

10FED.CAS.—44

Case No. 5,571.

GOODYEAR v. EVANS.

[6 Blatchf. 121; 3 Fish. Pat. Cas. 390.]¹

Circuit Court, S. D. New York.

April 23, 1868.

PATENTS—CONSTRUCTION OF REISSUE—INFRINGEMENT—ADVERSE PATENTS—PRIMA FACIE RIGHT TO USE.

1. The reissued letters patent, Nos. 556 and 557, granted to Henry B. Goodyear, administrator of Nelson Goodyear, May 18th, 1858, for an “improvement in the manufacture of India-rubber,” on the surrender of the original patent granted to Nelson Goodyear, May 6th, 1851, are valid.
2. It is an infringement of those reissued patents to use, for dental purposes, India-rubber prepared in accordance with letters patent granted to Edwin L. Simpson, October 16th, 1866, for an “improvement in dental rubber,” and to vulcanize it, and then to use the product.
3. The Simpson patent is not an adverse patent to the Goodyear reissues, or one for the same invention covered by the Goodyear reissues, and does not confer upon the holder of it any prima facie right to use, without license, any thing covered by the Goodyear reissues, or warrant the withholding of an injunction to restrain a party working under the Simpson patent from infringing the Goodyear reissues.

[Approved in *Goodyear v. Berry*, Case No. 5,556.]

In equity. This was a motion for a provisional injunction to restrain the defendant [George Evans] from infringing letters patent [No. 8,075] for an “improvement in the manufacture of India-rubber,” granted to Nelson Goodyear, May 6, 1851, reissued in two divisions, Nos. 556 and 557, to Henry B. Goodyear, administrator of Nelson Goodyear, deceased, and extended to said administrator for seven years from May 6, 1865. So much of the inventions covered by said reissues as applied to dentistry and dental purposes was assigned to the Goodyear Dental Vulcanite Company. The claims of the original and reissued patents of Goodyear will be found in the report of *Goodyear v. Honsinger* [Case No. 5,572]. The defendant claimed to manufacture dental plates under letters patent granted to Edwin D. Simpson for “improvement

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in dental rubber," October 16, 1866, the specification of which is as follows:

"To all whom it may concern: Be it known, that I, Edwin L. Simpson, of Bridgeport, in the county of Fairfield and state of Connecticut, have invented a new improvement in dental rubber, and I do hereby declare the following to be a full, clear, and exact description of the same: The rubber now used for dental purposes has incorporated with it large proportions of free sulphur, for the purpose of vulcanizing the rubber after it is formed. The odor and taste occasioned by the presence of this sulphur is extremely obnoxious to many persons, and occasions the principal, if not the only, objection to the use of rubber for dental purposes. To overcome this objection, and produce vulcanized rubber for dental purposes without the actual or apparent presence of sulphur, is the object of my invention, and consists in preparing the rubber for vulcanizing by the introduction of a peculiar vulcanizing compound for which I have applied for letters patent in even date herewith; and that others skilled in the art may be enabled to prepare and use my improved rubber, I will proceed to describe my manner of so doing. I will first describe the vulcanizing compound, as set forth in the specification accompanying my application for patent as aforesaid. I first boil linseed or other vegetable oil to the consistency of honey (this I do to facilitate the preparation), thoroughly mix two ounces of benzoin gum with one pound of pulverized sulphur; then to each quart of the boiled oil add one pound of the prepared sulphur, carefully subjecting this mixture to a moderate heat, sufficient only to cause the two substances to react upon each other until they pass from a semi-fluid to a semi-hard state, having a honeycomb or spongy appearance. This forms my vulcanizing compound, and differs from that patented to me February 28, 1865, in that the benzoin gum is added, which, by its vaporizing qualities, more perfectly expels the fumes of the sulphur as well as the odor from the oil, and renders the compound nearly, if not perfectly, odorless, and when combined with India-rubber, or similar gums, and subjected to a regulated heat, will cause the same to undergo the change known as vulcanizing. To produce my rubber for dental purposes, to one pound of India-rubber or gutta percha, add ten to fourteen ounces of my above described compound; the greater the quantity of the compound the harder will be the rubber. After curing, twelve ounces I believe to be the proper quantity for general purposes. Thoroughly mix the compound and rubber by grinding between warm rolls. To produce the requisite color, I add chrome red, or lake pink, in quantities to produce the requisite color, and when thoroughly mixed, the substance will be in a plastic state, and in this state rolled into thin sheets and ready for the dentist's use. The dentist forms the plate in the ordinary manner for other rubber, and when so formed, it should be subjected to a heat of 320 degrees Fahrenheit, for about four hours, proportionately less time as the degree of heat is greater; otherwise treat as ordinary rubber, and the plate thus prepared will be as tasteless and odorless as metal plate, and will not tarnish the fillings or other gold in the mouth of the wearer. Having,

