Hobbs Vs. Beach

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SooperKanoon Citation : sooperkanoon.com/89137

Court : US Supreme Court

Decided On : Mar-05-1901

Appeal No. : 180 U.S. 383

Appellant : Hobbs

Respondent : Beach

Judgement :

Hobbs v. Beach - 180 U.S. 383 (1901)
U.S. Supreme Court Hobbs v. Beach, 180 U.S. 383 (1901)

Hobbs v. Beach

No. 139

Argued January 16-17, 1900

Decided March 5, 1901

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TO THE CIRCUIT COURT OF APPEALS

FOR THE FIRST CIRCUIT

SYLLABUS

The first three and sixth claims of reissued letters patent No. 11,167 to Fred H. Beach for a machine for attaching stays to the corners of boxes were not anticipated by prior devices, and are valid.

It is within the jurisdiction of the Commissioner of Patents to order a patent to be reissued to correct an obvious error in one of the drawings.

The claims of the Beach patent were not unlawfully expanded pending the litigation of interferences in the Patent Office.

A patent is not terminated by the expiration of a foreign patent for the same invention unless such patent were obtained by the American patentee, or by his consent, connivance, or authority.

The first three and sixth claims of the Beach patent *held* to be infringed by defendant, manufacturing under a patent to Horton of December, 1890.

The fact that a claim contains the words "substantially as described" does not preclude the patentee from insisting that his patent has been infringed by the use of a mechanical equivalent. These words are entitled to but little weight in determining the question of infringement, although, if a doubt arose upon the question whether an infringing machine is the mechanical equivalent of a patented device, that doubt might be resolved against the patentee where the claims contain the words "substantially as described, or set forth."

This was a bill in equity by Fred H. Beach against Clarence W. Hobbs and Richard Sugden, now deceased (whose estate is

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represented by his executors), doing business under the name of the Hobbs Manufacturing Company, for an injunction and a recovery of damages for the infringement of reissued letters patent No. 11,167, dated May 26, 1891, for a "Machine for Attaching Stays to the Corners of Boxes."

In his specification the patentee makes the following statements:

"That it has been customary heretofore, in making paper or straw-board boxes, to apply a stay or fastening strip over the joints at the corners of the boxes, which strip is pasted down on the outside of the box or is folded over the edge of the box and secured by paste both outside and inside of the corner, and such work, as far as I am aware, has heretofore been done by hand."

"My invention relates to a machine for doing this work, and it consists in the matters hereinafter set forth, and pointed out in the appended claims."

Following are fifteen drawings of the machine and distinct portions thereof, and a minute description of the same. The patentee continues:

"The machine herein shown is, as hereinbefore stated, constructed to turn into the inside of the box the projecting end of the stay, and for this purpose the stay-strip is made of such width, and its guides are so arranged, that the inner edge of the strip extends over or past the edge of the box-wall, so that, when the stay is pasted down on the outside of the box-corner, a loose or free end projects outward beyond the inner edge of the box. After the plunger G has pressed the stay upon the box the, secondary plunger or strip-bender H then descends and bends or turns this loose end vertically downward."

"In many boxes, the stay is simply pasted against the exterior surface of the box-corner, and is not turned in or over the edge of the same, in which case the work can be done by using a nonreciprocating angular lower die, or anvil, and a single upper die, or plunger. In such case, the form B will obviously be not necessary as a part separate from the die, or, in other words, a single lower die or form will take the place of the form B and movable lower die I. "

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"As far as the main features of my invention are concerned, forms other than those illustrated of the several parts of the machine may be employed without departure from my invention -- as, for instance, in place of the particular mechanism shown

for feeding or delivering fastening-strips or stay-strips to and between the clamping dies, or for applying paste or glue to the said stay-strips, for applying paste or glue to the said stay-strips, pasting devices may be used in practice with the same general result, as above described."

The following are the claims alleged to have been infringed by the defendants:

"1. The combination, with opposing clamping-dies, having diverging working faces, of a feeding mechanism constructed to deliver stay-strips between said clamping-dies, and a pasting mechanism for rendering adhesive the stay-strips, said clamping-dies being constructed to cooperate in pressing upon interposed box-corners the adhesive stay-strips, substantially as described."

