

## **Specification of Richard Archibald Brooman : yeast.**

### **Contributors**

Brooman, Richard Archibald.

### **Publication/Creation**

London : Great Seal Patent Office, 1857 (London : George E. Eyre and William Spottiswoode)

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A.D. 1856 . . . . . N° 1887.

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S P E C I F I C A T I O N

OF

RICHARD ARCHIBALD BROOMAN.

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YEAST.  
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LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

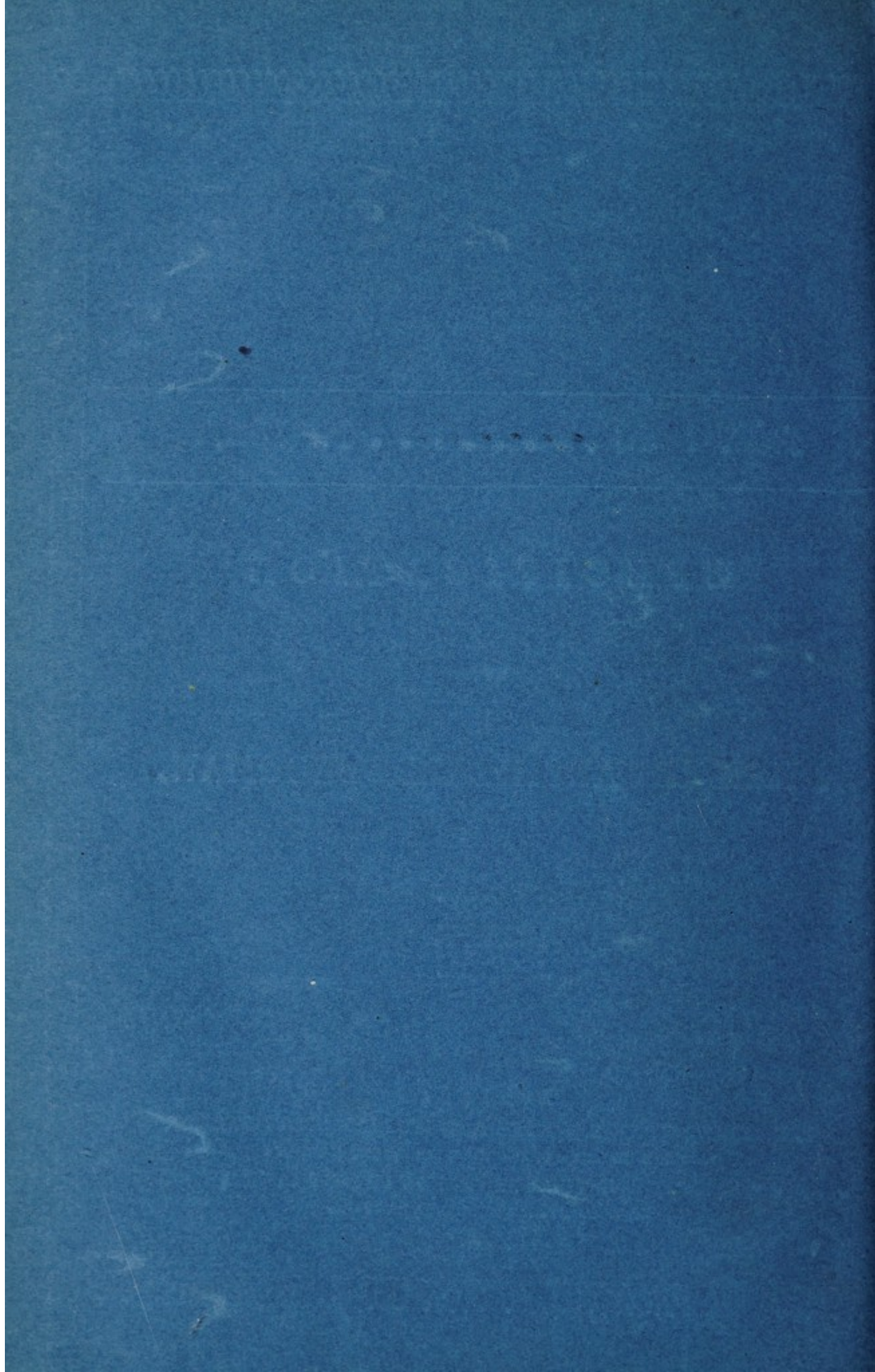
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

*Price 4s.*

1857.





