am aware that young meats and those portions of the animal containing a large proportion of gelatine have been brought into solids like glue; but this of itself is not sufficiently nutritious to sustain vigorous health, or scarcely life. I was myself endeavoring to make a paste-cake from the extract of meat when I made the discovery. Impressed with the importance of a concentrated nutritious food for travellers to the Pacific coast, I had put up an apparatus by which I reduced one hundred and twenty pounds of young beef meat to ten pounds of essence or extract, of a consistency like thick sugar-house syrup. I could not slice nor dry it; and unwilling to lose my labor, it occurred to me, after various experiments, to mix the article with good flour and bake it. To my great satisfaction, the bread or biscuit was found to contain all the primary principles of the meat, and with a better flavor than simple beef soup, thickened with flour.

I would here remark, that the essence or extract of matured meat, of which "the Meat Biscuit" is made, will not form a gelatine or a substance that will dry like glue. I am thus particular on this point, as most Editors, in giving an account of the process by which the Meat Biscuit is made, call the extract jelly or gelatine. The French chemists have long since ascertained the worthlessness of gelatine as a diet; it is only when combined with other qualities of meat that it is serviceable.

I have been asked why the manufacture of the Meat Biscuit should be located at Galveston? The answer is obviously this: because the prairies of Texas abound in neat cattle of the finest quality.

The Meat Biscuit forms one of the most useful diets ever offered to the public; and is adapted to the *Whaling* and *Maritime* service generally. For *Families* and *Hospitals*, and in all circumstances, where fresh meat is wanted, this biscuit will be found invaluable; and on all voyages, whether long or short, or journeys on land, most useful and economical.

FOR THE MARINE.—The health of seamen would be preserved, and their comfort increased by the use of it. Having the quality and flavor of meat fresh from the slaughter, it would doubtless prove anti-scorbutic; and therefore, with the sailors' salt provision, would be of the utmost

importance. It can be cooked with great advantage with many other articles of diet; one day a soup with hard biscuit—the next with beans or peas—the third with rice, and at all times as a sauce for puddings; thus having a fresh article of meat every day. And when to these advantages is added, that, in case of shipwreck, a single barrel of this Meat Bread will, without further preparation than such as it receives in its manufacture, support in full vigor an entire boat's crew for weeks. How many valuable lives would oftentimes be saved to the world, if every *sea-going vessel* would take but a few cases of this biscuit, to be stowed away for use in such emergencies?

FOR HOSPITALS and the *Sick* or *Convalescent* it will be found most useful. A patient can, at the shortest notice, have it prepared to any degree of nutrition, from a weak broth to the most nutritious soup. The absence of grease from the composition, while it possesses the nutritive qualities of the meat, renders it particularly adapted for the use of invalids.

FOR FAMILY USE, this Meat Bread will be found very convenient, and especially so in warm weather, as it requires little fire (or a lamp of alcohol) to prepare it. The various ways in which it can be served up, will be explained in the "directions for cooking," accompanying each package.

Before offering this new article of diet to the

public for sale, the inventor went to great trouble and expense in having it tested by *sea* and on *land* for more than eighteen months ; and its preservative qualities have been put to the test by its being carried to California across the plains, and by way of *Cape Horn*, as well as on other voyages, as will be more fully shown by the testimonials which follow.

I have obtained a patent with a view to control and insure the manufacture of a genuine article. *One* pound of the Meat Biscuit contains all the nutriment that can be got out of *five* pounds of the best fresh beef. An article to imitate it may be made, to contain not one-fourth the quantity. It must be apparent to every one, that the character of the article is such, that unless its manufacture be guarded by exclusive right, it would become adulterated, and be of no advantage to individuals, or use to the world. And I would here remark, that, in order to protect the integrity of the Meat Biscuit, I intend to have only one agent in a place, and (for some time to come, a few in the aggregate) only in a few of the most important places in the United States.