therefore, thus fully described my invention, what I claim as new and useful, and desire to secure by letters patent, is: Combining the within described vulcanizing compound with India rubber in the proportions herein named, and substantially in the manner and for the purposes specified. Edwin L. Simpson.”

C. F. Blake, A. Pollok, and C. M. Keller, for complainants.

H. T. Blake and S. D. Law, for defendant

BLATCHFORD, District Judge. The reissued patents in this case cover the invention of what is known as “hard India-rubber.” Reissue No. 556 is for the process, and reissue No. 557 is for the product. No. 556 claims “the combining of sulphur and India-rubber, or other vulcanizable gum, in proportions substantially as specified, when the same is subjected to a high degree of heat, substantially as specified according to the vulcanizing process of Charles Goodyear, for the purpose of producing a substance or manufacture possessing the properties or qualities substantially such as described, and this I claim, whether the said compound of sulphur and gum be, or be not, mixed with other ingredients, as set forth.” No. 557 claims “the new manufacture or substance herein above described, and possessing the substantial properties herein described, and composed of India-rubber, or other vulcanizable gum, and sulphur, in the proportions substantially such as described, and, when incorporated, subjected to a high degree of heat, as set forth, and this I claim, whether other ingredients be, or be not, used in the preparation of the said manufacture, as herein described.” The Goodyear Dental Vulcanite Company, who are joined as plaintiffs in this suit, are the owners of the exclusive right under the reissued patents, for the extended term, to the inventions covered thereby, as applied to dentistry, and for dental uses, within and throughout the United States. The bill alleges an infringement of the reissued patents by the defendant, by the manufacture, use, and sale of hard rubber for dental purposes, and by the making and using of hard rubber for plates for artificial teeth, and by the sale of such plates, such hard rubber being made substantially according to the process described in the reissued patents. It is shown, that the defendant has made dental plates for artificial teeth, and artificial gums and palates, of India-rubber, manufactured in accordance with letters patent of the United States, granted to Edwin L. Simpson, October 16th, 1866, for an “improvement in dental rubber,” the

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India-rubber being manufactured by A. R. Hale, and the plates being vulcanized by the defendant, in the manner described in the Nelson Goodyear patent, with only the difference, that the time required for vulcanization is longer under the Simpson patent.

It is claimed on the part of the defendant, that, in using, for dental purposes, India-rubber prepared according to the Simpson patent, and vulcanizing it, and then using the product, he does not employ either the process or the product covered by the Goodyear reissues. These reissued patents have been fully sustained by this court, after a thorough investigation into the novelty of the invention and the validity of the patents. The main decision in favor of the patents, on all the questions involved, was in October, 1802, in the case of *Goodyear v. New York Gutta Percha Co.* [Case No. 5,580], on a final hearing in equity. Subsequently, in the case of *Goodyear v. Wait* [Id. 5,587], a suit brought for an infringement of the patents by the manufacture of plates of hard vulcanized rubber for artificial teeth, and by the sale of plates so made, this court upheld the patents against all the defences set up. Among those defences were, that the reissued patents were void, because, on the reissue, there was a division into two reissued patents, one for the process and the other for the product; that the descriptions in the specifications were not sufficiently full and clear; and that the invention, so far as respects the application of the product to dental purposes, had been dedicated to the public. On this last point, Mr. Justice Nelson, in the opinion delivered by him in the 0 case, held that the proofs in the case showed that great and extraordinary exertions had been made, by the proprietors of the dental branch of the patent, to get the article into common use, and to prevent piracies, and that there had been no dedication or abandonment of their right.