"2. The combination, with opposing clamping-dies, having diverging working faces, said clamping-dies being arranged to cooperate in pressing adhesive fastening strips upon interposed box-corners, a feeding mechanism constructed to feed forward a continuous fastening-strip, and a cutter for severing the said continuous strip into stay-strips of suitable lengths, substantially as described."

"3. The combination, with opposing clamping-dies, having diverging working faces, said clamping-dies being arranged to cooperate in pressing an adhesive fastening-strip upon the corner of an interposed box, a feeding mechanism constructed to feed between the dies a continuous fastening-strip, a pasting mechanism for applying adhesive substance to the strip, and a cutter for severing the strips into stay-strips of suitable lengths, substantially as described."

"6. The combination of opposing clamping-dies having diverging working faces constructed to cooperate in pressing an adhesive stay-strip upon an interposed box-corner, one of said clamping-dies being constructed to act with an elastic or yielding pressure to enable the dies to operate upon the box-corners of different thicknesses, substantially as described. "

Upon a hearing upon pleadings and proofs, the case resulted in a decree in favor of the plaintiff Beach upon the sixth claim, and a further finding that the first, second, and third claims had not been infringed. 82 F. 916.

Both parties appealed to the circuit court of appeals, which reversed the decree of the circuit court with respect of the first three claims of the patent and affirmed it as to the sixth claim, and remanded the case for further proceedings in conformity with the opinion. 92 F. 146.

MR. JUSTICE BROWN delivered the opinion of the Court.

The art of making paper boxes requires that the better class of square or other angular shapes be stayed or reinforced at the corners, where a union of the sides and ends is to be brought about by the application of adhesive strips of paper or muslin placed upon the joints, and the corners thereby strengthened, before receiving their final covering of paper. Prior to the Beach invention, the work of thus strengthening the corners of paper boxes by these adhesive strips had always been performed in a tedious and irregular way by hand.

The Beach machine and its operation are thus described by the plaintiff's expert:

"The machine consists of an anvil, or lower die, having at the upper portion two working faces which diverge downward from one another at a right angle. Working in connection with this anvil or die, and above it, is a vertical movable die or plunger, having also two diverging working faces, the working faces of the plunger forming a notch therein, which notch cooperates with the upper portion of the lower anvil or die, the dies being adapted to operate upon the right-angle corner of a tax to compress the said corner between the working faces of

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the opposing dies. A strip of paper suitable for the stay is fed by automatically moving mechanism over a pasting device and between a pair of shears, and thence between the upper and lower die when separated. The operation of the machine briefly described is as follows: a box whose corner is to be strengthened

by the addition of a stay-strip is placed upon the lower anvil or die, the inside of the corner of the box resting upon the apex of the lower die. The machine, as it is revolved, then feeds forward the stay-strip which has the paste upon it, and as the upper die descends, the shears also operate, severing from the continuous stay-strip a portion sufficient for the stay. As the cutting operation is completed, the upper die or plunger is descending, and forces the gummed stay-strip into position upon the outside of the box-corner, and the stay-strip and box corner are pressed between the working faces of the two opposing dies, and thus the stay-strip is caused to conform to and be stuck upon the corner of the box. When the upper die or plunger rises, the box, with its attached stay-strip, can be removed, and another corner presented, when the operation will be repeated. The upper die or plunger is provided with a spring of rubber or metal so that it may yield slightly in the direction of its motion, so that it may give an elastic pressure upon the box, and also be made to operate upon different thicknesses of box or stay-strips."