And further, to guard the public against the sale of a spurious article, I shall execute letters of attorney, under my hand and seal, to each and every agent I may appoint to make sales for me ; and I likewise fully give notice of my intention to

prosecute with the rigor of the law, any and every violation or infringement of my patent right, which may come to the knowledge of myself or agents.

Much more might be said to show the importance and usefulness of this discovery, but reference need only be made to the few testimonials which follow, out of many which I have received from persons whose scientific attainments and practical experience preclude the idea of their being deceived, and whose high position is a guarantee of their impartiality.

G. BORDEN, JUN.

Galveston, 8th April, 1851.

From Ashbel Smith,

Surgeon-General of the late Army of Texas, and Minister at London and Paris, in a letter to Dr. Alexander Dallas Bache, President of the American Association for the Advancement of Science, etc. he says:

“I have eaten soup made of the Meat Biscuit several times; it has a fresh, lively, clean, and thoroughly done, or cooked flavor. It is perfectly free from that vapid unctuous stale taste, which characterizes all prepared soups I have hitherto tried at sea and elsewhere. But, before speaking further of its uses, I will briefly allude to the manner of preparing the biscuit in question. The nutritive portions of the beef, or other meat, immediately on its being slaughtered, are, by long

boiling, separated from the bones and fibrous and cartilaginous matters: the water holding the nutritious matter in solution, is evaporated to a considerable degree of spicitude—this is then made into a dough with superfine wheaten flour; the dough rolled and cut into the form of biscuits, is then desiccated, or baked in an oven at a moderate heat. The cooking, both of the flour and the animal food, is thus complete. The Meat Biscuits thus prepared have the appearance and firmness of the nicest crackers or navy bread, being as dry, and breaking or pulverizing as readily as the most carefully made table crackers. Those chemical changes in food which, in common language, we denominate *cooking*, have been perfectly effected in Mr. Borden's biscuit, by the long continued boiling at first, and the subsequent baking or roasting. The soup prepared of it is thus ready to be absorbed into the system without loss, and without tedious digestion in the alimentary canal and is in the highest degree nutritious and invigorating. It is to be noted, moreover, that the Meat Biscuit is manufactured without salt, pepper or any condiment or chemical antiseptic whatever: thus the *freshness* or peculiar properties inherent to recently slaughtered meat are preserved, and a simple and perfect guarantee furnished of the goodness of any particular parcel. To the soup made of Mr. Borden's biscuit, as already

intimated, salt and the various condiments used in soups may be added to suit the taste; also, toasted bread, vegetables, etc. as circumstances permit and fancy suggests, until the varied catalogue of the *potages* of the restaurateurs may be rivaled.

“The different portable soups and prepared meats for long voyages, which I have seen, answer only imperfectly the ends for which they have been designed. Being prepared more or less with condiments, these meats differ from freshly slaughtered animal food; they contain fibrous and indigestible portions, being more or less liquid in form, they are inconvenient to carry, and besides, thus necessitate the transportation of useless bulk. The meats put up for long voyages, in the manner just alluded to, are not wholly freed from fatty matters: these undergoing slight chemical changes in time, impair both the taste and quality of the food, into which they enter; nor are these meats so completely cooked as by Mr. Borden’s double process of boiling and baking.

“I might here insist on the very great convenience of Mr. B.’s Meat Biscuit arising from its dryness. For long voyages, it is best preserved in soldered tin cases or tight casks: but it may be carried in sacks, suspended from one’s saddle bow, for weeks or months over the prairies, or

through the desert, without risk of spoiling, using care to keep it dry; and when a case or cask is opened, it may be economised for days or weeks, according to circumstances: whereas the liquid portable soups and prepared meats must be at once eaten, or they soon spoil, especially in damp or hot weather.

“As no condiments nor chemical preservatives enter into the Meat Biscuit, it retains, unchanged and unimpaired, all its qualities of freshly slaughtered meat: and, as already intimated, furnishes its own evidence and guarantee of soundness at the time of using.

