

Gill Vs. Wells

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Appellant : Gill

Respondent : Wells

Judgement :

Gill v. Wells - 89 U.S. 1 (1874)

U.S. Supreme Court Gill v. Wells, 89 U.S. 22 Wall. 1 1 (1874)

Gill v. Wells

89 U.S. (22 Wall.) 1

ERROR TO THE CIRCUIT COURT FOR

THE SOUTHERN DISTRICT OF NEW YORK

SYLLABUS

1. An original patent of one Wells, for a hat body machine, among other things, minutely described a specific device called a "*chamber or tunnel*," composed of two side pieces, a bottom piece, and a top piece, permanently united together so

as to form in fact a single tubular device, and described minutely the functions which this device performed. A reissued patent separated this "chamber or tunnel" into its several component parts, called by distinct names, viz., a "bottom guide" and a "top guide" and "side guides," and ascribed independent functions to each of these parts and claimed in succession each of these parts in combination with other parts of the hat body machine. At the same time, the description of this composite device, "the chamber or tunnel," and its functions as such, which were contained in the original patent, were omitted entirely from the reissued specification. *Held* that the reissued patent was invalid, as not being for the same invention as the original patent.

2. A complete description was given in the original patent of the combination of the four parts which constituted the "chamber or tunnel," and that patent did not contain the slightest evidence that the patentee ever made any other combination than that of all the four parts which together form this "tunnel or chamber." *Held* that in such case, even if the patentee had subsequently discovered that he could accomplish a new and useful result by a combination of some of the several parts included in this "tunnel or chamber," he could not surrender and reissue his patent for this combination of a smaller number of the ingredients, because the reissued patent in that event would not be for the same invention as the surrendered original.

3. Such a description of a combination of other parts, besides the first-mentioned, would constitute new matter, the introduction of which into the

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specification of a reissued patent is forbidden by section fifty-three of the Patent Act of 1870.

4. A patentee cannot legally surrender a patent for an invention consisting of a combination of old ingredients and amend the descriptive parts of the specification by striking out *the entire description of one of the ingredients of the combination* and inserting in lieu thereof *a full description of several other devices*, without any

allegation that *they are the equivalents of the one whose description is stricken out.*

5. The case of [Gould v. Reese](#), 15 Wall. 194, commented on.

6. An equivalent for the ingredient of a combination consisting wholly of parts that are old must be one which was known at the date of the original patent as a proper substitute for the ingredient left out.

Mrs. Eliza Wells, administratrix of Henry A. Wells, sued Gill at law for infringement of letters patent for an improvement in machinery for making hat bodies. Original letters patent had been granted to the said Henry April 25, 1846. The patent was reissued in 1856, in two parts, No. 396 and No. 400, to an assignee of Wells, and was extended by the Commissioner of Patents, April 17, 1860, and again reissued in December, 1860, to the assignee of Wells, in No. 1086 and No. 1087. No. 1086 was again reissued to Burr, June 17, 1862, in No. 1318. On the 2d of March, 1867, Nos. 1087 and 1318 were extended to Eliza Wells, as administratrix of Wells, by act of Congress, and on the 19th of May, 1868, No. 1087 was again reissued in No. 2942. On this the present suit was founded.

The cause was tried upon the general issue, with notice of certain special matters in defense, and a verdict for the plaintiff below for nominal damages was rendered.

The defendant excepted to certain rulings, instructions, and directions given below, and exceptions being taken the case was now before this Court.

The subject of hat-forming machines and the art relating to the making of hats is set out by the present reporter in the case of *Burr v. Duryee*, [[Footnote 1](#)] which was a suit under a prior

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reissue of the already-mentioned patent of Wells, and it is indispensable that the reader of the present case, unless he has already a knowledge of the subject in some other way, master the general history presented by that case before he proceed with the present one. [[Footnote 2](#)]

As stated in that case, Wells had been preceded by a machine of one Williams, in which there was a feed apron for carrying the fur, a disintegrater, a fur conductor, a rotating cone, and an exhaust.

The Wells machine, as shown in his original patent and in the model filed by him in the Patent Office, consisted of certain parts organized together into a hat-forming machine which consisted of:

1st. Feed aprons.

2d. A revolving brush.

3d. A tunnel or chamber.

4th. An upper hood and lower flap as adjuncts to the trunk.

5th. An exhaust, rotating, perforated cone.

These several parts are shown combined in Fig. 1, which is a copy of Wells's original patent drawing.

The functions of these several parts and their mode of operation were thus set out in the original patent of Wells:

"My improvements consist in feeding the fur (called the stock) after it has been picked to a rotating brush between two endless belts of cloth, one above the other, the lower one horizontal and the upper inclined, to gradually compress the fur and grip it more effectually where it is presented to the action of the rotating brush, which, moving at a great velocity, throws it in a chamber or tunnel which is gradually changed in form towards the outlet, where it assumes a shape nearly corresponding to a vertical section passing through the axis of the cone, but narrower, for the purpose of concentrating and directing "

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image:a

"the fur thrown by the brush on to the cone, this casing being provided with an aperture immediately under the brush, through which a current of air enters in consequence of the rotation of the brush and the exhaustion of the cone, for the purpose of more effectually directing the fibers towards the cone, which is placed just in front of the delivery aperture of the chamber or tunnel, which aperture is provided at top with a bonnet or hood hinged thereto, and at the bottom with a hinged flap, to regulate the deposit of the fibers on the cone or other former, with a view to distribute the thickness of the bat wherever more is required to give additional strength."

It will be seen that the marked feature of this invention here set out was a *tunnel* or *chamber* placed between the revolving brush disintegrating mechanism and the revolving perforated cone, this tunnel being adapted to collect or receive the fur from the disintegrating brush, to convey it towards the cone, and then to discharge it in a concentrated form against the revolving cone. The tunnel had an opening in front, under the revolving brush, through which a current of air entered. This current of air, constrained by the casing or walls of the tunnel, was plainly the direct agent in conveying the fibers to and discharging them on to the cone.