"Briefly, this description describes the machine, so far as it is necessary to describe the same for the purposes of this case. I must state, however, that the machine is also arranged to fold in the end of the stay-strip within and into the interior of the box, and this it accomplishes by having the lower die longitudinally movable, and by supporting the box upon both the working faces of the lower die and upon the faces of the block within which the lower die can move. The faces of the upper portion of the die and of the block are arranged so that they form two planes at right angles to one another, the planes of the upper working faces of the die corresponding with the planes of the upper faces of the block. I refer to this capacity of the machine merely for the purpose of showing that I have considered the same, but such capacity -- that is, the ability to turn the end of

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the stay-strip in and over the edge of the box, is not a feature of the machine which need always be present. I quote as follows from the specification of the patent:"

" In many boxes, the stay is simply pasted against the exterior surface of the box-corner, and is not turned in or over the edge of the same, in which case the work can be done by using a nonreciprocating angular lower die or anvil, and a single upper die or plunger."

"From the above quotation it will be clearly evident that the patentee contemplated using his machine in the simple form in which I have described it, and divested of that mechanism which is involved when the stay-strip is turned over the edge of the box and into the same. As the issue in this case involves a mechanism which does not turn the stay-strip over and into the box, I have deemed it best not to put into the record a description of the mechanism necessary to accomplish that result."

The first claim of the patent is for (1) two opposing clamping-dies, having diverging working faces; (2) a feeding mechanism which delivers the stay-strip between the clamping-dies, when the upper die is raised, and (3) a pasting mechanism. The clamping-dies are so constructed as to cooperate with one another in pressing upon interposed box-corners the adhesive stay-strips, substantially as described.

The second claim also includes the opposing clamping-dies with diverging working faces; the same feeding mechanism, and a cutter for severing the continuous strip into stay-strips of suitable length, substantially as described.

The third claim includes the same dies, the feeding mechanism, the pasting mechanism, and the cutter; in short, a combination of all the elements of the two preceding claims.

The sixth claim includes the same clamping-dies having the diverging working faces, one of which clamping-dies is constructed to act with an elastic or yielding pressure, to enable the dies to operate upon box-corners of different thicknesses.

1. The first three claims were vigorously assailed by the defense upon the ground that, in view of the prior state of the art, they involved no invention. Unfortunately, however, this

defense comes to us so loaded down with adverse decisions that we should hesitate to sustain it unless it were made clear that, through some misunderstanding or omission, it had not been fully presented to the various tribunals which had passed upon it, or that their rulings had been based upon a misapprehension of the facts.

The proofs show that Mr. Beach made application for his patent in June, 1885; that, while pending in the Patent Office, it was placed in interference with five other claims, and that the patentee was awarded priority of invention by the examiner of interferences, by the Board of Examiners-in-Chief on appeal, and finally by the Commissioner of Patents. It also appears that, in a suit in the Northern District of New York defended by two of the contestants in the interference proceeding, these three claims were sustained by the circuit court, *Beach v. American Box-Machine Co.,* 63 F. 597, and on appeal, by the Circuit Court of Appeals for the Second Circuit. *Inman Manufacturing Co. v. Beach,* 71 F. 420. Nor do we understand that, in the case under consideration, the Circuit Court for the District of Massachusetts differed from the New York courts as to the validity of the first three claims. Indeed, the learned circuit judge says expressly: "On the questions of anticipation and the state of the art, we therefore follow the conclusions of the Circuit Court of Appeals for the Second Circuit." The difference between him and the circuit court of appeals, to which this case was carried, related to the proper construction of these claims, and to the question of their infringement. Of course, we are bound to give to this question of anticipation an independent consideration. At the same time, we feel ourselves bound to defer somewhat to this unanimity of opinion upon the part of so many learned and distinguished judges whose lives have been largely devoted to the examination of patent causes.

Taking up these prior patents, our attention is at once challenged to the fact that none of them covers a machine for attaching paper or muslin stays to the corners of boxes, and the question arises whether the uses to which these machines are adapted are so nearly analogous to the use made of them by

Beach that the applicability of the old device to the new use would occur to a person of ordinary mechanical skill, within the case of *Potts v. Creager,* 155 U. S. 597 , in which we said (p. 155 U. S. 608):

"If the new use be so nearly analogous to the former one that the applicability of the device to its new use would occur to a person of ordinary mechanical skill, it is only a case of double use; but if the relations between them be remote, and especially if the use of the old device produces a new result, it may at least involve an exercise of the inventive faculty."