“As the Meat Biscuit requires only ten to twenty minutes to be made into a hot delicious soup, with the aid of fire and water only, its advantages for family use, for hospitals, at sea, and on long journeys, over land, and wherever it is desirable to prepare food promptly, must be obvious.

“The paramount excellence of Mr. B.’s discovery, appears to me to consist in this, that it is a Meat Biscuit—it is meat *and* bread. Human life may be sustained, as we all know, on a diet of a single kind, but the highest degree of corporeal and mental strength and health can be long maintained only by the use of both vegetable and animal food; especially when labors, fatigues, and privations are to be undergone. I believe

there does not exist in nature or art the same amount of nutriment in as small bulk or weight, and as well adapted to support, efficiently and permanently, mental and physical vigor, as is concentrated in the Meat Biscuit in question. One ounce of the biscuit meal makes a pint of rich, invigorating animal and farinaceous soup. The biscuit being converted into soup by its combination with water, all the requirements of a good food are answered, animal and vegetable aliment in a sufficient *bulky* form.

“ We have thus, in the Meat Biscuit, an article of food, partly farinaceous, and partly animal, such as the system requires for continued use; it is easily preserved in all climates, seasons, and circumstances—it is in a form the most concentrated and convenient for carriage—it is prepared with little trouble, and speedily; by its cheapness, it is accommodated to universal use.

“ The advantages of the Meat Biscuit, for hospitals, are obvious; a nice, cheap, fresh, invigorating, and easily digestible soup can be prepared in a few minutes, at the moment almost, when the taste and condition of the patient require it.

“ *For private families*, and especially small ones, and in the warm season, it is convenient by dispensing with the long hours of boiling required to prepare ordinary soups.

“ On long sea voyages, it furnishes, at a cheap

rate, that indispensable requisite of health and preventive of scurvy, an occasional ration of fresh meat. But it is not for long voyages alone, to which it is adapted. Every one who has been at sea knows the sparing use of fire on board ships. What could be more grateful, invigorating, and healthful for the sailor, dripping with water, and shivering with cold, than a bowl of hot soup, well seasoned with pepper, or other warming condiments? and how vastly more salutary than the ration of grog!

“Ten pounds, a weight easily packed by a foot traveller, is sufficient for thirty days’ subsistence. The fire for cooking is one of the greatest dangers in the Indian country, as it betrays the situation of the camp to the hostile Indian; the advantage of a small and momentary flame, such as is adequate to prepare the Meat Biscuit, will not be lightly estimated by persons whose path has been among hostile Indians. Our frontier, it is to be feared, will be long subject to Indian depredations. Mr. Borden’s discovery greatly adds to our means of prompt and efficient pursuit and protection.

“Indeed, I feel quite confident that the Meat Biscuit will, ere long, form a part of the indispensable supplies of every expedition into our western wilds, and of every military corps on our frontier.

“Every one familiar with the recent Mexican

campaigns, remembers the delays and embarrassments occasioned by want of rations of easy transportation. It was often impracticable to pursue, even a small corps of the enemy. A similar want has been the chief difficulty experienced by the French in the subjugation of Algiers; for want of subsistence, the French troops could not pursue the Arabs in their razzias, on their retreat to the mountain fastnesses. We have here the means of obviating similar difficulties, delays, and embarrassments hereafter. Every invention which shortens war, is a gain to humanity.

“For upwards of a thousand years, science, commerce and philanthropy have cast wistful and longing eyes toward that vast terra incognita, hidden in the interior of Africa. An opinion has long prevailed that, in the hitherto inaccessible regions of that immense continent, mineral wealth, vegetable productions, animals, and perhaps forms of civilization exist, as yet unknown to the rest of the world. Among the formidable obstacles to be encountered in penetrating thither, has been the want of a suitable food to sustain life on the journey from the coast. Mr. Borden’s discovery supplies this want; light and not bulky, and not liable itself to be spoiled and rendered unfit for use by the climate.

