

**Case No. 2,188.**

BURR et al. v. COWPERTHWAIT.

[4 Blaatchf. 163.]<sup>2</sup>

Circuit Court, D. Connecticut.

April Term; 1858.

PATENTS—BATS FOR HAT  
BODIES—VALIDITY—PATENTABILITY—INFRINGEMENT.

1. Henry A. Wells was the first inventor of the improvements in making and hardening bats of wool or fur for hat-bodies, described in his patent of April 25th, 1846, and that patent is valid.

2. An end or result produced cannot be secured by a patent, but only the substantial means used and specified to produce the end or result. The same end or result may be produced by means other than those substantially described in the specification, without infringing the patent.

[Distinguished in *Arkell v. J. M. Hurd Paper-Bag Co.*, Case No. 532.]

[See note at end of case.]

3. The case of *O'Reilly v. Morse*, 15 How. [56 U. S.] 62,119, cited and applied.

4. The essential means specified in the patent reissued to Henry A. Burr and others, September

30th, 1856, on the surrender of the said Wells patent, to accomplish the object of forming bats of fur for hat-bodies and other purposes, were new with Wells, and such reissued patent is valid for such means.

5. In this case, the same result was produced by the means specified in said reissued patent of September 30th, 1856, and by the means used by the defendant in his machine, that result being the forming of a hat-bat on a revolving cone, exhausted at its base, by causing a sheet of fur to be directed to, and thrown upon, a section of the revolving cone, as it rotates, in properly regulated quantities, parallel with its axis, by certain means used, so as to form the bat of fur on the cone, of the desired shape and thickness, at the will of

the operator; but the means for producing that result were different. In the patent, a trunk or channel way interposed between the picker cylinders and the cone, and combined with a hinged hood, to direct the sheet of fur on to the cone and produce a variable thickness of bat, was an essential means; but, in the defendant's machine, there was no trunk or channel way, and no hinged hood, but the fur was directed on to the cone by the power of the picking cylinders, and the variable thickness of the bat was produced by the manner of feeding the fur. It was, therefore, *held*, that the defendant's machine did not infringe the patent.

6. The reissued patent to Henry A. Burr and others, of October 7th, 1856, is for the process of making hat-bodies described in said patent of September 30th, 1856, in combination with the method of hardening the bat while on the cone. If the patent of October 7th, 1856, is for any method of hardening the bat while on the cone, when such method is combined with the method of forming a bat secured by the patent of September 30th, 1856, then the defendant does not infringe such combination, because he does not infringe the patent of September 30th, 1856; and, if the patent of October 7th, 1856, is for the mode of hardening described in that patent, then the defendant does not infringe that patent, because his mode of hardening the bat is different.

This was a bill in equity, founded on two reissued letters patent granted to the plaintiffs [Henry A. Burr and others], as assignees of Henry A. Wells, one on the 30th of September, 1856, [No. 396], and the other on the 7th of October, 1856, for inventions connected with the manufacture of fur hat-bodies. The original patent [No. 4,472] was granted to Wells on the 25th of April, 1846. [Bill dismissed.]

Edwin W. Stoughton, Charles M. Keller, and George Clifford, for plaintiffs.

George Harding, for defendant.

Before NELSON, Circuit Justice, and INGERSOLL, District Judge.

INGERSOLL, District Judge. Previous to the year 1846, efforts had been made to form hat-bodies, by throwing the fibres of the wool or fur, by means of a brush or picker cylinder, in proper proportions, on to a perforated cone, exhausted by a fan or other contrivance at its base, to hold the fibres on the cone, by the currents of air, which rush through the perforated cone, and to sufficiently harden the bat of wool or fur, while on the cone, to enable the operator to remove it from the cone, as formed, to go through the other processes, to make a complete hat; but, previous to the discovery and invention of Henry A. Wells, no devices were known to accomplish the desired object in a satisfactory way. By the discovery which Mr. Wells made, and which he described in the specification to the patent which he obtained, he did accomplish this object. It was attained by throwing the fibres of wool or fur on to a cone exhausted by a fan or other contrivance at its base, to hold the fibres on to the cone, by regulating the distribution of fur or wool on the cone, so as to make the bat of fur or wool thick or thin, where desired, by the aid of certain devices in the specification described; and by certain other devices for hardening

and interlocking the fibres while on the cone, to accomplish the result, so as to enable the operator to take the bat from the cone as formed, to go through the other processes, to make a complete hat. Mr. Wells having made this discovery, fully described the same in a written specification presented to the patent office, and, on the 25th of April, 1846, a patent was granted to him according to the claim which he then made. That patent has been repeatedly decided by the courts to be valid, and to grant what it purported to grant.