It is sufficient to observe of the patents to Cohn, of 1874, to Lieb, of 1880, and of the English patent to Hadden, of 1884, that they cover machines for stitching wire or attaching metallic stays, and that, while all three of them have the clamping-dies with diverging faces, they lack most of the other elements of the first three claims of the Beach patent. The possibility of adapting these devices to the attaching of gummed strips to the corners of paper boxes might occur to an ordinary mechanic, but could scarcely be carried into effect without the employment of something more than mechanical skill.

Most of the other prior patents relate to machines for making paper tags, wherein a piece or patch is gummed or cemented to the side of the tag to strengthen it, to preparing paper for covering paper boxes, to covering such boxes with pasted paper, to machines for making match or other paper boxes, forming heel stiffeners, shaping or working sheet metals, or addressing machines.

The only patents requiring special notice are the Maxfield and Terry patents for making paper boxes, which relate to mechanism for pressing a strip of glued paper upon the edge of circular collar boxes at the junction of the bottom and sides, or rim, so as to form a union of the circular end with the cylindrical side of the box. The operation of the machines seems to be only partly mechanical, and differs so widely from the Beach patent that they can be hardly be seriously insisted upon as anticipating it. It would seem from the specifications that a great part of the work is

done by hand; indeed, in the Terry patent, it is said

"that the invention connects the circular parts with the strips, said parts forming the tops and bottoms and

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sides of boxes, the remaining work, such as the pasting of the strip in one part, being done by hand, as also the covering of the boxes, if desired, with colored paper."

The machine is in no sense automatic, and if it were, its functions are so different from those of the Beach device it is clearly no anticipation.

None of these patents approximates so nearly to the Beach patent as that of Dennis and York's addressing machine, which was the only one deemed worthy of special notice in the courts below. This relates to

"addressing machines in which a strip of paper, with the addresses printed thereon, is run through the machine, the addresses cut off in slips, and automatically affixed to the newspapers, envelopes, or other articles by a descending knife and platen."

The object of the invention is stated to be

"to change or adjust the feed automatically by the running of the machine itself so that addresses of greater or less width can be cut accurately without attention of the operator, the machine adjusting itself accurately to the work to be done; and, second, to enable the addresses to be affixed to single sheets beneath the platen."

The machine has a feeding, pasting, and cutting mechanism, combined with a vertical reciprocating plunger armed at its lower end with a knife to cut off the addresses, and descending with a flat head upon a flat platen, a newspaper being interposed between. The bed on which the papers rest is called a "follower," and instead of being rigid, is supported upon light, coiled springs, and by lever action, so that it will move up and down freely and produce just enough pressure under all

circumstances to receive that pasted slip upon the upper sheet. Being designed for light work, it is not built with the solidity required for pasting strips upon boxes, and in other particulars differs from the Beach device.

In its operation, it approaches much more nearly to the Beach device than any other which has been put in evidence, and we agree with the Circuit Court of Northern New York that if this be not an anticipation, none of the others are. By changing the flat head and the flat platen to clamping dies with diverging faces, and strengthening and changing the machine in some minor particulars, it could be used to fasten stay-strips

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to box-corners. Indeed, a model of the Dennis and York machine so altered was put in evidence, and shown to be capable of doing the work of the Beach patent, though somewhat crudely and imperfectly. It is insisted that, as the only material change in the Dennis and York machine is the substitution of dies with diverging faces for the flat head and platen of that structure, this involves no invention, and that it would at once occur to a mechanic of ordinary skill.

It appears from the testimony that several of these addressing machines, of which that of Dennis and York is a type, and which are now claimed to have inspired the Beach patent, had been upon the market for many years, and yet it never seems to have occurred to anyone engaged in the manufacture of paper boxes that they could be made available for the purpose of attaching strips to the corners of such boxes. This very fact is evidence that the man who discovered the possibility of their adaptation to this new use was gifted with the prescience of an inventor. While none of the elements of the Beach patent -- taken separately or perhaps even in a somewhat similar combination -- was new, their adaptation to this new use and the minor changes required for that purpose resulted in the establishment of practically a new industry, and was a decided step in advance of any that had heretofore been made.