For the purposes of this motion, therefore, all questions must be regarded as settled, except the question, whether it is an infringement of the Nelson Goodyear patents to use hard rubber prepared according to the Simpson patent. The Goodyear reissues, in their claims, claim, that the India-rubber and the sulphur must be combined substantially in the proportions described in the specifications. What are those proportions? The specifications state them to be about from four ounces to a pound of sulphur to a pound of India-rubber. They also state, that, in working the vulcanizing process of Charles Goodyear (that is, to make what is called "soft rubber,") the best results are obtained by the use of the smallest proportional quantity of sulphur which will suffice to produce the change termed vulcanization, and which is usually not over one ounce of sulphur to a pound of gum, but that so small a proportional quantity of sulphur would entirely fail to produce the result obtained by the Nelson: Goodyear process. Again, the specifications say: "The character of the new manufacture or substance is dependent upon the use of caoutchouc, and a sufficiently proportional quantity of sulphur, and a sufficiently high degree of heat, continued long enough to induce the change indicated; and, although much latitude may be taken in the proportional quantity of sulphur, a proportion much less than four ounces

to the pound of caoutchouc will utterly fail to produce the new substance or manufacture herein above described." "The change indicated" is the production of a compound having the "hard and tough properties found, in various degrees, in ivory, bone, tortoise shell and horn, and the spring-like property, under flexure, of whalebone, and which, in the process of manufacture, is plastic, so that it can be moulded or modelled with facility into any desired shape, and which, when completed, may be wrought and polished to as high a degree as any of the native substances for which it is a substitute."

The specification of the Simpson patent says: "The rubber now used for dental purposes has incorporated with it large proportions of free sulphur, for the purpose of vulcanizing the rubber after it is formed." It is evident, that, by "rubber" here, is meant the compound of India-rubber and sulphur, before it is vulcanized, and in the condition in which it is when prepared for dental purposes, and ready to be vulcanized. The specification proceeds: "The odor and taste occasioned by the presence of this sulphur, is extremely obnoxious to many persons, and occasions the principal, if not the only, objection to the use of rubber for dental purposes. To overcome this objection, and produce vulcanized rubber for dental purposes, without the actual or apparent presence of, sulphur, is the object of my invention, and consists in preparing the rubber for vulcanizing by the introduction of a peculiar vulcanizing compound." The patentee then describes the mode of making this vulcanizing compound. He says: "I first boil linseed or other vegetable oil to the consistency of honey, (this I do to facilitate the preparation,) thoroughly mix two ounces of benzoin gum with one pound of pulverized sulphur; then, to each quart of the boiled oil add one pound of the prepared sulphur, carefully subjecting this mixture to a moderate heat, sufficient only to cause the two substances to react upon each other, until they pass from a semi-fluid to a semi-hard state, having a honeycomb or spongy appearance." He also says, that the benzoin gum, "by its vaporizing qualities, more perfectly expels the fumes of the sulphur as well as the odor from the oil, and renders the compound nearly, if not perfectly, odorless, and, when combined with India-rubber, or similar gums, and subjected to a regulated heat, will cause the same to undergo the change known as

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vulcanizing.” To produce the rubber for dental purposes, he adds, to one pound of India-rubber, from ten to fourteen ounces of the vulcanizing compound, twelve ounces being the proper quantity for general purposes, the hardness of the rubber, after curing, increasing with the increase in the quantity of the vulcanizing compound. The compound and the rubber are thoroughly mixed, by being ground between warm rolls, and coloring matter is put in, if desired. The mixture is plastic, and is rolled into thin sheets, and is then ready for the dentist’s use. The dentist forms the plate in the ordinary manner for other rubber, and then vulcanizes it by subjecting it to a heat of 320 degrees, Fahrenheit, for about four hours, or for a proportionately less time, with a higher degree of heat. Otherwise, it is treated as ordinary rubber, “and the plate, thus prepared, will be as tasteless and odorless as metal plate, and will not tarnish the fillings, or other gold, in the mouth of the wearer.” The claim of the patent is this: “Combining the within described vulcanizing compound with India-rubber, in the proportions herein named, and substantially in the manner and for the purposes specified.”

