

Case No. 12,135.

RUMFORD CHEMICAL WORKS v. LAUER.

[10 Blatchf. 122; 3 O. G. 349; 5 Fish. Pat. Cas. 615;

Merw. Pat. Inv. 133.]¹

Circuit Court, S. D. New York.

Sept. 13, 1872.

PATENTS—NOVELTY—SEVERAL

CLAIMS—INVENTION—BAKING POWDER.

1. The first and second claims of the reissued letters patent granted to the Rumford Chemical Works. June 9th, 1868, as assignees of Eben N. Horsford, as inventor, for an "improvement in pulverulent acid for use in the preparation of soda powders, farinaceous food, and other purposes," the original patent having been granted to Horsford April 22d, 1856, and reissued to the plaintiffs May 7th, 1867, and again reissued to them June 9th, 1868, namely: (1) "As a new manufacture, the above described pulverulent phosphoric acid;" (2) "the manufacture of the above described pulverulent phosphoric acid, so that it may be applied in the manner and for the purposes described," are void for want of novelty, regarding the second claim as one to the described process of making the acid claimed in the first claim as a new manufacture.
2. Two chemical processes *held* to be the same, although the proportions of the ingredients used in the two were, not the same.
3. The products of the two processes *held* to be the same.
4. The 9th section of the act of March 3, 1837 (5 Stat. 194), is designed to allow a patentee to recover on one claim of his patent, notwithstanding other claims in it are void for want of novelty, but it requires that the parts claimed without right, and the parts rightfully claimed, shall be definitely distinguished from each other in the claims.

[Cited in brief in *Burke v. Partridge*, 58 N. H. 351.]

5. The third claim of the said patent, namely: (3) "The mixing, in the preparation of farinaceous food, with flour, of a powder or powders, such as described, consisting of ingredients of which phosphoric acid, or acid phosphates, and alkaline carbonates are the active agents, for the purpose of liberating carbonic acid, as described, when subjected to moisture or heat, or both." is a claim to the mixing of the acid and the alkali with the flour, in a dry

state, and stopping at that point without applying moisture or heat.

6. Such claim is void, in view of the letters patent granted by the United States, May 1st, 1349 1849, to John Fowler, which describe a mixture consisting of flour and dry, powdered tartaric acid, and a dry, powdered, alkaline carbonate, requiring only the addition of water to make dough. The substitution of phosphoric acid, or acid phosphate, in the mixture referred to in such claim, in place of the acid named in Fowler's patent, was a mere formal and colorable alteration of Fowler's mixture, and not an invention, and not the subject of a patent.
7. The fourth claim of the said patent, namely: (4) "The use of phosphoric acid, or acid phosphates, when employed with alkaline carbonates, as a substitute for ferment or leaven, in the preparation of farinaceous food," is a claim to the actual use of such acid and alkali in making raised dough, and is valid. It required experiment and invention to find out whether phosphoric acid could be used in place of tartaric acid practically and successfully, and with safety to health.
8. Proper form of decree, on the infringement of the fourth claim. Motion to amend a bill of complaint denied. Motion to open proofs, and for a rehearing, granted.

This was a bill in equity, brought by the Rumford Chemical Works, a Rhode Island corporation, founded on reissued letters patent granted to the plaintiffs, June 9th, 1868 [No. 2,979], for an "improvement in pulverulent acid for use in the preparation of soda powders, farinaceous food, and for other purposes," as assignees of the alleged inventor, Eben N. Horsford. The original patent was granted to Horsford April 22d, 1856 [No. 14,722], and was reissued to the plaintiffs May 7th, 1867, and reissued to them a second time June 9th, 1868. The infringement alleged in the bill was the making and selling by the defendant [John B. Lauer] of pulverulent acid, in infringement of said reissued patent of 1868. The defendant, in his answer, admitted that he has made and sold improved acid compound for use in baking and cooking, under letters patent granted to him February 19th, 1867. The specification of the plaintiffs' patent stated the