We agree that if the Dennis and York machine were designed for the purpose of attaching together the edges of paper boxes, where each surface was in line with the other, with the aid of flat dies and platen, it would require no invention, in view of other anticipating devices, to change this to dies with diverging faces for gluing boxes at their corners. But that is not all. Beach did not have before him a machine for attaching strips to the corners of paper boxes, but a machine for attaching addresses to newspapers, and while there is an analogy, there can scarcely be said to be a similarity in these functions. We agree with the courts below that it did involve invention to see that a machine of the Dennis and York type was adaptable to the work of the Beach device, and second, to make such changes as were necessary to adapt that device to its new function. With all the anticipating devices before us, it is apparent that

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the mere change in the shape of the dies was a minor part of the work involved in so changing the Dennis and York machine as to make it perform a wholly different function, the invention consisting rather in the idea that such change could be made than in making the necessary mechanical alterations. As stated by Judge Coxe in his opinion in *Beach v. American Box Machine Co.,* 63 F. 597:

"The question is whether a mechanic, before anyone had thought of pasting stay-strips to the corners of boxes by machinery, would construct the Beach machine after seeing the labeling machine. Would the latter suggest the idea and the embodiment of the idea? Would the thought enter the mind of the skilled mechanic with the Dennis and York device before him on his work bench, and if it did, would it not be a creative thought whose presence would convert the mechanic into an inventor?"

In passing upon the question of novelty, we feel at liberty to consider the fact that the Beach machine and its congeners have completely supplanted the former method of applying strips by hand; that no manufacturer can successfully compete for the trade without adopting such machine; that it not only applies these strips with much greater rapidity than is possible by hand, but the work done is stronger,

cheaper, cleaner, and more uniform; that the machine attaches the strip more rigidly about the corner, and that, by reason of its greater compression, forces out the moisture and dries the box for immediate use; that there is also a saving of material by cutting the strips of the proper length instead of tearing them, and that, by reason of the greater compression, heavier and stronger material may be employed than was possible when the work was done by hand. We find no difficulty in holding that the first three claims of this patent were not anticipated by any prior devices.

What we have said regarding these claims applies with even greater potency to the sixth claim, which introduces a new feature of a clamping die constructed to act with an elastic or yielding pressure, to enable the dies to operate upon box corners of different thicknesses. While the mere introduction of springs to enable the plunger to act with an elastic pressure may not, of itself, have been a novelty, its introduction into a machine

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which was itself novel certainly did not destroy its novel character. The claim does not cover simply a die constructed in this manner, but the elastic feature introduced into one of opposing clamping dies, having diverging working faces, constructed to cooperate in pressing an adhesive stay-strip upon an interposed box-corner, was clearly novel, and while the introduction of this feature into an old and nonpatentable machine may not itself involve invention, in this case, it is merely an additional element introduced into a machine which did itself involve invention. This feature was introduced into Beach's claim as early as May 4, 1886, by an amendment to his specification, before the patent was issued, and hence could not have been inserted to cover the Horton patent used by defendants, which never was known to the trade before 1889 or 1890.

2. The validity of the reissue is attacked upon the ground that the original patent was neither "inoperative nor invalid by reason of a defective or insufficient specification," as required by statute (Rev.Stat. sec, 4916), to justify a reissue. The reissue was applied for April 9, 1891, but a few weeks after the original patent was

issued, merely to correct, as it would seem, an obvious error in one of the drawings. Possibly the error was such as would not have impaired the patentee's rights under his original designs, but he was entitled to the full scope of his invention, and if he were dissatisfied with the drawings as they stood, and the error was purely an inadvertent one, we think it was within the jurisdiction of the Commissioner of Patents to order the patent to be reissued. The defense is purely a technical one. There was no attempt to enlarge the claims or to alter the specifications. There is no evidence that anyone could have been prejudiced by the reissue, and we see no reason to doubt that it was applied for in good faith, and with a design only of securing to the patentee what he had actually invented. To justify a reissue, it is not necessary that the patent should be wholly inoperative or invalid. It is sufficient if it fail to secure to the patentee all of that which he has invented and claimed. The reissue was applied for so promptly that no question can arise, upon the facts of this case, of an attempt to cover devices which had been patented,

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or meantime had come to the knowledge of the patentee. As was said in *Topliff v. Topliff,* 145 U. S. 156 , 145 U. S. 171 :

"This Court will not review the decision of the Commissioner upon the question of inadvertence, accident, or mistake unless the matter is manifest from the record."