This *tunnel* was represented in the original model and patent as an integral structure, as shown in Fig. 2, and

image:b

although, like all tubular structures of rectangular section, it had a bottom and top and two sides, yet these were shown as made of uniform material and united rigidly and permanently together.

The patent also described two movable adjuncts to the

discharging end of the tunnel, one called the "*hinged hood*," placed above, and the other called the "*hinged flap*," placed below. The hinged hood is shown in Fig. 1 at *s* , and the hinged flap at *q* .

Nothing was said in the original specification to lead one to suppose that any result whatever could be accomplished without the union of the bottom, the sides, and the top into this integral structure called the "*chamber*" or "*tunnel*;" and the interposition of that "tunnel" between the disintegrating brush, *F* , and the pervious vacuum cone, *O* . Moreover it was not suggested in the original patent, nor was there anything to lead anyone to suppose that if the tunnel or chamber was entirely removed, the feeding mechanism and the disintegrating apparatus could in any useful way whatever *cooperate* with the previous cone.

There were four claims of this patent relating to the mechanism.

The first claim of the original patent of 1846 pointed clearly to a *combination* of the peculiar feeding mechanism, *bb1* , the disintegrating brush, *F* , and the tunnel or chamber, *M* , in front of the brush.

The second claim pointed at the combination of the chamber or tunnel, *M* , and the perforated cone, *O* , in front of it.

The third claim pointed at the combination of the tunnel or chamber, *M* , and the upper hinged hood, *S* .

The fourth claim pointed at the combination of the tunnel or chamber, *M* , with the lower hinged flap, *q* .

It will be observed that into each of the four combinations set out in the four claims above respectively, the entire tunnel or chamber (composed of a bottom, sides, and top, united together) entered as an *integral* device.

The first feature of invention claimed looked to the function which, as an *integral* device, this tunnel performed at its receiving end with reference to the feeding and disintegrating brush.

The second feature claimed looked to the function which this same tunnel as an *integral* device performed, at the discharging end, in reference to the perforated vacuum cone.

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The third and fourth features claimed respectively concerned this same tunnel as an *integral* device, viewed in connection with the movable adjuncts at the upper and lower part of its discharging end.

In the several successive reissues of this patent, granted in 1856, April 17th, 1860, and December, 1860, this device was called a " *tunnel* or *chamber*; " was uniformly described as an *integral* device, and no hint was given that it could be entirely removed or that it could be separated into its elementary parts, and that either of its several elementary parts could alone perform any useful purpose in connection with the disintegrating brush and cone. After the patent had been extended by Congress, the extended patent was reissued May 19th, 1868 (that is to say, twenty two years after the date of the original patent), with specification No. 2942, presenting two distinct features of invention not exhibited in the original patent or in any prior reissue, *viz.*, 1st, that there existed in the Wells invention a direct combination between the feeding machinery, the disintegrating brush, and the pervious cone, independent of any intermediate device between the disintegrating brush and the cone. Such a combination would be represented to the mind by dropping out the chamber or tunnel from the Wells patent, drawing Fig. 1, at page [98 U. S. 4](#) , *supra*, and thus producing

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A special claim, No. 4, was inserted in this reissue to point out and secure this combination to the representatives of Wells. It was in the following language:

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" *FOURTH CLAIM*"

"The combination of the feeding apron, on which the fur can be placed in separate batches as described, the rotating brush or picker substantially as described, the rotating cone, or 'former,' provided with an exhausting mechanism substantially as described, the said combination having a mode of operation substantially such as described."

The second marked change in this last reissue, No. 2942, from either of its predecessors was the omitting from the specification the words "*tunnel or chamber*" always theretofore present in the specifications, and employing no distinctive term as applicable thereto as an integral device. At the same time that all mention of this integral device theretofore called the "*tunnel or chamber*" disappeared from the specification, that device in the new description was split up into four parts, *each* of which parts was treated as if it was in itself an *integral* device, and a specific designation was given to each part. Thus, instead of it being stated as it had been done in the previous issues that there was a "tunnel or chamber" extending from the brush toward the cone, it was stated in the last reissue that "*from the under part of the rotating brush x x, there is a plate f, which extends towards the pervious cone.*" Again, it was stated that "there is an upper guide or deflector *r* , which extends over the rotating brush forward of it toward the cone." Again, it was stated that "on each side there is a guide *m* , extending from the picker brush toward the cone." These devices, called respectively for the first time in this reissue "*plate f or bottom plate,*" "*upper guide or top guide,*" and "*guide m or side guides,*" had no names or designation by letters or otherwise whatsoever given to them in either of the prior reissues. Moreover, all statement of the function performed by the "tunnel or chamber" regarded as an integral device, which function had been theretofore regarded as the *mode of operation* of the Wells machine, disappeared in this reissue, and special functions were assigned to each of these *parts*, thus treated as integral devices in this reissue. Finally, in the claiming part of the specification, combinations between

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each of these several newly recognized integers and the other parts of the machine were carved out. Thus, Claim 1 covered the combination of the

disintegrating brush, the "*bottom plate or guide f f,*" and the rotating pervious vacuum cone. This combination would be shown by

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Claim 1 was in the following language:

"The combination of the rotating brush or picker, substantially such as described, the rotating pervious cone, provided with an exhausting mechanism substantially as described, *and the bottom plate or guide* substantially as described for directing the fur fibers towards the lower part of the cone, and preventing the fibers going to waste, the said combination having the mode of operation specified, and for the purpose set forth."

Claim 2 covered the combination of the feeding mechanism, the disintegrating brush or mechanism, the "*top guide or deflector,*" and the pervious vacuum cone. This combination would be shown in Fig. 5.