This specification does not pretend that the product formed by combining the vulcanizing compound with India-rubber, and subjecting the mixture to heat until it undergoes the change known as vulcanizing, differs, in any of its qualities or properties or capacities, from the product formed according to the Nelson Goodyear patents, except in being tasteless and odorless. It is not pretended that it does not possess all the properties which the specifications of the Nelson Goodyear reissues state are possessed by the product described in those reissues, and all the properties which the product formed by the process described in those reissues in fact possesses. It may possess some other qualities, such as being tasteless and odorless, and thus not obnoxious to those who dislike the odor and taste of sulphur, and not tarnishing gold, but still it possesses all the intrinsic, valuable, and distinctive qualities, as a product, which belong to the Nelson Goodyear product. It may be an improvement, and patentable, and yet it does not follow that it can be made or used without the permission of the owners of the Nelson Goodyear patents. On the face of the Simpson specification, the invention seems to be one merely for getting rid of the odor and taste of the sulphur used. The specification expressly states, that the object of the invention of Simpson is to overcome the objection to the odor and taste occasioned by the presence of free sulphur in the rubber used for dental purposes. The patentee does not pretend that he is not going to prepare hard vulcanized rubber, or that he is not going to vulcanize it by applying heat to a combination of India-rubber and sulphur. On the contrary, he says he is going to produce vulcanized rubber, and that he is going to do it “without the actual or apparent presence of sulphur.” He does not venture to say that he can vulcanize the rubber without the actual presence of sulphur, but as the product has no odor or taste of sulphur, and thus there is no apparent presence of sulphur, he says that he produces the vulcanized rubber “without the actual or apparent presence of

sulphur.” That sulphur is actually used by him in making what he calls his vulcanizing compound, is fully set forth in his specification, and the quantity of sulphur is given; and the entire point of the invention, as the specification discloses it, is, that the benzoin gum, by its vaporizing qualities, expels the fumes of the sulphur and the odor of the oil, and renders the compound odorless. The specification then explicitly says, that the vulcanizing is effected by subjecting to heat the mixture formed by combining with India-rubber the compound composed of the oil, the benzoin gum and the sulphur. Therefore, sulphur is used,—“pulverized sulphur,” as the specification says. It is actually present, although not apparently present, because its fumes are expelled by the use of the benzoin gum. It is there for all the practical purposes of vulcanizing, but it is not there to be smelt or tasted. The invention of Simpson is clearly, therefore, only an improvement on that of Nelson Goodyear, embodying the latter, and not capable of being used without using the latter, provided it involves the use of sulphur in the proportions covered by the Nelson Goodyear reissues.

The plaintiffs produce the depositions of four chemical experts, Thomas Antisell, chief chemist of the agricultural department of the patent office at Washington, and formerly chief examiner in said office, Henri Erni, formerly chief chemist in said department, and now an examiner in the patent office, Dubois D. Parmelee, a chemist in the city of New York, and Eben N. Horsford, professor of chemistry in Harvard University. Dr. Antisell has analyzed a piece of the vulcanizing compound, made according to the Simpson patent, and states its ingredients and their proportions. He finds in 100 parts of it 66.25 parts of rubber and foreign matter, 12.25 parts of free sulphur, and 21.50 parts of coloring matter, and says that it contains the ingredients, and in the proportions, described in the Nelson Goodyear reissues, and that, if heated according to the vulcanizing process, hard rubber, such as is described and claimed in such reissues, must be produced. Erni, Parmelee, and Horsford say, that they have each examined the Simpson specification, with a view of determining the proportion of sulphur to the pound of rubber, contained in the vulcanizing compound described therein. Erni and Horsford say, that, by following the specification, they find that the compound, when vulcanized, does not contain less than four