Previous to the year 1856, the right to that patent, and to the discovery which Mr. Wells made and described in his specification, became, by various assignments, vested in the plaintiffs. They, conceiving that the patent did not grant an exclusive right to the whole invention, as described in the specification, caused it to be surrendered, with the view of securing to themselves the exclusive right to the whole invention and discovery made by Wells and described in his specification. Upon such surrender, and on the 30th of September, 1856, a reissued patent was granted to the plaintiffs, securing to them the exclusive right of forming bats of fur fibres by throwing the fur, in properly regulated quantities, substantially as described in the specification, against a section of the circumference of a perforated cone or other form, as the same is rotated, to present in succession every part of the circumference thereof to the current of impelled fur, to obtain the required thickness of bat, substantially as described in the specification, in combination with the method of holding the fibres on the cone or other form, during the operation, substantially as described in the specification, and for the purpose specified; and, on the 7th of October, in the same year, a reissued patent was granted to them, securing to them the forming of the bat of fur fibres on the perforated cone or other form, in manner as substantially described in the specification, in combination with the hardening of such bat, while on such cone or other form, to give it the required consistency to admit of taking it off in a suitable condition for sizing by the well-known process of felting, substantially as described.

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The bill charges that the defendant, at Danbury, in Connecticut, is manufacturing hat-bodies substantially according to the manner first described by the said Wells, and in violation of the rights secured to the plaintiffs under the two last-mentioned patents; and the prayer of the bill is, among other things, that he be restrained by injunction from so doing. The defendant admits that he is manufacturing hat-bodies at Danbury, but he denies that by so doing he is violating any right secured to the plaintiffs by either of their patents. Three questions, therefore, are presented for consideration: First. What are the rights which the plaintiffs' patents purport to grant to them? Second. Are the grants which the patents purport to make, valid grants of right? And, if they are, then, third, is the defendant infringing upon any of the rights so granted to the plaintiffs?

Whoever discovers that a certain useful result will be produced, in any art, machine, or composition of matter, by the use of certain means, is entitled to a patent for it, provided he specifies the means he uses, in a manner so full and exact, that any one skilled in the science to which it appertains, can, by using the means he specifies, without any addition

to, or subtraction from them, produce precisely the result he describes. And, if this can not be done by the means he describes, the patent is void. And if it can be done, then the patent confers on him the exclusive right to use the means he specifies, to produce the result or effect he describes, and nothing more. And it makes no difference, in this respect, whether the effect is produced by chemical agency or combination, or by the application of discoveries or principles in natural philosophy, known or unknown before his invention, or by machinery acting altogether on mechanical principles. In either case, he must describe the manner and process, as above mentioned, and the end it accomplishes; and any one may lawfully accomplish the same end without infringing the patent, if he uses means substantially different from those described. *O'Reilly v. Morse*, 15 How. [56 U. S.] 62, 119. The end or result produced is not secured by the patent, but only the substantial means used and specified to produce the end or result—these, and nothing more. The same end or result may be produced by means other than those substantially described in the specification, without infringing the patent.