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This Claim 2 was in these words:

"The combination of the feed apron, the rotating brush or

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picker, substantially as described, the rotating pervious cone, provided with an exhausting mechanism, substantially as described, and *the guide or deflector, for directing fur fiber on to the tip and upper part of the cone,* substantially as described, the said combination having the mode of operation specified, and for the purpose set forth."

Claim 3 embraced the combination of the disintegrating mechanism, the "side guides or either of them," and the previous vacuum cone. This combination in an alternate

image:f

form would be illustrated by Fig. 6, where only one side guide is involved, and by Fig. 7, where both side guides are shown.

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Claim 3 was in these words:

"The combination of the rotating brush or picker, substantially as described, the rotating pervious cone provided with an exhausting mechanism, substantially as described, and the *side guides, or either of them*, substantially as described, to prevent fur fibers from getting out of the proper influence of the current traveling to the cone, and to protect the traveling fibers from disturbing currents, the said combination having the mode of operation specified, and for the purpose set forth.
"

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Such being the claims of this reissue, No. 2942, on which the present suit was brought, it becomes necessary to describe the defendant's machine -- the machine, namely, alleged to have infringed. It consisted of a machine shown in Fig. 8.

This machine had a single feed apron *A* , a rotating picker *B* , which revolved in the direction shown by the arrow, throwing the fur against a "cut off board" *F* .

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The fur is carried to the machine on the feeding apron *A* , and passes between rollers *C* and *D* , and by the action of the picket cylinder *B* , it is thrown against a cut off board *F* , whence it passes into the top of box *I* . The fan *T* creates a blast in the direction of the respective arrows, drawing the air and fur in the box *I* downwards, and as this current of air passes through the apertures in the cone the fur is deposited on said cone *N* .

The current of air can be regulated by means of the registers

S , which are within the cone N , the lower one of which can be turned on shaft R , and serves to open or close the apertures of the upper disk so as to produce a current of air of the desired strength.

The court below, after describing to the jury the Wells "trunk," consisting of a bottom, top, and sides, and its mode of operation as a "trunk," proceeded to charge them as follows:

"Now gentlemen, having said what I have in relation to the combination of the three parts to the trunk, this instrumentality for controlling the passage of the fur from the picker to the cone, and mode of restraining this fur, so it shall not go to waste, and which is claimed to be new, you will perceive that it consists of a top, bottom, and sides; I have been asked to say to you that it is essential to a just construction of this patent that those sides should be united. No doubt that they are united in the model that is produced; and if the dividing of them into four pieces would make no substantial change, if the instrumentality would be the same substantially, and operate in the same mode, no man could sever them and say he was not an infringer; and if not then the union of the edges at the corners is not of the substance of the invention. Therefore I am not able to say that one has not infringed who did not use a trunk that was constructed with its corners solid or united in the manner that is here exhibited. If I had a case of that sort, I should submit to you the question whether a man who took the thing as we see it here and divided it at the corners, and set it up, had made anything more than an attempt, colorable, to evade the patent, without producing any substantial difference, either in the instrumentality or in the mode in which the result was effected."

"Such being the model which is produced here -- for if you perceive that, in any respect, I have erroneously conceived it or misstated it, you will correct me -- I have only recurred to it for the purpose of giving application to the views, mainly of law, bearing upon the question. I say this being substantially an account of the machine which Mrs. Wells, the plaintiff, patented in the reissue, which is the

foundation of this suit, has, for reasons doubtless sufficient to her, divided the claim of the specification into several parts, and she has done so apparently

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under the idea that if she dealt with the machine as a unit, as an aggregate, the invention might be appropriated with impunity by a party who used a portion of its effective, original, and useful parts, leaving out some others. An inventor is at liberty when he has made an invention, if it consists of several distinct, effective, new devices, which as an aggregate, may constitute, in his judgment, the best machine in the world, but of which certain of the parts may be omitted, and it still be an effective, new, and useful machine -- I say that the inventor is at liberty, in taking out his patent, to protect himself against that species of innovation by claiming the separate, new, and useful parts of the machine by themselves."

"For illustration. A party patenting a machine may introduce ingenious and new devices which may be better than any other for the purpose, but some of which could be supplied by old devices, if he patents the machine and the combination containing his new devices, patents only a combination. A party who might think he could make a machine substantially useful for his purpose by omitting these devices and supplying their places by old devices having different operation and character would be at liberty to do so and thus, practically, a large benefit, or perhaps the whole benefit that is due the inventor, might be lost. I say the patent law therefore permits the inventor not only to patent the machine as an aggregate, but to patent the new devices which enter into it, so that another may not avail himself of his ingenuity in that respect. That is the reason why reissues often become necessary, because in the original patent the party did not claim distinctly the separate items of the property which he had a right to claim. And in that view I suppose the plaintiff here has claimed the combination of the rotating brush or picker, substantially as described, the rotating pervious cone, provided with an exhausting mechanism, substantially as described, and the bottom plate or guide, substantially as described, of which is called the trunk for directing the fur fibers toward the lower part of the cone, and preventing the fibers going to waste, which combination has the mode of operation specified and for the purpose set forth."

Upon this instruction of the court below, and upon the refusal of the court below to instruct the jury that the reissued patent, No. 2942, was invalid because it was not for

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the same invention as the original patent -- matters to which the defendant excepted -- the first principal decision of this Court is based.

The only other matters assigned for error and noticed by the court were:

That the court erred in refusing to instruct the jury that the defendant's machines did not infringe the fourth claim of the plaintiff's patent, unless it had the feeding device of the original patent in combination with the rotating brush or picker and the pervious cone, and the chamber or tunnel described in the original specification.