invention to be “a new pulverulent acid for use in the preparation of soda powders, farinaceous food, and for other purposes.” It then described the acid and the mode of its preparation. It said: “Carefully washed and properly burned bones, after being ground, are put into freshly diluted oil of vitriol, with continual stirring and in the following proportions: Five hundred pounds of the above described bones, (sometimes called bone ash), four hundred pounds of oil of vitriol, and one thousand pounds of water. These ingredients are stirred, from time to time, for about three days, when, ordinarily, the action will be completed, and the resultant products will be phosphoric acid, superphosphates and sulphate of lime, or gypsum, with a small proportion of salts of magnesia and soda, in a paste-like mass.” Various methods were then described for making this mass pulverulent: (1st.) Mixing it, while moist, with any farinaceous substance, drying it slowly in the sun or with artificial heat not above 150° of Fahrenheit, and pulverizing it; (2d.) mixing it with freshly burned gypsum, drying it in the sun, or by artificial heat, and pulverizing it; (3d.) mixing it with stearine or other fatty bodies, drying it and pulverizing it; (4th.) leaching the mass, mixing the concentrated extracts with burned gypsum or stearine, drying it and pulverizing it; (5th.) drying and pulverizing it without admixture. All of these modes were stated to have given desirable results, but a preferable mode was then described, which consisted in leaching the mass, concentrating the mass to 25° Beaume, thereby obtaining a solution consisting of phosphoric acid and acid phosphate of lime, with slight traces of other salts, substantially freed from gypsum or sulphate of lime, heating ten gallons of this mixture to boiling, adding four pounds of perfectly white bone ash, continuing the boiling until the concentrated liquid mass, containing in solution the added bone ash, became pasty, cooling the mass, adding seventy-

six pounds of wheaten flour, mixed to a uniform paste, adding sixteen pounds of potato starch, carefully mixed, sifting it through a sieve with quarter inch meshes, drying it thoroughly at a temperature of not over 150° Fahrenheit, and pulverizing it. The sole object of these manipulations of the paste-like mass was to obtain it in the shape of powder. The specification said: "The object is to obtain phosphoric acid in such form, that is, a pulverulent powder, so that it may be intimately mixed with any alkaline carbonates, or other sensitive chemical compounds, without decomposing them or entering into combination with them, except upon the addition of moisture or the application of artificial heat. This requires that the phosphoric acid or acid phosphates be mixed with some neutral agent, as flour, or starch, gypsum, &c, so that action of the acid shall be prevented while dry, and shall, when moisture or heat is applied, be prompt, thorough and equally diffused. * * * As a dry, brittle powder, the article has the advantages of a pulverulent acid, may be handled, weighed, stirred, &c, as tartaric acid or cream tartar; and, as a substitute for these and a variety of pulverulent acids and acid salts, it has many uses in manufacture. It may, among other uses, be mixed with dry alkaline carbonates, (carbonate of potassa or carbonate of soda,) and remain in this state, without evolution of carbonic acid, until moistened or heated; thus making it a substitute for cream tartar and tartaric acid in the preparation of yeast powder or baking powder. I am aware, that acid phosphates have been used as fertilizers; but, because of the method pursued in their manufacture, their coarseness, dark color and offensive impurities, they were totally unfit to be used in the preparation of food. I am also aware, that acid phosphates and phosphoric acid, in a liquid, or more or less viscid condition, have been prepared in the laboratory of the chemist; but neither of these forms

of phosphoric acid or acid phosphates possessed the properties essential to the purpose for which I design 1350 to employ them. The body which I have invented and above described is a form of acid phosphate of lime, or of mixed acid phosphate of lime and phosphoric acid, in which the phosphoric acid is the active and valuable constituent, free from the objectionable qualities of the above mentioned bodies. It is a dry, fine, white, or nearly white, homogeneous powder, unobjectionable on account of odor, taste or composition, is an essential and important element in healthful nutrition, and is suited to be employed as the acid ingredient in the preparation of self-raising farinaceous food. In order to make the article possessing these qualities and suitable to this office, it is necessary that a powder should be made which can be not only evenly comminuted and diluted, but one which shall have so little affinity for the moisture of the atmosphere that it can be mixed with flour and bicarbonate of soda, in the practical preparation of self-raising flour. * * * To meet the wants I have contemplated, the phosphoric acid must be a dry, fine, homogeneous powder, white, or nearly white, and unobjectionable on account of smell, or taste, or healthfulness. It must be a dry powder, to permit it to be mixed with flour and bicarbonate of soda, and not evolve carbonic acid prematurely. If sticky, it would mix unequally, and, if moist, it would at once act on the bicarbonate of soda, to decompose it and set free carbonic acid. It must be a fine powder, in order, so to speak, that, with proper distribution, each minute quantity of flour may be brought into juxtaposition with a particle of acid and a particle of bicarbonate of soda, so that, upon the application of moisture, the carbonic acid of the bicarbonate of soda shall be so uniformly liberated throughout the entire mass of the dough, that it shall secure a uniform finely porous structure throughout the loaf. It must be a