The reissued patent of the 30th of September, 1856, is for a combination of certain means, by which a sheet of fur is thrown on a section of an exhausted rotary cone, or other form, parallel with its axis, so that the deposit of fur on the revolving cone, or other form, by the means used and specified, can be regulated at the will of the operator, so as to make the hat-bat, or other body formed on the cone, or other form, of the desired shape and thickness, thick or thin, where required. The devices or essential means used, and set forth in the specification, to accomplish this result, are a feed-table, upon which the fur is distributed; a suitable feeding apparatus, to which the fur is brought by the feed-table, and which presents and holds the fur to the action of one or more rotary brushes, or other suitable device, for disintegrating and casting the fur into a current of air, induced by the rotary brush or brushes, or other suitable device; a trunk, or some analogous device, interposed between the rotary brush and the cone upon which the fur is to be thrown, and extending some distance from the rotary brush, or other suitable device, towards, and in the direction of, a perforated exhausted rotary cone, upon which the fur is to be thrown, to control and give direction to the current of air bearing the disintegrated fur from the rotary brush; and a hinged hood, or some analogous device, by which the current of air bearing the fur may be further modified, for the proper distribution of the fur upon the cone, in the direction of its length. By the combination of these means, when they are united with a perforated cone exhausted by a fan or other contrivance at its base, and having a rotary motion, so placed as to present, in its rotation, its entire surface to the current of air bearing the impelled fur from the rotary brush through the trunk, a bat of fur fibres, in properly regulated quantities, of a required thickness in all its parts, may be formed upon the cone, at the will of the operator, and, by the exhaust at the base of the cone, held on the same, ready for the subsequent operation of hardening and removing, preparatory to sizing. The exclusive right to the combination of these means and what are substantially the same, the patent of the 30th of September, 1856, purports to grant. The essential means used and specified in this patent of the plaintiffs, to accomplish the object of forming bats of fur for hat-bodies and other purposes, were, at the time of the application for the original patent by Wells, new, and they accomplished a useful and desirable result. Wells was the original inventor and discoverer of the same. The

plaintiffs, as his assignees, are entitled to be protected in his discovery, in the means used by him, and set forth in the patent, to accomplish such useful and desirable result.

It is clear, that before the discovery of Wells, no machine was known or used, that did, by any means, direct a sheet of fur on to a section of a revolving, exhausted, perforated cone, or other form, parallel with the axis, so as to form a bat of fur on the cone, or other form, of the desired shape and thickness, in properly regulated quantities, at the will of the operator. By the machines before known and in use, although bats of fur for making hat-bodies were sometimes formed by means of machinery on a perforated exhausted cone, yet, by such machines,

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no sheet of fur was directed, by the organization of the machine, on the perforated cone or other form in a line parallel with its axis, so as to form the bat of fur thick where desired, and thin where desired, at the will of the operator. By such machines, the fur was deposited on the exhausted cone by the power of gravity, or the power of the exhaust, or by the combined power of both, and not by the power of the machine directing how and in what manner the fur should be distributed on the cone. And this latter mode (by directing the fur) of forming the bats of fur on a perforated, exhausted cone, distinguishes the plaintiffs' machine from all machines known, or used, before the discovery of Wells; from the Blanchard machine; from the Williams machine; from the Fosket machine; and from any other machine to which our attention has been directed. A claimed identity of principle, between the Blanchard machine, the Williams machine, or the Fosket machine, and the plaintiffs' machine, has heretofore, in other cases, been repeatedly called to the attention of courts. It has been uniformly held, that the principle of the plaintiffs' machine and the combination claimed by it, were different from the principle and the combination of either of the other machines mentioned. We see nothing in the case, as now presented, to change the view heretofore taken on this subject, in this report. The grant made in the patent of the 30th of September, 1856, was, therefore, a valid grant of right.

The same useful and desirable result is produced by the means used by the plaintiffs in their machine, and specified in the specification to their patent, and by the means adopted by the defendant, in the machine which he uses. Both machines form a hat-bat on a revolving cone, exhausted at its base, by causing a sheet of fur to be directed to, and thrown upon, a section of the revolving cone, or other form, as it rotates, in properly regulated quantities, parallel with its axis, by certain means used, so as to form the bat of fur on the cone, or other form, of the desired shape and thickness, at the will of the operator. The result of the machine patented to the plaintiffs, and the machine used by the defendant, is the same; and if the essential means to produce the like result are the same, or substantially the same, then the defendant has violated the rights secured to the plaintiffs, by their patent. If they are not the same, there has been no violation of right; for the defendant may lawfully produce the like result with the plaintiffs, if he uses means substantially different from those described in the plaintiffs' specification. Results are not patented, but only means used to produce results.