That the court erred in instructing the jury that the reissued patent is valid as respects the fourth claim if the combination of the three ingredients therein mentioned was new and could be usefully employed for the purpose of facilitating the making of *hat bodies, supplemented by any known means of guiding the fur in such a way as to bring, by the operation of these three devices, the fur to the cone so as to make a hat body, or if those three devices would make a hat body without the aid of other means of protecting the fur against escape that would be serviceable for any purpose, then it was patentable, even without the trunk, which is also called the chamber or tunnel.*

MR. JUSTICE CLIFFORD delivered the opinion of the Court.

Valid letters patent may be granted for an invention which consists entirely in a new combination of old ingredients, provided it appears that the new combination of the ingredients produces a new and useful result; but the rule is equally well settled in such a case that the invention consists merely in the new combination of the ingredients, and that a suit for an infringement cannot be maintained against a party who constructs or uses a substantially different combination, even though it

includes the exact same ingredients. Alterations, however, in a combination which are merely

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formal do not constitute a defense to the charge of infringement, as the inventor of a new and useful combination of old ingredients is as much entitled to claim equivalents as any other class of inventors, but they cannot suppress subsequent improvements which are substantially different from their inventions, whether the new improvement consists in a new combination of the same ingredients or of some newly discovered ingredient, or even of some old ingredient performing some new function not known at the date of the letters patent as a proper substitute for the ingredient withdrawn.

Old ingredients known at the date of letters patent granted for an invention, consisting of a new combination of old ingredients, if also known at that date as a proper substitute for one or more of the ingredients of the invention secured by the letters patent, are the equivalents of the corresponding ingredients of the patented combination. Such old ingredients, so known at the date of the letters patent granted, are the equivalents of the ingredients of the patented combination, and no others, and it may be added that that, and that only, is what is meant by the rule that inventors of a new combination of old ingredients are as much entitled to claim equivalents as any other class of inventors.

Reissued patents, in order that they way be valid, must be for the same invention as the surrendered originals. Inoperative or invalid patents, which are so by reason of a defective or insufficient specification, or by reason that the patentee claimed as his own invention or discovery more than he had a right to claim as new, may be surrendered if the error arose by inadvertence, accident, or mistake and without any fraudulent or deceptive intention, and the provision is that the Commissioner in that event shall, upon the payment of the sum required by law, cause a new patent for the same invention, and in accordance with the corrected specification, to be issued to the proper party, as prescribed in the fifty-third section of the Patent Act. [[Footnote 3](#)]

Unquestionably the specifications in such a case may be

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amended to correct an error which has arisen by inadvertence, accident, or mistake, if without any fraudulent or deceptive intention, but the express provision in the new Patent Act is that no new matter shall be introduced into the specification, and that in the case of a patent for a machine, neither the model nor drawings shall be amended except each by the other, which is a very important provision to secure the fulfillment of the condition that the reissued patent shall be for the same invention as that secured by the original patent.

Matters of law only are in dispute here between the parties, as the judgment of the circuit court was rendered in a suit at law for the infringement of a patent, and the cause was removed into this Court by a writ of error to revise the rulings and instructions of the circuit judge, but it will be necessary to refer somewhat fully to the specification of the original patent and to compare the same with the specification of the reissued patent, which is the patent in suit, in order to understand the exact nature and scope of the controlling questions presented for decision.

Exact description of the invention was given in the specification of the original patent, which affords the most ample means to define the nature and scope of the improvement actually made by the patentee as secured by that patent.

My improvements, he says, consist in feeding the fur after it has been picked to a rotating brush, between two endless belts of cloth, one above the other, the lower one horizontal and the upper one inclined to gradually compress the fur and gripe it more effectually where it is presented to the rotating brush, which moves at great velocity and throws it into a chamber or tunnel which is gradually changed in form towards the outlet, where it assumes a shape nearly corresponding to a vertical section passing through the axis of the cone, but growing narrower, for the purpose of concentrating and directing the fur thrown by the brush to the cone.

Currents of air enter at the same time through an aperture immediately under the brush, in consequence of the rotation of the brush and the exhaustion of the cone, for the

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purpose of more effectually directing the fibers towards the cone, which is placed just in front of the delivery aperture of the chamber or tunnel, which aperture is provided at the top with a bonnet or hood, hinged thereto, and at the bottom with the hinged flap to regulate the deposit of the fibers on the cone or other former with the view to distribute the thickness of the bat wherever more is required to give additional strength to the manufacture.

Means are also described for holding the fibers composing the bat on to the cone, so that the bat may be removed from the cone or former before the hardening process is applied, and for that purpose the representation is that the patentee first covers it with felted or fulled cloth, and then he employs one or two metallic cones, one to put over the bat after it has been surrounded with the moist cloth, for the purpose of making pressure on the fibers and to allow hot water to circulate when the whole is immersed therein to harden the bat preparatory to felting, and the other metallic cone is to be placed within the perforated one on which the hat has been formed, and which is necessarily thin and weak, for the purpose of resisting the pressure of the surrounding water, consequent upon a partial vacuum produced within, when the whole is withdrawn from the water.

Special reference is then made to the drawings and a detailed description is given of every device included in the apparatus and of the functions which the respective devices of the apparatus perform. Superadded to those details is a general description of the mode in which the described apparatus operates and of the result which it accomplishes, in substance as follows: as the fibers are first presented they are acted upon by the brush, which moves with great velocity, and they are properly laid by its downward action, but when liberated they are carried down the curved surface of the chamber or tunnel, and at the lower edge of that device they meet a current of air that enters a narrow aperture near the bottom of

the chamber or tunnel, which extends the whole length of the brush and prevents the fibers from

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falling and resting on the bottom of the chamber or tunnel and carries them on to the perforated cone.