homogeneous powder; that is, all particles must have a like acidity, in order that the decomposition of the alkaline carbonates shall be uniform, and thus prevent portions of the bread from becoming dark colored, heavy and alkaline, by the action of undecomposed bicarbonate, while certain other portions may become sour, on account of uncombined acid. * * * The acidified mixture above described as acid phosphate, or acid phosphate and free phosphoric acid, I have called 'pulverulent phosphoric acid.' The acid agent which this preparation places in available condition, is phosphoric acid, as tartaric acid is the available acid agent in cream tartar, and this is used as a substitute for tartaric acid or cream tartar, to decompose alkaline carbonates, as stated above, in the well-known process of making bread, cake, &c, without the use of ferment." The claims of the patent were as follows: "1st I claim, as a new manufacture, the above described pulverulent phosphoric acid. 2d. I claim the manufacture of the above described pulverulent phosphoric acid, so that it may be applied in the manner and for the purposes described. 3d. I claim the mixing, in the preparation of farinaceous food, with flour, of a powder or powders, such as described, consisting of ingredients of which phosphoric acid or acid phosphates and alkaline carbonates are the active agents, for the purpose of liberating carbonic acid, as described, when subjected to moisture or heat or both. 4th. The use of phosphoric acid or acid phosphates, when employed with alkaline carbonates, as a substitute for ferment or leaven, in the preparation of farinaceous food."

The case was brought to final hearing, on pleadings and proofs, and the court (Blatchford, District Judge,) held, that, as the alleged infringement charged in the bill was confined to the making and selling of pulverulent acid, in infringement of the patent, only the first two claims of the patent were involved; that the first claim was a claim to the described pulverulent

phosphoric acid, as a new article of manufacture; and that whether the second claim was to be regarded as a claim to the process of making such acid, or as being, in substance, the same as the first claim, in another form, it was unnecessary to determine in the view taken of the case, by the court.

The defences set up were, that Horsford was not the original and first inventor of anything which had been made and sold by the defendant, and that the defendant had not infringed the patent. On the question of novelty, the defendant undertook to establish that Horsford was not the original and first inventor of a pulverulent acid phosphate of lime suitable to be used, with bicarbonate of soda, as a substitute for ferment or leaven, in the preparation of farinaceous food; and that an acid phosphate possessing all the properties and qualities of the acid phosphate described in the plaintiff's patent was known in the arts prior to the date of Horsford's invention. The article relied on by the defendant as antedating Horsford's acid, was what was known as the "three-fourths phosphate" of Berzelius, described in the Hand Book of Chemistry, by Leopold Gmelin, volume 3, page 195, published in 1846. It was claimed, by the defendant, that such three-fourths phosphate was an acid phosphate of lime, possessing all the properties and qualities specified in the plaintiffs' patent as being possessed by Horsford's pulverulent phosphoric acid, and as being necessary, in admixture with bicarbonate of soda, for the preparation of self-raising, farinaceous bread: that it was a dry, non-hygroscopic, fine, white, homogeneous powder, unobjectionable on account of odor, taste or composition; that the phosphoric acid of such powder was the active agent, when the powder was mixed with bicarbonate of soda and moistened, in liberating carbonic acid, to give porosity to dough; and that such acid, in uniting with the soda of the carbonate,