The only alternative of a reissue was a suit upon the original patent, in which the patentee would be compelled to take his chances of success notwithstanding the error in his drawing, when, in case of defeat, the time in which to obtain a reissue might have expired. We do not think he should be driven to this expedient.

3. The defense that the claims of the Beach patent were unlawfully expanded pending the litigation in the Patent Office and before the final issue of the patent, by omitting the secondary plunger or strip bender H, was considered by the courts in both the first and Second Circuits, and was held to be unsupported by the facts. In his first application, made June 10, 1885, Beach claimed not only a plunger

coming down "to press the stay upon the box," but a secondary plunger coming down "to turn the projecting end of the stay down at right angles," although in the third claim the secondary plunger is not mentioned as an element, and in his specification he says,

"in some kinds of work, the stay can be applied and the projecting edge turned under without the use of the secondary plunger H, but in ordinary work, it is necessary."

In his first amendment, filed May 4, 1886, he states that,

"in some cases, with the use of thin stays, the edge that projects beyond the edge of the box will be turned down sufficiently by the action of the plunger G, and without the use of the secondary plunger H,"

and that

"in many boxes, the stay is simply pasted down over the corner of the box, and is not turned under, in which case the work can be done by using the angular form and one plunger with a corresponding angular notch."

He also amended his first claim to fit this contingency, by omitting mention of the secondary plunger, and adding a fourth claim, in which he describes the plunger as "formed with an elastic or yielding foot."

All this was prior to the invention of the Horton machine, which was first put into use in September, 1889. Of course, the amendment of May, 1886, could not have been made with

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reference to this device. It is true that, in November, 1890, after application had been made for the Horton patent, new specifications and claims were filed, in which the invention was stated much more in detail, and with much fuller and more accurate language than before. But there appears to have been no attempt to expand the original claims for the purpose of including the Horton patent.

The patent had been the subject of an earnest contest in the Patent Office for four years; had been put in interference with five other devices, and it was scarcely possible that, after this long litigation, the patentee should not have detected defects in his original application, and have taken this opportunity of correcting them. His experience in this litigation had doubtless apprised him of the weak points in his prior specification and claims, and it was perfectly competent for him to restate them, provided his patent was not essentially broadened to cover intervening devices.

In *Railway Company v. Sayles,* 97 U. S. 554 , application for patent was made in June, 1847, and rejected. The application remained unaltered until 1852, when it was amended, and a patent granted with considerable modifications. In the meantime, other devices were introduced, including that used by the defendant. It was with reference to this state of facts that the court observed:

"If the amended application and model, filed by Tanner five years later, embodied any material addition to or variance from the original -- anything new that was not comprised in that -- such addition or variance cannot be sustained on the original application. The law does not permit such enlargements of an original specification, which would interfere with other inventors who have entered the field in the meantime, any more than it does in the case of reissues of patents previously granted. Courts should regard with jealousy and disfavor any attempts to enlarge the scope of an application once filed, or of a patent once granted, the effect of which would be to enable the patentee to appropriate other inventions made prior to such alteration, or to appropriate that which has, in the meantime, gone into public use."

Had there been any expansion of the original specification

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and claims subsequent to the introduction of the Horton machine, especially if made with reference thereto, we should not have hesitated to apply the doctrine of that case, but we see no evidence of an intent to cover that machine, unless it

were already covered, and agree with Judge Lacombe, that

"the original drawings and specifications suggest the claims finally made, which recognize and claim the two different operations of outside and inside applications."