Minute description is also given of the chamber or tunnel and of its appendages and of the functions which it performs, as follows: that it extends over and under the brush and is so arranged as to have a slight motion the axis of which is the same as that of the brush, and that its bottom rests on set screws to regulate the delivery end of the same relatively to the cone; that its forward end is provided with a hinged flap regulated by a cam lever as the means of regulating the delivery of the fibers; that its top is gradually elevated and that the sides are contracted to make the delivery aperture nearly of the form of the cone but narrower and higher; that its upper part is provided with a hood so curved as to correspond generally with the curve of the top of the cone.

Particular description is also given of the mode in which the hood is arranged and of the functions which it performs, as follows: that it is hinged to the upper part of the delivery aperture of the chamber and that it is connected with an eccentric by means of a cord and bell crank passing over a pulley, so that each revolution of the eccentric carries the hood up and down to direct the discharge of the fibers and to distribute the same on to the cone, giving a greater thickness in the parts of the hat which form the brim and edge than on the top and crown, and he suggests the means to be employed by the manufacturer when it is desired still further to diversify the distribution of the fibers.

Intelligent description is also given of the cone and of the functions which it performs, and of the whole mode of operation from the time the fibers are placed upon the feed apron until the hat is formed, but there is no trace of any suggestion or intimation that the operation can be performed or the patented result be produced without the chamber or tunnel. Instead of that, it is unquestionably true

that the chamber or tunnel is a material ingredient of the combination and an essential feature of the described invention. Unmistakable support to that view, if any be needed beyond what is disclosed in the description given of the same, is

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also derived from the claims of the patent, three of which in express terms describe the invention as a combination, and include the chamber or tunnel as one of the ingredients of the combination. Besides the evidence in that direction, derived from the first three claims, the fourth claim is for the employment of the hinged hood to regulate the proper distribution of the fibers, which device is obviously but a mere appendage of the chamber or tunnel in terms included in the described combination.

Such a combination, if new and useful and if it produces a new and useful result, is the proper subject of a patent to secure to the owner or proprietor the exclusive right to make, use, and vend the thing patented for the period allowed by the Patent Act. Beyond doubt, such a patent is valid and operative, but the rights of the patentee under it differ in one respect from those of a patentee for an invention which consists of an entire machine, or of a new and useful device, as the rights of a patentee for a mere combination of old ingredients are not infringed unless it appears that the alleged infringer made or used the entire patented combination. [

[Footnote 4](#)]

Invalid and inoperative patents may be surrendered and reissued for the same invention, but Congress never intended that a patent which was valid and operative should be reissued merely to afford the patentee an opportunity to expand the exclusive privileges which it secures, to enable him to suppress subsequent improvements which do not conflict with the invention described in the surrendered patent. Evidence of a decisive character to negative the theory that such a practice finds any support in the Act of Congress, besides what existed before, is found in the new Patent Act, which expressly provides that no new matter shall be introduced into the specification, and in case of a machine patent, that neither the model nor the drawings shall be amended except each by the

other.

Two or three only of the errors assigned will be much

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considered. They are in substance and effect as follows:

1. That the court erred in refusing to instruct the jury that the reissued patent is invalid because it is not for the same invention as the original.
2. That the court erred in refusing to instruct the jury that the defendant's machine did not infringe the fourth claim of the plaintiff's patent unless it had the feeding device of the original patent in combination with the rotating brush or picker and the pervious cone and the chamber or tunnel described in the original specification.
3. That the court erred in instructing the jury that the reissued patent is valid as respects the fourth claim if the combination of the three ingredients therein mentioned was new and could be usefully employed for the purpose of facilitating the making of hat bodies, supplemented by any known means of guiding the fur in such a way as to bring, by the operation of these three devices, the fur to the cone so as to make a hat body, or if those three devices would make a hat body without the aid of other means of protecting the fur against escape that would be serviceable for any purpose, then it was patentable, even without the trunk, which is also called the chamber or tunnel.

Three or more important propositions of patent law are involved in the exceptions covered by the assignment of errors, which it becomes important to restate with some care, because neither the prayers for instructions, nor the rulings of the court in refusing the same, nor the instructions given, nor the assignment of errors are in every respect free from ambiguity.

Perhaps no one of the prayers for instruction corresponds in precise terms with either of the first two propositions, but it is nevertheless true that many of them, as applied to the separate claims of the patent, did raise the questions involved in

those propositions, and it is equally certain that the court in several instances ruled to the effect that the reissued patent was not invalid for the reason assigned, and that the machine of the defendant did infringe that of the plaintiff, even though it did not contain the chamber or tunnel described in the plaintiff's original specification.

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Filled as the record is with proofs to establish the truth of the preceding statements, further argument upon the subject is unnecessary. Throughout the trial it was the constant aim of the defendant to defeat the plaintiff's action upon the three grounds mentioned:

1. That the reissued patent was invalid because it was not for the same invention as the original.
2. That the defendant did not infringe the plaintiff's invention because his machine did not contain the chamber or tunnel of the plaintiff's invention, nor its appendages.
3. That the reissued patent was invalid as it respects the fourth claim of the same, because the combination contains only three of the four ingredients described in the original specification, and does not include either the chamber or tunnel or its appendages.

Unquestionably these several defenses were pressed in many forms, and all must agree that the court refused to sustain anyone or all of them as often as they were presented by the defendant.

Attention will next be called to the specification of the reissued patent as the best means by which to determine whether the invention secured by it is or is not the same as that of the original. Wide differences between the two specifications are manifest in two important particulars.

1. That the whole description of the chamber or tunnel and its appendages is left out of the specification of the reissued patent, and that it contains a full description of other devices different from the chamber, in form at least, to perform the functions of the chamber and its appendages as described in the original specification.