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A.D. 1856 . . . . . N° 1887.

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Yeast.

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**LETTERS PATENT** to Richard Archibald Brooman, of No. 166, Fleet Street, in the City of London, Patent Agent, for the Invention of "**AN IMPROVED FERMENTING AGENT.**"—A communication.

Sealed the 3rd February 1857, and dated the 11th August 1856.

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**PROVISIONAL SPECIFICATION** left by the said Richard Archibald Brooman at the Office of the Commissioners of Patents, with his Petition, on the 11th August 1856.

I, RICHARD ARCHIBALD BROOMAN, of 166, Fleet Street, in the City of  
5 London, Patent Agent, do hereby declare the nature of the said Invention for  
"AN IMPROVED FERMENTING AGENT," (communicated to me by a foreigner  
residing abroad,) to be as follows:—

The nature of this Invention consists in making use of the investing matter  
or covering of the cereal grains, which, when ground, is called bran, instead  
10 of the materials usually employed in making yeast, some of which I find to be  
positively injurious.

This Invention is based on the well-known fact that if we take a kernel  
of a cereal grain, the delicately balanced matter known as albuminous matter,

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*Brooman's Improved Fermenting Agent.*

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the protein compounds allied to flesh and the grain, exist in the largest proportion in and next the covering. When such grain is ground and bolted, the covering and contiguous are rejected as articles of food under the form of bran. As all diseases and chemical changes proceed from this covering towards the centre of the grain, it occurred to the Inventor that the bran of 5 the cereals would ferment sooner than any other part of the grain, and experiments fully proved that such a change is more easily induced and proceeds with more regularity than when we use flour free from bran, or in part mixed with it. The bran, after the action of fermentation has commenced, becomes broken up by new chemical arrangements, and the true 10 vinous fermentation proceeds for several days. The addition of flour, and especially impure gluten, to the bran retards the fermentation, and tends to produce putrefaction or animal matter fermentation, while the vinous fermentation of the pure bran shews no such tendency, the final result being the acetous fermentation only. When we use pure bran, fermentation commences 15 after twenty-four to thirty hours, while ordinary flour by the same treatment requires one hundred and sixty-eight to one hundred and ninety-two hours' time before it reaches the same stage. The spores of the yeast plant existing in the covering of the grain are retained by the bran, very few passing into the flour. The yeast, therefore, changes grape or sugar uniformly into 20 alcohol without risk of the acetous or putrefactive fermentation, and the mash for beer or spirits thus affords more alcohol than is usually obtained.

To enable others to make this improved fermenting agent or improved yeast, I proceed to describe the method of making it. I take bran of wheat, as rejected by the bolting machine, and having placed it in a warm room at 25 85° to 90° Fahrenheit, I mix it uniformly, so as to dampen it to a thick paste with water at 85° to 90° Fahrenheit, and cover the vessel close. After the lapse of 30 hours, or generally after 24 hours, the bran is converted into this improved fermenting agent or improved yeast. I use and prefer the bran of wheat in all cases when, as in beer making and in manufacturing spirits, 30 a continuous pure vinous fermentation is desirable; and when the fermenting agent is added to the mash, a mixture of sugar and water, I advise the fermenting agent to be stirred in frequently during the 24 hours. In bread making and other cases, bran of rye or maize may be substituted for wheat bran. 35

I am aware that barm and yeast have been rendered dry and portable by the use of bran and sawdust mixed with the fluid yeast, and also that yeast and dry flour have been mixed to retard fermentation. Both these results

*Brooman's Improved Fermenting Agent.*

I disclaim, and confine this Invention to the use of pure bran for obtaining a better agent for the vinous fermentation at a lower cost than has been obtained heretofore.