The essential means which the defendant uses, in his machine, to produce the result which he obtains—that of forming a bat of fur of the required thickness in all its parts, upon a cone, or other form—are a feed-table, upon which the fur is first placed and distributed; a suitable feeding apparatus, to which the fur is brought by the feed-table, which presents and holds the fur to the action of the rotary brush or ordinary picking cylinder, which picking cylinder is combined with a second picking cylinder, which runs in the opposite direction to the first one, and which removes the fur which would otherwise tend to adhere to the surface of the first, picks it thoroughly, and delivers it in such manner that the fur from the two picking cylinders forms one current, whose direction is controlled by the position of the two cylinders. By the combination of these means, when they are united with a rotary, perforated cone, or other form, exhausted at its base and placed in front of the pickers, with its axis parallel thereto, and so placed as to present, in its rotation, its entire surface to the current of fur formed and directed by the two picking cylinders, a bat of fur fibres, in properly regulated quantities, of a required thickness in all its parts, is formed upon the cone, at the will of the operator, and, by the power of the exhaust at the base of the cone, is held on the same, ready for the subsequent operations of hardening and removing, preparatory to sizing. In the defendant's machine, there is no guiding-trunk, interposed between the pickers and the cone, to control and give direction to the sheet of fur carried by the current of air on to the cone. Neither is there anything either as an equivalent to the guiding-trunk, or in lieu or in substitution thereof, or for any other purpose, interposed between the pickers and the cone. The current of air which carries and directs the sheet of fur from the picker cylinders on to the section of the rotary cone, is controlled and directed by the operation of the picker cylinders, without the aid of anything interposed between them and the rotating cone. It is a complete and useful machine for forming bats of fur on a perforated, exhausted cone, without any trunk, or channel-way, or other device, interposed between the picker cylinders, rotary brush, or other disintegrating apparatus, and the cone on which the bat is to be formed; whereas, in the plaintiffs' machine, a trunk or channel-way for the disintegrated fur, or some other device, interposed between the picker cylinder, rotary brush, or other disintegrating device, and the cone, is an essential means to be used, and without which a sheet of fur would not, by the power of the machine, be thrown upon a section of a revolving, perforated cone, in properly regulated quantities, at the will of the operator. Without such trunk, channel-way, or other device, so interposed, the defendant's machine is a perfect one, complete in all its parts. Without it, the plaintiffs' machine would be useless. In one machine, the trunk, channel-way, or other means so interposed is an essential means. In the other, it is a nonessential.

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In one machine, the trunk, with the hinged hood, controls the current of impelled fur in the way it should go. In the other, the current of impelled fur is directed and controlled in the way it should go by the power of the picking cylinders. The variable thickness of bat in the direction of the length of the cone, in the defendant's machine, is produced by feeding the fur upon the apron of the machine in a greater quantity over against those parts where greater fur is required upon the cone in the direction of its length. Such

variable thickness of bat, in the plaintiffs' machine, is produced by the trunk, aided by the hinged hood. The result produced by the operation of the two machines is the same; but the combination of essential means in the defendant's machine to produce such result, is substantially different from the combination in the plaintiffs' machine. The use by the defendant, of his machine, is, therefore, no infringement of the right of the plaintiffs, secured by their patent of the 30th of September, 1856.