Material matters are left out of the specification when compared with the original, and it is beyond dispute that new features are introduced in the description of the devices to be employed in guiding the fibers of the fur when taken from the feeding mechanism by the rotating brush or picker. They are picked and thrown towards the cone as in the other specification, in which it has already appeared that the representation is that they are guided and directed in the manner and for the purpose specified by the chamber and

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its appendages. Instead of that, the description in the reissued specification is that the function of guiding and directing the fur is effected by the following means. Nothing is said about the chamber, but the description is that a plate is provided and placed under the brush, and that it extends towards the pervious cone, an open space being left between that end of the plate which is nearest the picker and the concave part below the feeding mechanism that a current of air may enter freely to assist in carrying the fibers towards the cone as they are thrown by the brush or picker, and the further representation is that the plate guides the fibers as they are traveling and prevents too great an accumulation of them immediately around the lower edge of the cone, the greatest thickness of the bat being required to be deposited some distance above, that the bat when made may be thickest at and about the junction of the rim and crown, technically termed the band, and that it also prevents waste, as otherwise many of the fibers would be carried by the force of gravity below the influence of the currents traveling towards the cone, particularly towards the close of the operation, when the currents induced by the exhausting fan become very faint.

Description is then given of the mode in which the plate is adjusted and of the functions which it performs, as follows: that it rests on an adjusting screw, so that that end of it which is nearest the cone can be readily elevated or depressed relatively to the base of the cone, as it may be desired to vary the distribution of the fibers with a view to make hats with a broad or narrow rim and with the rim thicker or thinner relatively to the other parts, the plate being made in two parts with a view to facilitate the distribution, the part beyond the supporting screw and nearest the cone being hinged to the other part and being provided with a cam or lever or other equivalent device.

Provision is also made for a device called an upper guide or deflector, which, as the representation is, extends from the feeding mechanism over the rotating brush or picker and forward of it towards the cone to direct the fibers and effect a

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proper distribution of them on the top of the cone and down the sides thereof towards the base; and the further representation is that the under surface of that guide or deflector nearest the picker brush is flat or parallel with the axis of the picker brush, and thence, towards the other end, concave and of a gradually increasing concavity towards the cone, and that the apparatus may be supplied with an additional deflector further to diversify the distribution of the fibers, somewhat in the form of a hood, which is hinged to the end of the deflector nearest the cone, so that it can be moved by a cord passing over a pulley or a lever actuated by an eccentric or a cam on a shaft. Guides are also provided on each side of the deflector, extending from the picker brush towards the cone, to prevent the fur fibers from escaping laterally out of the proper influence of the currents which are traveling towards the cone, and which otherwise would go to waste, and also to prevent the fibers which are traveling towards the cone from being disturbed by lateral or foreign currents, not induced by the rotating brush or picker or by the exhausting of the cone.

No allusion even is made to the chamber or tunnel in describing the apparatus for guiding and directing the fibers thrown by the rotating brush or picker except at the

conclusion of the description, where the patentee states that in the machine illustrated by the accompanying drawings the bottom plate, top guides or deflector, and side guides are all united along their edges, which is an express admission that it is the chamber or tunnel and its appendages in the original specification that performs all these functions, and that the description given in the reissued patent is a new feature, describing devices different in form and with different names from the description given of the means to accomplish the same end in the original patent.

Differences so wide between an original and a reissued patent show that it was a bold measure to grant, as well as to ask for, such a reissue. Examples of the kind, if any, it is believed are very few in which such a reissued patent has been granted where is not a word in the original specification

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to support the theory that the patentee ever invented anything except his described combination, which it is admitted consisted of four ingredients, all of which were old Complete description is given in the original specification of that combination, but the specification does not contain the slightest evidence that the patentee ever made any other combination than that which embodies the four described ingredients.

Cases arise where a patentee, having invented a new and useful combination consisting of several ingredients which in combination compose an organized machine, also claims to have invented new and useful combinations of fewer numbers of the ingredients, and in such cases the law is well settled that if the several combinations are new and useful, and will severally produce new and useful results, the inventor is entitled to a patent for the several combinations, provided that he complies with the requirement of the Patent Act and files in the Patent Office a written description of each of the alleged new and useful combinations, and of the manner of making, constructing, and using the same.

He may give the description of the several combinations in one specification, and in that event he can secure the full benefit of the exclusive right to each of the several inventions by separate claims referring back to the description in the specification; and if by inadvertence, accident, or mistake, he should fail to claim anyone of the described combinations, he may surrender the original patent and have a reissue not only for the combination or combinations claimed in the original, but for any which were so omitted in the claims of the original patent.

Very different rules, however, apply in a case where the only invention described in the original patent is the one which includes all the ingredients of the machine, provided there is no suggestion, indication, or intimation that any other invention of any kind has been made. Such a patentee as the one last mentioned may subsequently discover that he can accomplish a new and useful result by a combination embracing less than the whole number of the ingredients

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included in the prior patented combination, but he cannot secure the right and privilege of a patentee in the combination of the smaller number of the ingredients by a surrender of his first patent and a reissue of the same which shall include the second combination as well as the first, because the reissued patent in that event would not be for the same invention as the surrendered original. [[Footnote 5](#)]

Nor could that change be allowed under the present Patent Act for another reason equally decisive, which is that the description of the other combinations, beside the first, would constitute a new matter, the introduction of which into the specification of a reissued patent is expressly forbidden by the fifty third section of that act. Such a prohibitory provision, it should be remembered, is new and was not in force when the reissued patent in suit was granted. [[Footnote 6](#)]

None of the prior patent acts contained any such prohibition, but they all provided in terms that the reissued patent must be for the same invention as the original, and that the inventor before he shall receive a patent for his invention, shall file in the Patent Office a written description of the same and of the manner of making,

constructing, and using the same, in such full, clear, concise, and exact terms as to enable any person skilled in the art to make, construct, and use the invention.