**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed  
5 by the said Richard Archibald Brooman in the Great Seal Patent Office on the 10th February 1857.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, RICHARD ARCHIBALD BROOMAN, of 166, Fleet Street, in the City of London, Patent Agent, send greeting.**

10 **WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eleventh day of August, in the year of our Lord One thousand eight hundred and fifty-six, in the twentieth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Richard Archibald Brooman, Her special licence that I, the said Richard  
15 Archibald Brooman, my executors, administrators, and assigns, or such others as I, the said Richard Archibald Brooman, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom  
20 of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**AN IMPROVED FERMENTING AGENT,**" communicated to me by a foreigner residing abroad, upon the condition (amongst others) that I, the said Richard Archibald Brooman, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals,  
25 should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

**NOW KNOW YE,** that I, the said Richard Archibald Brooman, do hereby  
30 declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

The nature of this Invention consists in making use of the investing matter or covering of the cereal grains, which, when ground, is called bran, instead

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*Brooman's Improved Fermenting Agent.*

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of the materials usually employed in making yeast, some of which the Inventor has found to be positively injurious.

This Invention is based on the well-known fact that if we take a kernel of a cereal grain, the delicately balanced matter known as albuminous matter, the protein compound allied to flesh and the grain, exists in the largest proportion in and next the covering. When such grain is ground and bolted, the covering and contiguous are rejected as articles of food under the form of bran. As all diseases and chemical changes proceed from this covering towards the centre of the grain, it occurred to the Inventor that the bran of the cereals would ferment sooner than any other part of the grain would do, and experiments fully proved that such a change is more easily induced and proceeds with more regularity than when we use flour free from bran, or in part mixed with it. The bran, after the action of fermentation has commenced, becomes broken up by new chemical arrangements, and the true vinous fermentation proceeds for several days. The addition of flour, and especially impure gluten, to the bran retards fermentation, and tends to produce putrefaction or animal matter fermentation, while the vinous fermentation of the pure bran shews no such tendency, the final result being the acetous fermentation only. When we use pure bran, fermentation commences after twenty-four to thirty hours, while ordinary flour by the same treatment requires one hundred and sixty-eight to one hundred and ninety-two hours' time before it reaches the same stage. The spores of the yeast plant existing in the covering of the grain are retained by the bran, very few passing in to the flour. The yeast, therefore, changes grape or sugar uniformly into alcohol without risk of the acetous or putrefactive fermentation, and the mash for beer or spirits thus affords more alcohol than is usually obtained.

I proceed to describe the method of making this improved fermenting agent or yeast. I take bran of wheat, as rejected by the bolting machine, and having placed it in a warm room at 85° Fahrenheit, I mix it uniformly to a thick paste with water at 85° or 90° Fahrenheit, and cover the vessel close. After the lapse of thirty hours, or generally after twenty-four hours, the bran is converted into yeast. I use and prefer the bran of wheat in all cases. When, as in beer making, and in manufacturing spirits, a continuous pure vinous fermentation is desirable, and when the yeast is added to the mash or mixture of sugar and water, I advise the yeast to be stirred in frequently during the twenty-four hours. In bread making, and other cases, bran of rye or maize may be substituted for wheat bran.

The Inventor is aware that barm and yeast have been rendered dry and

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*Brooman's Improved Fermenting Agent.*

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portable by the use of bran and sawdust mixed with the fluid yeast, and also that yeast and dry flour have been mixed to retard fermentation. Both these results I disclaim, and confine this Invention to the use of pure bran for obtaining a better fermenting agent or yeast for the vinous fermentation at  
5 a lower cost than heretofore.

And having now described the nature of the said Invention, and in what manner the same is to be performed, I declare that what I claim is the employment of bran of the cereal grain for producing a fermenting agent or yeast without the aid of the flour as usually obtained from such grains.

10 In witness whereof, I, the said Richard Archibald Brooman, have hereunto set my hand and seal, this Sixth day of February, One thousand eight hundred and fifty-seven.

R. A. BROOMAN. (L.S.)

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LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
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N. A. BROOKMAN (Esq.)

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