to evolve carbonic acid gas, formed phosphate of soda, which 1351 was deposited in the dough. The three-fourths phosphate was so called, as having a chemical composition of four atoms of oxide of lime and three atoms of phosphoric acid. The entire passage in Gmelin describing this phosphate was as follows: "4 Ca O, 3 PO⁵. c. Three-fourths Phosphate. Aqueous solution of phosphoric acid is saturated with the salt (a,) the solution mixed with alcohol, and the white precipitate formed washed with alcohol and dried. White powder, having an acid taste and reddening litmus. With water it separates into the insoluble salt b and an acid salt, which remains in solution (with one atom of acid?) Berzelius, Ann. Chim. Phys. 2, 167. If the salt a, recently precipitated, is immersed in a solution of hydrated phosphoric acid ignited just before it was dissolved in water, it gradually changes to a tenacious acid mass, which may be drawn out into threads and sticks to the teeth; after drying, it becomes yellow, transparent and very friable. This substance has the same composition as c, and is decomposed in the same manner by water, but contains metaphosphoric acid. Berzelius, Lehrb. 4, 277. Graham regards this compound as metaphosphate of lime."

The court held, that the first claim of the plaintiffs' patent, if valid, would be infringed by the manufacture, sale or use of any dry, fine, homogeneous powder, containing, as an active agent, phosphoric acid, in an available condition to be used as a substitute for tartaric acid, in decomposing an alkaline carbonate, in making bread without the use of ferment; that the prior existence of any such powder was an answer to such first claim; that the testimony showed, that, by following the description in Gmelin, a dry, fine, homogeneous powder was produced, containing, as an active agent, phosphoric acid, in an available condition

to be used as a substitute for other acid, in decomposing an alkaline carbonate, in making bread without the use of ferment, and which was used for that purpose successfully, and which powder did not, by being kept, lose its acid strength or become inert, or absorb moisture from the air, or part with any of the qualities defined in the plaintiffs' patent as necessary in such a powder; that the pulverulent phosphoric acid, as a chemical substance, claimed in the first claim of the plaintiffs' patent, was shown, by the evidence, to have existed prior to the invention of it by Horsford; and that the first claim was, therefore, void, for want of novelty.

The court held, as to the second claim, that, if it were regarded as a claim to the process described in the patent for making the acid, the defendant had not infringed it, because his process was as different from that of the plaintiffs', as the plaintiffs' was different from that described by Berzelius or Gmelin; that the defendant dissolved bone black in a mixture of muriatic acid and water, filtered the product, added sulphuric acid, and dried the resulting mass by heat, till it crumbled into a powder which was white and acid, and could be used, in connection with bicarbonate of soda, to liberate carbonic acid, to make bread; that bone black was burned bones; that the muriatic acid dissolved the phosphate of lime in the bones from the carbon, the filtering got rid of the carbon, the action of the sulphuric acid created sulphate of lime, acid phosphate of lime and free phosphoric acid, and the heat drove off the muriatic acid; that Horsford removed the carbon from the bones by fire before he applied the sulphuric acid, while the defendant removed the carbon from the bones by muriatic acid, and then got rid of that acid by heat; that Horsford burned away the carbon from the phosphate of lime in the bones, while the defendant dissolved away the phosphate of lime from the carbon;

that the products produced by the two processes were substantially identical with each other and with the product produced by the process of Berzelius and Gmelin, as powders containing phosphoric acid as an available agent to decompose alkaline carbonates, for the purpose of liberating carbonic acid, to give porosity to dough, but the three processes differed each from the other, in substance; that it appeared, from the evidence, that the use of sulphuric acid, to act on what was indifferently known as bone earth, or bone ash, or bone phosphate, being common bones containing phosphate of lime, and thus form sulphate of lime and liberate phosphoric acid or an acid phosphate of lime, was well known before the date of the alleged invention of Horsford; that the defendant did not, by the use of the process described in his patent, infringe the second claim of the plaintiffs' patent, considered as a claim to the process described in that patent for making the pulverulent acid therein described: and that, if the second claim were considered as a claim to the acid, as a product, the conclusions arrived at in regard to the first claim applied to it

The third and fourth claims of the plaintiffs' patent not being involved in the case, the court remarked, that the questions, so largely discussed by the counsel for the plaintiffs, on the argument, as to whether Horsford was not the first person who used, as a substitute for yeast, a powder containing phosphoric acid as its active agent, and as to whether he was not entitled to a patent for applying phosphoric acid, in connection with an alkaline carbonate, to the raising of dough, and as to whether the third and fourth claims of the plaintiffs' patent were not valid, as containing inventions which involved the necessity or experiments, to determine whether phosphoric acid, when artificially introduced into bread, would be healthful, and whether and how the acid could be mixed with flour and with an alkaline carbonate, and remain inactive until moistened

or heated, were questions which would arise on the patent when a suit was 1352 brought on it for the infringement of its third and fourth claims, but they were not presented in this case; and that it might be, that there were claims which Horsford could make and hold in reference to certain constituents and qualities of the pulverulent phosphoric acid that was made by his process, but the broad claim made to the acid described was not tenable. The conclusion was, that the bill must be dismissed.