Where the ingredients are all old the invention in such a case consists entirely in the combination, and the requirement of the Patent Act that the invention shall be fully and exactly described applies with as much force to such an invention as to any other class, because if not fulfilled all three of the great ends intended to be accomplished by that requirement would be defeated. They are as follows:

1. That the government may know what they have granted and what will become public property when the term of the monopoly expires.
2. That licensed persons desiring to practice the invention may know, during the term, how to make, construct, and use the invention.
3. That other inventors

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may know what part of the field of invention is unoccupied.

Purposes such as these are of great importance in every case, but the fulfillment of them is never more necessary than when such inquiries arise in respect to a patent for a machine which consists of a combination of old ingredients. Patents of that kind are much more numerous than any other, and consequently it is of the greatest importance that the description of the combination, which is the invention, should be full, clear, concise, and exact.

Patent search has been made in vain for any trace of the description of any other invention in the original patent than that of the combination of all the ingredients of the apparatus described by the patentee as the one used by him to effect the described patented result. Unable to discover in that specification any description of any other invention than that, the court is of the opinion that none other was secured by the original patent.

Argument to show that an invention consisting of a combination of three ingredients which are old is not the same as that of a combination of four old ingredients is quite unnecessary, as the negative of the proposition is as well settled in the patent law as it is in mathematics. In *Vance v. Campbell*, [[Footnote 7](#)] four propositions were decided which have an important application to the case before the court:

1. That a patentee in a suit for an infringement of an invention consisting of a combination of old ingredients cannot in his proofs abandon a part of such combination and maintain his claim to the rest, for the reason that unless the patented combination is maintained the whole of the invention fails.
2. That the patentee in such a suit cannot be allowed to prove that any part of the combination is immaterial or useless.
3. That the combination is an entirety, and that if one of the ingredients be given up the thing claimed disappears, which is an obvious truth, as the invention in such a case consists simply in the combination.
4. That the clause which provides that the suit shall not be defeated where the

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patentee claims more than he has invented, in case he shall disclaim such part, applies only where the part invented can be clearly distinguished from that improperly claimed, which shows that the clause cannot apply to a patent granted for an invention consisting of a combination of old ingredients. [[Footnote 8](#)]

Enough has already been remarked to show that all the principal claims of the original patent recognize the chamber or tunnel and its appendages as one of the primary ingredients of the patented invention, and it is absolutely certain that the specification of that patent contains neither suggestion, indication, nor intimation that the original patentee made any other invention to accomplish the described functions than the one which includes the whole four described ingredients.

Suppose that it is so, still it is insisted by the plaintiff that the plate, deflector, and side guides which are described in the specification of the reissued patent are substantially the same thing as the chamber or tunnel of the original patent, and that those devices taken together are legally to be regarded as the equivalent of the chamber or tunnel and its appendages as described in the specification of the original patent.

Even a glance at the original specification is sufficient to show that it does not contain any description whatever of the plate, deflector, or side guides mentioned in the specification of the reissued patent, nor is it pretended that if the several devices named had been described in the original specification the description of these several devices would have been a good description of the chamber or tunnel and its appendages which are embraced in the invention secured by that patent within the meaning of the Act of Congress, which requires that the description shall be full, clear, concise, and exact. Clearly it could not be, as it would not accomplish anyone of the three great purposes before named as the purposes for which the description is required.

Equivalents are doubtless allowed to a patentee or owner

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of the patent to shut out infringements, but the Patent Act furnishes no support to the theory that the patentee may surrender a patent for an invention consisting of a combination of old ingredients, and amend the descriptive parts of the specification by striking out the entire description of one of the ingredients of the combination and inserting in lieu thereof a full description of several other devices without any allegation that they are the equivalents of the one whose description is stricken out, or any explanation whatever showing the reason why the change was made.

Whether one device is or is not an equivalent for another is usually a question of fact, and often becomes a difficult issue to decide. Grave doubts were at one time entertained whether the patentee of an invention consisting of a combination of old

ingredients was entitled to equivalents, but it is now well settled that he is just as much as the patentee of any other class of inventions; but it is very important to understand what is meant by an equivalent of an ingredient in such a combination. Questions of the kind usually arise in comparing the machine of the defendant in a suit for infringement with that of the plaintiff, and the rule is that if the defendant omits entirely one of the ingredients of the plaintiff's combination, without substituting any other, he does not infringe, and if he substitutes another in the place of the one omitted, which is new or which performs a substantially different function, or even if it is old but was not known at the date of the plaintiff's patent as a proper substitute for the omitted ingredient, he does not infringe. [[Footnote 9](#)] By an equivalent in such a case, it is meant that the ingredient substituted for the one withdrawn performs the same function as the other, and that it was well known at the date of the patent securing the invention as a proper substitute for the one omitted in the patented combination. [[Footnote 10](#)] Hence it follows that a party who merely substitutes another old ingredient for one of the ingredients of a patented combination

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is an infringer if the substitute performs the same function as the ingredient for which it was substituted, and was well known at the date of the patent as a proper substitute for the omitted ingredient; but the rule is otherwise if the ingredient substituted was a new one or performed substantially a different function, or was not known at the date of the plaintiff's patent as a proper substitute for the one omitted, as in that event he does not infringe. [[Footnote 11](#)]

Inconveniences past estimation would result if those rules should be applied in defining the rights of a patentee to make amendments to the specification of an original patent when applying for a reissue, as it would open the door in every case to issues of fact whether the substituted device is or is not an equivalent for the one withdrawn, within the rules defining what is meant by that term, which issues of fact might be determined one way in one case and another and a different way in another case. Nor can those rules be applied in such a case consistently with the language of the section allowing a surrender and reissue,

which is limited to the correction of errors which have arisen by inadvertence, accident, or mistake, nor without an utter disregard either of the condition that the reissue shall be for the same invention as the original, or of the clause of the twenty sixth section, which provides that before any inventor shall receive a patent for his invention, he shall file in the Patent Office a written description of the same in such full, clear, concise, and exact terms as to enable anyone skilled in the art to make, construct, and use the same.