4. The assignment that the court erred in holding that the reissue expired April 5, 1892, in consequence of the expiration on that date of the British Reed-Jaeger patent of April 5, 1888, for the same invention, is not supported by any evidence that this patent was obtained by Beach, or that the application for the same was authorized, directly or indirectly, by him. It is true that, by Rev.Stat. sec. 4887,

"every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent,"

but this obviously presupposes that the foreign patent shall have been obtained by the American patentee or with his consent. This is evident from the somewhat awkward phraseology of the first clause of the section, which declares that

"no person shall be debarred from receiving a patent for his invention, . . . by reason of its having been first patented or *caused to be patented* in a foreign country,"

which evidently means that the patentee shall not be debarred from his patent by reason of his having first patented, or caused his invention to be patented, in a foreign country. Indeed, it would be so manifestly unjust that a patentee should lose the full fruits of his patent by the fact that some intermeddler had caused the invention to be patented abroad that we could not give that construction to the section unless its phraseology imperatively demanded it. This construction would suggest an excellent device to an enemy to bring about the termination of an inconvenient patent. It seems that this patent was applied for by Reed April 5, 1888, at the instigation of Jaeger (who was one of before the Patent Office), and was allowed to expire April 5, 1892, through nonpayment lowed to expire April 5, 1892, through nonpayment of the renewal fee required by British law. The

fact that this patent was obtained through the instigation of one who was at that very time contesting Beach's right to the patent before the Patent Office indicates almost conclusively that it was not obtained by Beach's authority.

This reply to defendants' assignment is so conclusive that we have not thought it worth while to inquire whether the Jaeger British patent and the Beach patent were for substantially the same invention. Nor do we find it necessary to express an opinion whether the lapsing of a foreign patent by the failure of a patentee to pay a renewal fee required by British law would shorten the term of his patent here. *Bate Refrigerating Co. v. Hammond,* 129 U. S. 151 ; *Pohl v. Anchor Brewing Co.,* 134 U. S. 381 ; *Bate Refrigerating Co. v. Sulzberger,* 157 U. S. 36 .

5. The most important question in the case is that of infringement. Defendants are manufacturing under a patent to James A. Horton of December 9, 1890, in the specification of which the patentee declares that his

"invention relates to that class of machines for applying stays to the corner of boxes and box covers, in which a rectangular mandrel is employed to support the box or cover internally, while a reciprocating plunger, having a reentrant angle in its operating face, descends and bends the stay into angular form, and presses it upon the corner of a box body or cover while the same is supported by the mandrel."

Substitute for the word "mandrel" the "lower die or anvil" of the Beach patent, and for "a plunger having a reentrant angle in its operating face" a "clamping die having a diverging working face," and these elements of the two machines are identical. There is also a reel attached to the frame of the machine for carrying a continuous stay-strip, a pasting mechanism consisting of a wheel rolling in a trough of water which moistens the gummed strip, a feeding mechanism by means of which a sufficient length of the stay-strip is pushed forward at each revolution, and a cutting device for severing the stay-strip when it is fed in between the opposing dies.

The blade of the cutting mechanism consists of the inner edge of the plunger operating in connection with a portion of the frame of the machine. As the Horton machine is only intended

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to apply stay-strips to the exterior of a box, all the mechanism shown in the patent which specifically relates to the turning in of the stay-strip within the box is absent. The principal difference between the two devices consists in the details of the mechanism, and in the fact that, under the Beach patent, the stay-strip is fed at right angles to the line of the opposing dies and the corner joint of the box, while in the Horton machine the stay-strip is fed on a line parallel to the line of the box-corner, in other words, a back feed instead of a side feed, but they are both alike in that they grasp the paper and project it forward over the corner of the box when the dies are open. There is also a dissimilarity in the fact that the lower clamping die of the Horton machine is not movable into and out of its usual working position, is not moved when the machine is in operation, and is made movable only for the purpose of adjustment, but as the device is only used for the purpose of applying stay-strips to the exterior of the box-corner, such movability becomes unnecessary, or, as explained in the Beach patent,

"the said anvil I is herein shown as constructed to move horizontally and as extending through a horizontal bearing aperture a in the frame, by which it is supported, a horizontal movement being given to the said anvil to aid in turning in or pasting stay-strips to the inside of the box-corner."