Before a decree was signed or entered on such decision, the plaintiffs moved to amend the bill, by adding to the averment that the defendant had made and sold pulverulent acid in infringement of the patent, an averment that he had used such acid. The motion was made on the ground that, as the answer of the defendant admitted that the defendant had made, used and sold improved acid compound for use in baking and cooking, under letters patent granted to him February 19th, 1867, such averment of user would, in connection with such admission, raise an issue as to the infringement of the third and fourth claims of the patent. It was shown, however, by affidavit, on the part of the defendant, that he had never used any acid phosphate with an alkaline carbonate, except in a few instances, for the purpose of experiment, and had never mixed any acid phosphate with an alkaline carbonate for sale, to be used in the preparation of farinaceous food, or for any other purpose; and it did not appear that the defendant had used the plaintiffs' acid otherwise than by making and selling the acid compound patented to the defendant. The court, therefore, held, that the defendant had not infringed the third and fourth claims of the patent; that the issues as to the first and second claims were raised by the averments in the bill as to making and selling the acid, as fully as if the averment in regard to using

it were contained in the bill; and that the motion to amend the bill must be denied.

At the same time, a motion was made, on the part of the plaintiffs, to open the proofs in the case, for further testimony, and for a reargument. The ground of the motion was, that two of the chemical experts for the plaintiffs did not, in preparing specimens which they produced as specimens of the three-fourths phosphate of Berzelius, follow the process of manufacture described in the public works referred to, in that such specimens differed in chemical composition from such three-fourths phosphate, and that they boiled the solutions they employed. It was also urged, that a three-fourths phosphate, fulfilling the formula of Berzelius, could be produced without the use of heat, and had been so produced by the plaintiffs' expert, and was, when so produced, practically inert and useless as a constituent of a baking-powder. The court held, that that branch of the case had not been fully developed in the testimony taken for the hearing; that the question as to the effect of using heat in the process had not been gone into to the extent which seemed desirable; that the question as to whether the substance produced as the three-fourths phosphate was made by the process of Berzelius, was a vital question in the case; and that both parties ought to be allowed to take further testimony as to the novelty of what was covered by the first and second claims of the plaintiffs' patent, as affected by the descriptions in the public works referred to, the case to be then heard on the testimony already taken and on the new proofs to be taken. The case now came on to be reheard.

William Whiting and Clarence A. Seward, for plaintiffs.

Charles M. Keller, for defendant.

BLATCHFORD, District Judge. Although the announced decision of the court, on the motion of

the plaintiffs for a re-argument, was, that both parties would be allowed to take further testimony as to the novelty of what is covered by the first and second claims of the plaintiffs' patent, as affected by the description of the three-fourths phosphate in the Lehrbuch and in Gmelin, yet the formal order entered was an unrestricted one, reopening the cause, with liberty to either party to take further proofs, and to bring on the cause for a rehearing on the proofs then already taken and such further proofs as might be taken. A large mass of further testimony has been taken, on all the points involved in the cause, and it has been reargued.

The first two claims of the patent are the only ones involved in this suit. As to them, the contest is as to their novelty. Regarding the second claim as a claim to the described process of making the acid claimed in the first claim as a new manufacture, the process so described consists, so far as substance is concerned, in mixing together 500 pounds of bone ash, (made by grinding burned bones,) and 400 pounds of freshly diluted oil of vitriol, (which is sulphuric acid,) and 1000 pounds of, to consist of phosphoric acid, superphosphates, and sulphate of lime, or gypsum, with a small proportion of salts of magnesia and soda.