“To enumerate the various uses for ordinary life, and new occasions which the Meat Biscuit

may subserve, would extend this already long letter to a most unreasonable length; they will become more and more obvious on reflection to every man of observation; but it would, after all, be a discovery of only limited utility, unless it can be furnished at so low a price as to enter into free competition with the ordinary means of subsistence. From conversation with Mr. Borden, and learning the manner of preparation, and the cost of materials, I am satisfied it may be one of the cheapest articles of food. Putting it up in tin cases or casks, costs less than barreling a like amount of beef; being much smaller in bulk, and dry, its transportation is less. Indeed, it may be taken where the cost of freight on beef or pork would debar the introduction of these latter articles.

“Public confidence, in an article like the one which forms the subject of this letter, depends greatly on a well-grounded assurance of its careful and correct preparation. Being made without any condiments, or chemical antiseptic, its taste and smell are, at all times, evidence of its soundness and faithful manufacture.”

From Col. E. V. Sumner,

FIRST DRAGOONS.

[COPY.]

Fort Leavenworth, May 14, 1850.

MAJOR—I have tried the “Meat Biscuit,” and find it all, and more than the inventor thinks it is. To sa-

tisfy myself, I have lived upon it *entirely* for several successive days; and I am convinced that I could live upon it for months, and retain my health and strength. I thought that although it might sustain life, there would be a craving for more solid food; but it is not so—my appetite was perfectly satisfied. The inventor thinks that five ounces a day will support a man. * * * I could not use four ounces a day, made into soup, with nothing added but pepper and salt; and, moreover, I found I could entirely dispense with tea and coffee, which is a great advantage, and which has not been enumerated.

In my judgment, this is a very great discovery, and must lead to important results.

I have long thought the compression of wholesome food into a smaller compass, was one of the most important things that remained to be discovered in this age of inventions. Think of a regiment of 500 men cutting loose from all magazines for two months, with no other baggage train than 50 or 60 pack mules. At five ounces a day for each man, the weight would be 9,375 pounds, which forty-five mules would carry.

In military operations, fresh meat would generally be found and put into the soup, which would make it more substantial; but the men could subsist without it, and it would not be necessary, for their health and vigor, to transport *bread* or any other rations.

I have no idea that it will be used to this extent for some time to come, as great changes must be gradually made; but I am decidedly of opinion that we ought to commence using it in the army at once; and I believe, *for all active operations in the field*, the advantages of this food will be so apparent, that it will come into general use in a few years.

I think it will be better to have it always pulverised and kept in tin canisters to hold about 25 pounds.

The inventor had better send me a dozen of these canisters, before I march upon the plains this summer.

I shall frequently send out detachments on long excursions, and it will be a good opportunity to put this

discovery to a thorough test. Please send this letter to Gen. Gibson—and will you inform Mr. Borden of its purport? Very respectfully, your obedient servant,

E. V. SUMNER,

Brevet Col. 1st Dragoons.

From J. J. B. Wright,

Chief Surgeon of the 8th Military Department.

[EXTRACT.]

“I have examined and tried the article [the Meat Biscuit] with considerable attention to particularity—have used it in the Hospital, and at our private table; and have no hesitation in bearing testimony to its excellence as an article of diet. I think it admirably adapted for the use of troops on long marches or campaigns, where it is important to combine a large quantity of nourishment in small bulk and little weight.

“A friend of mine has in his possession a remaining quantity of the article, that was manufactured a year ago last September; which, having been kept with only ordinary attention to its preservation, is now in as good condition, apparently, as when it was first prepared.

(Signed) J. J. B. WRIGHT,

“4th January, 1851.

Surgeon U. S. Army.

“To Brig. Genl. THOS. LAWSON,

“Surgeon General of the Army.”