The patent of the 7th of October, 1856, is for the process of making fur hat-bodies, by forming a bat of fur-fibres on a perforated cone or other form, in manner as described in the patent of September 30th, 1856, in combination with the process or method of hardening the bat while on the cone, or interlocking the fibres of the fur, to give it the required consistency to admit of its being taken off in a suitable condition for sizing. If this last-mentioned patent is for any process of hardening the bat while on the cone, or any method of causing the fibres to interlock, to give the bat the required consistency, to admit of its being taken off the cone in a suitable condition for sizing, when such method or process is used in combination with the forming of a bat of fur fibres on a perforated cone by the means secured to the plaintiffs by the patent of September 30th, 1856, and only when it is used in such combination, it would follow, as the means used by the defendant in the forming of bats of fur on a perforated, exhausted cone, are different from the means secured to the plaintiffs by the last-mentioned patent, and as the defendant, in forming bats of fur on a perforated, exhausted cone, by the means which he adopts, has not infringed upon the rights of the plaintiffs secured by that patent, that, whatever method the defendant may have adopted for the hardening of the loafs of fur fibres formed by him, such method could not be in violation of any of the rights secured to the plaintiffs, as such method has not been used in combination with the means secured to the plaintiffs by the patent of the 30th of September, 1856, of forming bats of fur on a perforated, exhausted cone. As has already been shown, what the defendant has done is not in violation of any of the rights secured to the plaintiffs by the last-mentioned patent. No mode of hardening, therefore, which he could have used, would have been hi combination with the mode of forming by the means secured to the plaintiffs by the patent of the 30th of September, 1856. If, however, the patent of the 7th of October, 1856, is for a peculiar mode of hardening, then it will appear that the defendant has not adopted such peculiar mode. The mode pointed out by the plaintiffs, in their specification, for hardening the bat while on the cone is as follows: After the bat of fur fibres is formed on the perforated cone, and while the same is held to the cone by the pressure of the atmosphere, caused by the exhaust within the cone at its base, the bat is completely covered with pieces of felt or full'd cloth, taken from hot water, and then the whole is covered with another strong, perforated, metallic cone, put over the whole, the more effectually to hold the fibres of the bat, and make a slight pressure on them, whilst it is immersed in hot water, to harden. The immersion in hot water sufficiently hardens the bat, or interlaces the fibres, so that the bat can be taken from the cone. This is the peculiar mode of hardening set forth in the specification.

The mode adopted by the defendant for hardening the bat is different. It is not by hot water, steam, or other moisture. It is produced by friction, while the bat formed on the

cone is held to it by the pressure of the atmosphere caused by the exhaust. To produce the necessary friction, after the required thickness of bat is formed on the cone, another perforated cone, of slightly larger diameter, is placed over the bat, and the cone-case-stand is moved around about one-third of the circumference of the stand, and brought under a set of rollers which bear upon the upper part of the outer cone, to make a portion of its inner circumference (their axis being horizontal) bear upon the bat, and a longitudinal jiggling or vibratory motion is given to the rollers, and by them to the outer cone, whilst the cones and bat are slowly rotated on their axis to partially harden the bat. This method sufficiently hardens the bat, so that it can be removed from the cone. While the bat is undergoing the process of hardening by the defendant's mode, it is under the influence of the exhaust. While it is undergoing the process of hardening by immersion in hot water, it is not under such influence. There appears to be no substantial identity in the two peculiar modes of hardening. In whatever light, therefore, the patent of the 7th of October, 1856, may be viewed, there has been by the defendant no violation of any right secured to the plaintiffs by it. With this view of the case, the bill must be dismissed.

[NOTE. A result is not patentable. *Fuller v. Yentzer*, 94 U. S. 299; *Carver v. Hyde*, 16 Pet. (41 U. S.) 513; *Burr v. Cowperthwait*,

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Case No. 2,188; *New Process Fermentation Co. v. Maus*, 20 Fed. 725; *Case v. Brown*, 2 Wall. (69 U. S.) 320; *Howe v. Abbott*, Case No. 6,766; *Whittemore v. Cutter*, Id. 17,601; *Le Roy v. Tatham*, 14 How. (55 U. S.) 156. But see *Arkell v. J. M. Hurd Paper-Bag Co.*, Case No 532; *Heinrich v. Luther*, Id. 6,327; *Kuhl v. Mueller*, 21 Fed. 510.

[Patent No. 4,472 was granted to H. A. Wells, April 25, 1846; reissued September 30, 1856 (No. 396), and May 19, 1868 (No. 2,942), and December 4, 1860 (Nos. 1,086 and 1,087). For other cases involving this patent, see *Brett v. Quintard*, 10 Fed 741; *Wells v. Jacques*, Case No. 17,399; *Gill v. Wells*, 22 Wall. (89 U. S.) 1; *Burr v. Duryee*, 1 Wall. (68 U. S.) 531, Case No. 2,190; *Burr v. Prentiss*, Id. 2,194; *Wells v. Gill*, Id. 17,395; *Wells v. Jacques*, Id. 17,398; *Brett v. Quintard*, 17 Fed 529; *Wells v. Hagaman*, Case No. 17,396; *Wells v. Gill*, Id. 17,394.]

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