ounces of sulphur to sixteen ounces of rubber. This they demonstrate by a detailed calculation, which they set forth. Parmelee, by following the Simpson specification, calculates that, in the compound ready for vulcanization, there is about $4\frac{3}{4}$ ounces of sulphur to 10 ounces of rubber. Erni and Horsford say, that Dr. Antisell's analysis shows 4.34 ounces of sulphur to 16 ounces of rubber; and they and Parmelee say, each of them, that his deduction is corroborated by Dr. Antisell's analysis, because there is, in fact, as shown by the analysis, a greater loss of linseed oil by heat than is allowed in the calculations. Erni and Horsford allow a loss of one-sixth of the weight of the oil, in heating it. Parmelee allows a loss of a little more than one-third of the weight of the oil. Erni, Parmelee and Horsford, all of them, say, that the compound of Simpson is made in accordance with the invention of Nelson Goodyear. The result of this analysis is what was to be expected. The article, before analysis, has the properties of the Nelson Goodyear hard rubber. It is known to be made by the use of sulphur, rubber, and heat, under a description which shows a use of not less than four ounces of sulphur to a pound of rubber. The analysis shows that it contains not less than four ounces of sulphur to a pound of rubber. Sulphur is known to be the vulcanizing agent, and it is stated, in the Nelson Goodyear specifications, and known to be the fact, that a quantity of sulphur not much less than four ounces to a pound of rubber, is required to produce, with the aid of heat, hard vulcanized rubber. Nothing more is needed to establish clearly that the use of the Simpson vulcanized product, is an infringement of reissue No. 557, and that the manufacture of it by the Simpson process, is an infringement of reissue No. 556.

The reissued patents being fully established, and there being no doubt on the question of infringement, there would seem to be no doubt of the propriety of granting an injunction. But the defendant claims that the fact of the issuing of the Simpson patent is ground for withholding an injunction. The Simpson patent, however, can be of no avail to any greater extent than it purports to go. It is evidence merely of the novelty of what it claims, that is, the combining with India-rubber a compound, composed of benzoin gum, sulphur, and oil, prepared in the manner stated. That is all. A patent for such combination cannot confer upon the holder of it even a prima facie right to make the combination without the license of a person holding a subsisting prior valid patent for the combination of sulphur and India-rubber, without the benzoin gum and the oil, any more than the patent to the latter can confer upon the latter the right to make, without the consent of the former, the combination covered by the patent held by the former. The defendant furnishes no evidence, by analysis of the Simpson rubber, to controvert the analysis testified to by the plaintiffs' experts, and all the affidavits on the part of the defendant as to the quantity of sulphur contained in Simpson's vulcanized product, and as to the question of non-infringement, are altogether vague, general, and unsatisfactory, and the defendant does not

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satisfactorily meet the deductions and calculations drawn by the plaintiffs' experts from the language of the Simpson specification.

No case has been cited in which an injunction has been refused, where the subsequent patent set up by the defendant contained itself satisfactory evidence on its face, when read by experts, that its process involved an infringement of the prior patent. The Simpson patent, in the sense of the law, and of the decisions as to granting injunctions, is not an adverse patent, or one for the same invention as the plaintiffs', or one conferring upon its holder any prima facie legal authority to use, in working it, any thing before patented by the Goodyear reissues. An injunction must be issued, as prayed for.

{For other cases involving these patents, see note to [Goodyear v. Mullee, Case No. 5,577.](#)}

¹ {Reported by Hon. Samuel "Blatchford, District Judge, and by Samuel S. Fisher, Esq., and here compiled and reprinted by permission. The syllabus and opinion are from 6 Blatchf. 121, and the statement is from 3 Fish. Pat Cas. 390.}