Substitution of one ingredient for another may perhaps be made in cases where it would be competent for the court to decide as matter of law that the ingredient substituted is an equivalent for the one withdrawn, as where a spring is substituted for a lever to produce power, or where a weight is substituted for a spring to produce pressure, but the court could seldom or never, in a suit at law, undertake to determine without a jury whether a particular ingredient

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substituted in a reissued patent was or was not known at the date of the original patent as a proper substitute for the one withdrawn from the combination described in the original specification.

Viewed in the light of these several suggestions, the Court is of the opinion that it is not competent for a patentee, when he surrenders an original patent, to amend the specification for the new patent by striking out from the original the correct description of one of the ingredients of the patented combination and to substitute in its place the description of other devices not well known at the date of the original patent as a proper substitute for the ingredient whose description is stricken out.

2. Just the same considerations are involved in the second proposition, which, therefore, requires no further discussion, as it is fully maintained by the reasons given in support of the first proposition.

3. Even grant that neither of the rules laid down in the two preceding propositions are correct, still the court is unhesitatingly of the opinion that the judgment in this

case must be reversed for the reason that the instructions given to the jury are erroneous, inasmuch as they do not correctly define the meaning of an equivalent as applied to the ingredients of an invention consisting entirely of a combination of ingredients all of which are old.

Assume the theory that the patentee of such a patent, in effecting a reissue, may strike out from the original specification the description of one of the ingredients of the patented combination and insert as a substitute therefor in the new specification the description of an equivalent for the same, which is denied, still it is clear law that the substituted ingredient cannot be regarded as a legal equivalent, within the meaning of the Patent law, unless it performs substantially the same function as the ingredient withdrawn, and was well known as such an ingredient at the date of the original patent and as a proper substitute for the ingredient which was included in the patented combination.

Questions of the kind usually arise where it becomes necessary

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to determine whether the defendant is guilty of an infringement in case it appears that he has not used all of the ingredients of the patented combination of the plaintiff. Repeated decisions of this Court have settled the rule in such cases that if the ingredient substituted by the defendant for the one left out in the defendant's machine was a newly discovered one, or even an old one performing some new function, and was not known at the date of the plaintiff's patent as a proper substitute for the ingredient left out, the charge of infringement cannot be maintained. [[Footnote 12](#)]

Tested by these considerations the Court here is of the opinion that the judgment of the circuit court must be reversed for three reasons, as follows:

1. That the prayer for instruction presented by the defendant that the reissued patent is not for the same invention as the original was improperly refused.

2. That the circuit court improperly refused to instruct the jury that the defendant did not infringe the plaintiff's patent unless the apparatus had the feeding device of the original patent in combination with the rotating brush or picker and the pervious cone and the chamber or tunnel described in the original specification.

3. That the circuit court erred in instructing the jury that the reissued patent is valid as respects the fourth claim if the combination of the three ingredients therein mentioned is new and could be usefully employed for the purpose of facilitating the making of hat bodies, supplemented by any known means of guiding the fur in such a way as to bring the same, by the operation of these three devices, to the cone so as to make a hat body, or if those three devices would make a hat body without the aid of other means of protecting the fur against escape.

Two errors are contained in that instruction, as follows:

1. It gives an erroneous definition of an equivalent for the ingredient of a combination consisting wholly of such as are old, as the substituted ingredient in such a case must be

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one which was known at the date of the original patent as *a proper substitute* for the ingredient left out, which latter qualification is entirely omitted in the instruction given to the jury.

2. But the instruction is also erroneous because it would allow a patentee to secure in a reissued patent inventions for combinations fewer in number than the whole described in the original patent, though the original patent contained no description whatever of any such invention, in violation of the express provision of the Patent Act and of the decisions of this Court.

Judgment reversed with costs and the cause remanded with directions to issue a new venire.

MR. JUSTICE STRONG concurred in the judgment, but not in all the positions taken in the preceding opinion.

MR. JUSTICE BRADLEY did not sit, and took no part in the judgment.

[[Footnote 1](#)]

[68 U. S. 1](#) Wall. 531.

[[Footnote 2](#)]

For the better understanding of that case, the reporter deems it well to say that "the figure" referred to on page 550 of that report (in the 7th and 8th lines from the top of the page just named), is figure 21 on page 560, and not figure 10 on page 549, as might not unnaturally be supposed. The matter is put rightly in late editions of Volume I, but is not so in earlier editions.

[[Footnote 3](#)]

16 Stat. at Large 206.

[[Footnote 4](#)]

[Gould v. Rees](#), 15 Wall. 194.

[[Footnote 5](#)]

[Vance v. Campbell](#), 1 Black 428.

[[Footnote 6](#)]

16 Stat. at Large 206.

[[Footnote 7](#)]

[66 U. S. 1](#) Black 428.

[[Footnote 8](#)]

[Case v. Brown](#), 2 Wall. 320; [Burr v. Duryee](#), 1 Wall. 566.

[[Footnote 9](#)]

[Carver v. Hyde](#), 16 Pet. 514; [Brooks v. Fiske](#), 15 How. 212; [Stimpson v. Railroad](#), 10 How. 329; [Prouty v. Ruggles](#), 16 Pet. 341.

[[Footnote 10](#)]

[Gould v. Rees](#), 15 Wall. 194

[[Footnote 11](#)]

Roberts v. Harnden, 2 Clifford 504.

[[Footnote 12](#)]

[Gould v. Rees](#), 15 Wall. 193; [Seymour v. Osborne](#), 11 Wall. 555; [Vance v. Campbell](#), 1 Black 428; [Prouty v. Ruggles](#), 16 Pet. 341.

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