Other gentlemen connected with the Medical

Staff of the Army, and also Surgeons of the Navy, have investigated the merits of the Meat Biscuit, as an article of great promise and advantage to both branches of the public service.

Dr. John M. Tibbets, who crossed the plains to California in the Spring and Summer of last year, in a letter dated San Francisco, 12th February, 1851, says :

“I am happy to inform you that your *Meat Biscuit* came entirely up to your recommendation. We found it very nutritious, and on the plains, a great delicacy. We probably had soup six days out of seven for more than three months. It keeps perfectly sweet, and we have one canister of it at this date, and I assure you, it is perfectly sound. I have no doubt but that your Meat Biscuit, put up well, will keep sound for years.”

After speaking more particularly as to the uses he made of it over the plains, and its vast importance to the travelling community, he adds, “I will say, in conclusion, that a number of scientific gentlemen have examined your Meat Biscuit, and have often partaken of it on the plains, and pronounce it well adapted for the purposes for which you intend it; among whom I will mention Dr. R. Knox, of St. Louis, and Dr. H. Haughton, recently appointed one of the visitors of West Point Academy.”

The Meat Biscuit is one of the most valuable inventions that has ever been brought forward, and will be the means of enabling travellers and mariners to enjoy both vegetable and flesh in a most dainty dish at any moment.—*Scientific American*.

From J. H. Brower & Co.

Merchants, of New-York.

We hereby certify that we have now in our possession, a canister of your "Meat Biscuit," which has been on board our packet ship *Benjamin R. Milam*, during five consecutive voyages, between this port and Galveston, Texas, (comprising a period of about fourteen months,) and that the biscuit continues to be in as perfectly fresh and sound condition as when first manufactured.

(Signed) J. H. BROWER & Co.

New-York, April 30, 1851.

To GAIL BORDEN, JUN. Esq.

The following notices of the manufactory are extracted from the journals of Galveston :

The extensive establishment for the manufacture of the Meat Biscuit is now in operation in this city. The novelty of the various operations going on in this establishment, can hardly fail to strike the beholder with some degree of surprise; and he is naturally led to enquire if this is, indeed, the only establishment of the kind in the world.—*The News*.

THE MEAT BISCUIT MANUFACTORY.—This novel establishment is now in full and complete operation in this city. The buildings are commodious and well adapted to the business; the machinery entirely new,

and of the best description; and every thing about the establishment neat and clean to the very highest degree. In fact, this last seems to rank with the proprietor as the first of virtues, so scrupulously is it observed.

The biscuit resembles in appearance a light colored sugar cake. It is packed in air-tight casks, or tin canisters of different sizes, part of the biscuit being pulverized by grinding in a mill for the purpose, and thus packed with the whole biscuit.

The War Department being impressed with the importance of the new article of diet presented in the Meat Biscuit, has determined to make a thorough test of it among the troops on the frontier, and has accordingly ordered a large amount for the purpose.

Mr. Borden, as it is evident from the large amount he has invested in the enterprise, is perfectly sanguine of its success. Indeed it is no longer regarded as an experiment, and it is evident that it is destined to become a matter of great importance—not only to the Army, to all those “who go down to sea in ships,” and to emigrants across the great plains—but to Texas, through her stock-raisers, constituting a large portion of her citizens.—*Civilian*.

THE MEAT BISCUIT FACTORY.—We stepped into this establishment the other day, for the purpose of noting the *modus operandi* by which beef cattle are converted into biscuit. The arrangements and machinery are on a much more extensive scale than we had previously imagined, and the whole establishment exhibited a neatness and cleanliness which we did not expect to see. The process is carried on in a capacious brick building at the west end of the Strand, and all contrivances for facilitating the work are admirably arranged.

It is right to state that none but the best quality of beef is used, and that the whole process is performed with particular regard to cleanliness, as is apparent from the perfect order in the establishment, and the condition of the vessels and machinery used in it.—*Journal*



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