The process of the plaintiffs' specification is fully anticipated by the description of Lawes' process of making a dry superphosphate, which was not before the court on the former hearing. The Lawes process was published in England in 1845, in an article in volume 5 of the Journal of the Royal Agricultural Society of England, entitled: "On the Action and Application of Dissolved Bones." The article says: "Where calcined bones are used, owing to their containing merely the earthy portions of the bones, and to their being so easily dissolved, a dry superphosphate may be formed. For effecting this, Mr. Lawes * * *

1353 gives the following excellent and simple directions

for making this superphosphate: Calcined bones are to be reduced, by grinding, to a very fine powder, and placed in an iron pan, with an equal weight of water, (a cast iron trough such as are sold for holding water for cattle will do.) A man with a spade must mix the bone with the water until every particle is wet. While the man is stirring, an assistant empties, at once, into the pan, sulphuric acid, 60 parts, by weight, to every 100 parts of bone. The acid is poured in at once, and not in a thin stream, as commonly recommended. The stirring is continued for about three minutes, and the material is then thrown out. With four common farm laborers, and two pans, I have mixed two tons in one day. The larger the heap that is made, the more perfect the decomposition, as the heap remains intensely hot for a long time. It is necessary to spread the superphosphate out to the air for a few days, that it may become dry." The evidence shows, that the Lawes process is the same as that of the plaintiffs' patent. In each, ground calcined bones are mixed with water and sulphuric acid, the proper chemical action and decomposition are allowed to take place, and the result is a dry product, capable of being pulverized. The relative proportions of the three materials—bone ash, sulphuric acid and water—differ somewhat in the two processes. Lawes uses 10 parts in weight of bone, to 10 of water, and 6 of sulphuric acid. The plaintiffs' prescribe 10 of bone to 20 of water and 8 of sulphuric acid. But, their specification says: "It will be obvious to any practical chemist, that the above described processes of producing this pulverulent acid may be modified in various ways. The proportions of the agents employed may be varied somewhat, without materially affecting the result." The prescribed quantity of sulphuric acid in the patent is larger, in proportion, to the bone, than in Lawes' process. But, it is shown to have been a well-known chemical fact, that the greater or less acid strength of the product of such a mixture

would be due to the greater or less relative proportion of sulphuric acid used. There is no invention in so varying proportions, as the specification itself, in effect, states. The process remains, in substance, the same. There can be no doubt that Lawes' process, if it had been first resorted to subsequently to the issue of the plaintiffs' patent, would be an infringement of that patent.

The processes being the same, the natural conclusion would be that the products would be substantially alike. The evidence is to that effect. It shows, that the product of the Lawes process, as described, is, to all practical intents and purposes, the same thing as the product of the plaintiffs' process, and capable of being used for the purposes set forth in the specification of the plaintiffs' patent. It is no invention, in preparing the article to be used as an ingredient in food, to carefully wash the bones clean. The direction, as to each process, is simply to use sulphuric acid or oil of vitriol, and calcined or burned bones, generally. Any impurity of extraneous matter that would exist in the sulphuric acid or the bones, or in the product because of the quality of such acid or of such bones, in the one case, would exist in the other. The evidence shows, that the Lawes product is equally non-hygroscopic with that of the plaintiffs' process; that the one is as much entitled to the appellation of a dry powder as the other, and no more; and that the Lawes product has sufficient acid strength, of a permanent character, for use for the special purpose of an ingredient in a yeast powder.

The first two claims of the plaintiffs' patent are, therefore, anticipated by the Lawes process and product. This conclusion makes it unnecessary to consider any of the other matters discussed on the question of novelty.

It was suggested, on the hearing, that, as the defendant uses starch with his acid, and as the

plaintiffs' patent states, as its preferred method of preparing the acid, the use of starch in it, the first claim ought, at all events, to be held good for the acid when prepared with starch in it, on the ground that starch had never before been used as an ingredient in it. This view was urged, on the idea that the case falls within the 9th section of the act of March 3, 1837 (5 Stat. 194), which provides, that, when a patentee claims, in his specification, "to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and bona fide his own, provided, it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other parts so claimed without right as aforesaid; and every such patentee, his executors, administrators and assigns, whether of the whole or of a sectional interest therein, shall be entitled to maintain a suit at law or in equity on such patent, for any infringement of such part of the invention or discovery as shall be bona fide his own, as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim." This section has no application to the case. It is designed to allow a patentee to recover on one claim of his patent, notwithstanding other claims in it are void for want of novelty. But, it requires that the parts claimed without right, and the parts rightfully claimed, shall be definitely distinguishable, as matter of fact, on the face of the claims, that is, be definitely distinguished from each other in the claims. Here, there is no distinction, in the claims, between acid prepared with starch and acid prepared without starch. If there 1354 were a claim to the acid prepared with starch, and a separate claim to the acid prepared