In the case of a pioneer patent like this (and while the patent is not a great one, we are not speaking too highly of it in calling it a pioneer in its limited field), there would be no difficulty in holding that these differences were immaterial, were it not for the fact that each one of the claims is limited by the words "substantially as described." In other words, that, unless the infringing device contains mechanism substantially such as is described in the patentee's specification, and shown in his drawings, there can be no infringement. It was upon this point, and upon this alone, that there appears to have been any difference of opinion between the

circuit court and the court of appeals. While the words "substantially as described or set forth" are not absolutely meaningless, they do not limit the patentee to the exact mechanism described in his specification, or prevent recovery against infringers who have adapted mechanical equivalents for such mechanism. In determining the range of such

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equivalents much depends upon the question whether the machine is a primary one, or whether the patent covers some novel feature introduced into an old machine. It is difficult to say exactly what effect should be given to these words. In one sense, it may be said that no device can be adjudged an infringement that does not substantially correspond with the patent. But another construction, which would limit these words to the exact mechanism described in the patent, would be so obviously unjust that no court could be expected to adopt it. The authorities really throw but little light upon their proper interpretation. In *Seymour v. Osborne,* 11 Wall. 516, it was intimated that a claim which might otherwise be held bad as covering a function or effect, when containing the words "substantially as described," might be construed in connection with the specification and be limited thereby, and when so construed, might be held to be valid. So in the *Corn Planter Patent,* 23 Wall. 181, 90 U. S. 218 , it was said that "this clause throws us back to the specification for a qualification of the claim, and the several elements of which the combination is composed." This rule, however, is equally applicable whether these words be used or not. While, as stated in *Westinghouse v. Boyden Power Brake Co.,* 170 U. S. 537 , 170 U. S. 558 : "These words have been uniformly held by us to import into the claim the particulars of the specification," it was also said in *Mitchell v. Tilghman,* 19 Wall. 287, that

"words of such import, if not expressed in the claim, must be implied, else the patent in many cases would be invalid as covering a mere function, principle, or result, which is obviously forbidden by the patent law, as it would close the door to all subsequent improvements."

If these words are used, the patentee may still prove infringement in the use of a mechanical equivalent; if they are omitted, he is bound to prove no less. Perhaps it would be sufficient to say that, if a doubt arose upon the question whether the infringing machine was the mechanical equivalent of the patent device, that doubt should be resolved against the patentee where the claims contain the words "substantially as described or set forth."

Without determining what particular meaning, if any, should be given to these words, we are of opinion that they are not to be construed as limiting the patentee to the exact mechanism

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described, but that he is still entitled to the benefit of the doctrine of equivalents, and that it is still true, as observed in *Morley Sewing Machine Co. v. Lancaster,* 129 U. S. 263 , 129 U. S. 273 :

"Where an invention is one of a primary character, and the mechanical functions performed by the machine are, as a whole, entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements,"

although the subsequent machine may contain improvements in the separate mechanism which go to make up the machine.

The Horton machine not only accomplishes the same result as the Beach device, but accomplishes it by the employment of the same combination of the same elements. The mere fact that the continuous strip is introduced between the dies from a different direction is immaterial. The fact that the Horton device contains no mechanism for turning the strip into the inside of the corner merely indicates that it does not perform all the functions of the Beach patent. But it is no less an infringement if it performs its primary function in practically the same way. We are not concerned with the subordinate differences in the mechanism, least of all with the different names given by Horton to parts of his machine similar to the corresponding parts in the Beach patent. As the two machines are alike in their

functions, combination, and elements, it is unnecessary to go further and inquire whether they are alike or unlike in their details.

There seems to be no denial of defendants' infringement of the sixth claim. Plaintiff's expert testifies that he finds

"in the defendants' machine two opposing clamping dies having diverging working faces, the upper one of which is constructed to act with an elastic or yielding pressure to enable the die to operate upon box-corners of different thicknesses. This is the combination referred to in the sixth claim, and it is found in the defendants' machine."

We do not find this to be denied. