LEGGETT *v.* STANDARD OIL CO.

Circuit Court, S. D. New York. May 15, 1889.

PATENTS—INVENTION—LINING BARRELS WITH GLUE.

Letters patent, issued March 10, 1874, to Edward W. Leggett, for an improved mode of lining the inside of oil-barrels with glue, the claims for which, were a process "wherein the glutinous material, instead of being produced by reduction from a previously solid state, is permitted to attain only a certain liquid consistency, and is then applied to the package and permitted to harden thereon for the first time," and a barrel, cask, etc., coated or sized by the material, and by the mode or process whereby it is absorbed into and strengthened by the wood flber," are void for want of invention.

In Equity. On bill for injunction.

Edwin M. Felt and *Edward Wetmore,* for plaintiff.

Charles C. Beaman and *Edwin N. Dickerson,* for defendant.

SHIPMAN, J. This is a bill in equity to restrain the defendant from the infringement of reissued letters patent, applied for January 24, 1874,

issued March 10. 1874, to Edward W. Leggett, for an improved mode of lining the inside of oil-barrels with glue. The original patent was dated October 21, 1873. The ordinary dried glue of commerce is usually made from the trimmings of skins, which come from slaughter-houses and tanneries, as follows: The skins are soaked in water and lime to remove the fat and grease, and are then thoroughly washed and exposed to the air, or may be treated with a solution of acid to remove the lime; for the presence of lime, after it has performed its original office, is exceedingly injurious to the glue. The stock is then boiled by the application of steam-heat, and when the solution has been effected by boiling the liquid glue is run into moulds, and allowed to set and form a jelly. The jelly is cut into slices, which are spread upon nets and dried. The drying part of the process is simply to bring the glue to a condition in which it will keep permanently, and can be transported., and be a merchantable article; for either liquid glue or jelly glue, unless mixed with antiseptics, quickly and easily attracts impurities from the atmosphere, decomposes, and is spoiled. In order to make glue a commercial article for general use it must be dried. This part of the process is the most expensive, because the jelly glue is easily influenced by atmospheric changes, and, when thus affected, will not dry, but melts, and becomes worthless. Before 1874, hydro-carbon oil-barrels were prevented from leaking by pouring into them a sufficient quantity of hot glue, rolling the barrels, and thus permitting a lining or coating of glue to be poured upon the inside of the barrels. The liquid glue for this purpose was made in the ordinary way by melting dried glue, and heating the solution. The invention consisted in applying directly to the barrels hot liquid glue, or "glue soup," before it had been subjected to the cooling or drying part of the ordinary process of manufacture. The patentee describes his invention in the specification of the reissued patent as follows:

It "consists in preparing, from any glutinous substance, glue soup, said soup being permitted to attain but a certain consistency, and then applied directly as a coating or sizing. In carrying out my invention I proceed as follows: Take any of the materials from which glue may be made, and proceed in the usual or any suitable manner for the manufacture of glue, until the soup has attained a certain consistency. This consistency must be considerably less than that which is required whereby semi-fluid, solid, or cake glue is to be produced, and, while it is in this half-finished state, so to speak, it is applied directly to the inside of the barrel or cask, where, after due evaporation, it will be found that said cask or barrel is lined thoroughly and completely with the material, inasmuch as a pressure of steam generated by heat applied is sufficient to force the thin glutinous fluid or soup well into the pores, fibers, and recesses of the wood, thus insuring a perfect lining. Iam aware that barrels, etc., have been lined or coat-d with glue of commerce, when said glue has been sujected to a process of reduction by dilution from its original consistency to a sufficiently liquid state; but I am not aware of any process wherein the glutinous material has

been permitted to attain only its proper consistency for the purpose specified, and then applied directly; thus saving the time, labor, and expense heretofore employed by continuing the manufacture of the gelatinous soup until it has attained a glutinous condition; thus necessitating a reduction by diluting and reheating before it is fit for application, as set

forth in this specification, traveling over, as it were, the same ground backward and forward two or three times, whereas, by my process, this trouble is entirely dispensed with, by operating as within described. This invention has nothing to do with the ordinary glue-lined barrel, but relates to a new and inexpensive mode or process of making barrels, casks, etc., better adapted to the purpose designed, by coating or sizing, as set forth, than by the ordinary means. Heretofore glue has been taken in its completed state as an article of manufacture, reheated, diluted, and then applied; but such a process necessarily carries with it all the expense of preparing the glue at first as an article of trade or commerce. My process contemplates taking the said soup when at a proper consistency, and applying it to the inside of the package, permitting it to harden for the first time upon that surface. The distinguishing feature of this improvement may be found, on examination, to be the superior integrity of the lining by the use of soup glue. By its peculiar character it is more freely absorbed by the wood, penetrating into the fiber deeper than by the ordinary mode. Hence the sizing or coating is not only upon the surface, but penetrates into the wood, thereby presenting a thicker covering to the action of the oil, and this sizing is not liable to be broken off or cracked in handling the cask, as part of the coating is absorbed into the fiber and cells of the wood, which gives additional strength to it."