without starch, there might, under the statute, be a recovery on the former, although the latter were void for want of novelty, provided there had been no unreasonable delay in filing a disclaimer to the latter. The bill must be dismissed, with costs.

At the same time with the foregoing case, the case of the same plaintiffs against John Hecker and George V. Hecker, founded on the same patent, was heard, being argued by the same counsel.

BLATCHFORD, District Judge. The patent involved in this case is the same one sued on in the case brought by the same plaintiffs against Lauer, just decided. The present defendants are charged with infringing all four of the claims of the patent. The first two are disposed of by the decision in the case against Lauer.

The third and fourth claims are as follows: "3. I claim the mixing, in the preparation of farinaceous food, with flour, of a powder or powders, such as described, consisting of ingredients of which phosphoric acid, or acid phosphates, and alkaline carbonates, are the active agents, for the purpose of liberating carbonic acid, as described, when subjected to moisture or heat, or both. 4. The use of phosphoric acid, or acid phosphates, when employed with alkaline carbonates, as a substitute for ferment or leaven, in the preparation of farinaceous food."

The proper construction of the third claim is, that it claims the mixing of the acid and the alkali with flour, in a dry state, and stopping at that point, without applying moisture or heat. In other words, it claims the preparing of self-raising flour, containing the powder or powders named in the claim, and requiring merely the application of moisture or heat, to enable it to be leavened. Against the novelty of this claim, the defendants set up a patent granted by the United States, May 1st, 1849, to John Fowler, assignee of Henry Jones, the inventor. The specification of the

Fowler patent says, that the invention covered by it consists "in the adding to a certain weight of flour, such quantities of alkalines and acids, sugar and salt, as shall, by the addition of water only, enable such prepared flour to be manufactured into bread, &c, without the use of fermenting matter." The specification then describes a mode of making the prepared flour, by first mixing with one hundred weight of dry flour ten and a half ounces of fine, dry tartaric acid, and then, after two or three days, mixing with the flour and acid, twelve ounces of bicarbonate of soda, or fourteen ounces of bicarbonate of potassa, in fine powder, twenty ounces of muriate of soda, (common salt,) and eight ounces of loaf sugar, in fine powder. The specification adds: "The quantities of acids and alkalies may have to be slightly varied, according to their quality; but the point to be attained is the neutralization of both. My prepared flour, when used to make bread, biscuits, or other like food, only requires to be made into dough with cold water, in the proportion of ten ounces of water to one pound of flour for bread, and about six ounces to one pound of flour for biscuits, and baked at once in a well heated oven I do not claim mixing acid and alkali with flour, as a substitute for yeast, nor do I claim mixing one of these ingredients with flour in the dry state, when the other is dissolved, for making bread." The claim is this: "Mixing both the acid and alkali with the flour in the dry state, sugar and salt being added or not, at will, substantially in the manner and for the purpose herein set forth, as a new article of manufacture."

In view of the Fowler patent, it is impossible to see any patentable novelty in the third claim of the plaintiffs' patent. The prepared flour made with the ingredients named in said claim contains the phosphoric acid, or the acid phosphate, as a mere equivalent for the tartaric acid of Fowler's prepared flour; as much so as a screw or a lever is a mechanical

equivalent for a pulley. Any pulverulent acid, capable, on the application of heat or moisture, of liberating carbonic acid to make the dough porous, is, in the prepared flour, the equivalent of any other pulverulent acid having the like capacity, so far as regards such prepared flour, before heat or moisture is applied. Everything of substantive, patentable invention, in regard to prepared flour, as composed of an acid in dry powder, and an alkaline carbonate in dry powder, mixed with dry flour, is found in the patent of Fowler. Especially is this so, in regard to the plaintiffs' patent, in view of the fact that the specification of that patent discloses no mode of practically mixing the ingredients composing the self-raising flour, but merely states that the acid "may be mixed with flour and bi-carbon-ate of soda," as a substitute for cream tartar and tartaric acid, "in the practical preparation of self-raising flour."