The claims are as follows:

"(1) The within-described process of coating or lining the inside of barrels, casks, etc., wherein the glutinous material, instead of being produced by reduction from a previously solid state, is permitted to attain only a certain liquid consistency, and is then applied to the package and permitted to harden thereon for the first time substantially as herein set forth and described. (2) A barrel, cask, etc., coated or sized by the material, and by the mode or process, whereby it is absorbed into and strengthened by the wood fiber, substantially as herein described."

The patented process has been very extensively used by the defendant. Such use commenced after the date of the patent.

The question which first and most strongly presents itself is that of the patentability of the described and patented process. Upon this question the plaintiffs counsel insist that a solution of glue formed in the course of the original boiling and a solution of glue formed by dissolving the dried glue, are not identical; that the latter is subject to changes only partially understood, but positive and efficient, whereby the adhesive property of the gelatine is diminished; that, although this was theoretically known at the date of the invention, and although jelly glue was, at the same date, so treated as to last without decomposition, the use of glue fresh from the tubs was unknown; that dried glue dissolved was the only thing that was used, and glue fresh from the boiling-pot was not a known substitute for dissolved dried glue in the lining of oil barrels; that no one then knew or believed that it could be used for that purpose, but that Leggett made the practical discovery that glue,

in the boiling state, and before it was dried, made a more efficient and economical article for the uses of the oil refiner than remelted dried glue, and that thus a pew process was created, by which a large and expensive part of the old process was avoided. It must be regarded as proved that before the date of the invention practical experts believed that remelted dried glue was inferior in adhesiveness and binding qualities to hot and undried

glue. Thus it was stated in Wagner's Yearly Report of Chemical Technology for 1869 (volume 15, p. 657) that the adhesive and binding power of glue is greatly diminished in the process of drying in the air. Messrs. Wiedenhold and Plumer, two of the very intelligent witnesses on the part of the plaintiff, knew before the date of the invention that glue hot from the tubs was in the best condition, and would penetrate better. It is not important to ascertain whether this inferiority is inevitable in the case of the best dried glue which had been only once re-melted, because the frequent liability of glue to suffer deterioration in the process of drying, from one cause or another, is undeniable, and therefore the opinion of the experts was practically correct. While this inferiority was theoretically known, it is also true that glue hot from the tubs was not used, and that its advantages were not introduced to the public, except in the isolated instances to which reference will hereafter be made. The glue jelly manufactured by Stalling, near Dresden, in and after 1869, was a very different thing from the liquid article which is the subject of this patent. Stalling's article was a glue jelly capable of transportation, and was "extracted in a peculiar manner, entirely by treatment of bones with cold water under steam-pressure." The plaintiff, from the fact that inasmuch as the patentee was the first person who showed the public either to use or how to use the liquid article for the inside of barrels, by which a better result and a large saving of expense were effected, draws the conclusion that he is entitled to the benefits which the statutes confer upon first inventors. This conclusion would be correct, if Leggett gave to the public the result of invention, and did not merely give the commercial suggestions which would naturally occur to a person acquainted with the manufacture of glue. The manufacture of dried glue was a necessity, because the mechanic who has only the ordinary business of his calling must buy, rather than make, his glue. His business requirements do not compel him to be a daily consumer of a large quantity of the article, and it must therefore be purchased in a dry state. The use of hot glue as it flowed into the tubs was not practiced, because there was no occasion for such use, but when the time came that a manufacturer needed daily a very large supply of glue, the suggestion of a change in the mode in which he should procure and use glue was made; but the novelty consisted in the suggestion that he should be his own manufacturer. There was no novelty in the idea of the superiority or economy of hot liquid glue, and so much of the claim of the patentee to the character of an inventor as rests upon the discovery of the superior integrity of the lining by the use of "soup glue" is fallacious. Liquid glue had never been manufactured before for daily use simply because nobody needed a large daily supply, and the idea that the patentee exercised the genius of an inventor in first practically introducing the article to the public is without adequate foundation, for it was a business, rather than a mechanical suggestion. The thought that the defendant (which was a large daily consumer) could profitably be its own manufacturer of glue came

both to the patentee and to Mr. Plumer, who also subsequently communicated the same idea to the defendant;

but neither is entitled, on that account, to be considered an inventor, but each is rather to be regarded as having prompt ability to seize upon correct methods of conducting a large business. It is also true that there was no invention in the application of liquid glue taken freshly from the tubs to the inside of barrels. The use of such glue came naturally, and in the ordinary line of thought, to Wiedenhold, when the occasion came to him to line barrels. It came also to Baumann, before the date of Leggett's invention, when he was called upon to line neat's foot oil barrels in Peter Cooper's glue factory. Such use was undoubtedly occasionally practiced in that factory in other instances about the same time. The idea was the natural one which would readily occur to the intelligent mechanic in the factory. It is not strange that it did not occur to oil refiners, for they were not glue makers. It is not strange that it was not made public, because the occasion had not arrived for its development. It would be useless to the oil refiner who used but a few barrels daily, for he could not afford to manufacture glue; but when the occasion arose, the proper method of doing the business naturally presented itself to the mind of a person familiar with glue manufacture.

I do not consider whether an anticipation of Leggett's improvement is clearly proved by the facts which took place in Cooper's factory, but I place the decision upon the lack of patentable invention in the thing patented. The bill should be dismissed.