The fourth claim is a claim to the use of the acid and an alkaline carbonate, as a substitute for ferment or leaven, in the preparation of farinaceous food. This is a claim to the actual use of such acid and alkali in making raised dough. Nothing is shown which anticipates this claim, and the invention covered by it is patentable. Horsford was the first to use phosphoric acid, or an acid phosphate, for the purpose. It required experiment and invention to find out whether phosphoric acid could be used in place of tartaric acid, practically and successfully, and with safety to health. As it is admitted, and proved, that the defendants have used what is substantially the same acid described in the plaintiffs' patent, mixed with an alkaline carbonate, as a substitute for leaven, in making bread from flour, they have infringed the fourth claim of that patent, and there must be a decree for the plaintiffs, for an account 1355 of profits, as to that claim. The question of costs is reserved.

On the settlement of the decree, in the case against the Heckers, the plaintiffs asked to have the court

review its decision as to the third claim, and to consider whether, in the light of the decision of the supreme court in the case of *Gould v. Bees* [15 Wall. (82 U. S.) 187], the third claim was not valid. They also asked that the decree should direct that the account to be taken, on the infringement of the fourth claim, should include an account of the profits derived by the defendants from the sale of the mixture described in the third claim, on the ground that the defendants, by selling such mixture, were joint infringers of the fourth claim, with every purchaser of such mixture from them, who used it in infringement of the fourth claim.

BLATCHFORD, District Judge. In respect to the validity of the third claim of the plaintiffs' patent, I am referred to the case of *Gould v. Rees* [supra], decided by the supreme court of the United States. I do not understand that any different doctrine is laid down in the opinion delivered in *Gould v. Rees* from that which is laid down in the opinion delivered, in the same court, in *Seymour v. Osborne*, 11 Wall. [78 U. S.] 516, 555, 556, by the same judge, Mr. Justice Clifford. In view of the construction given by me to the third claim of the plaintiffs' patent, and of what is found in the Fowler patent, and even irrespective of the evidence as to what was known, prior to the plaintiffs' patent, in regard to phosphoric acid, and acid phosphate, and their chemical and other qualities and properties, I am confirmed, on full reflection, in the views and conclusions stated in my former decision in this case, and am of the opinion, that, in respect to such third claim, the substitution of phosphoric acid or acid phosphate, in the mixture referred to in such claim, in place of the acid named in Fowler's patent, was a mere formal and colorable alteration of Fowler's mixture, within the doctrine of *Seymour v. Osborne* [Case No. 12,688], and not an invention, and not the subject of a patent.

At the hearing, it was admitted and proved, that the defendants had used what was substantially the same acid described in the plaintiffs' patent, mixed with an alkaline carbonate, as a substitute for leaven, in making bread from flour. It was, therefore, held, that they had infringed the fourth claim of the patent. The proper decree, therefore, is, that they have infringed the fourth claim, and that they account for the profits in consequence of their infringement of said fourth claim. Whether such infringement has taken place solely by a use of what is named in the fourth claim, irrespective of any selling by the defendants of the mixture claimed in the third claim, or whether such infringement has taken place, also, through sales by the defendants of such mixture, in connection with a use of it by the vendees, under the fourth claim, will be a question to arise on evidence to be given, on the accounting, as to the facts attending such sales, in connection with the use, by the vendees, of the things sold.

[NOTE. For other cases involving this patent, see *Rumford Chemical Works v. Hecker*, Cases Nos. 12,132-12,134; *Rumford Chemical Works v. Vice*, Id. 12,136; *Oliver. Finnie. & Co. v. Rumford Chemical Works*, 109 U. S. 75, 3 Sup. Ct. 61; *Attorney General v. Rumford Chemical Works*, 32 Fed. 608.]

¹ [Reported by Hon. Samuel Blatchford, District Judge, and by Samuel S. Fisher, Esq., and here compiled and reprinted by permission. *Merw. Pat. Inv.* 133, contains only a partial report]

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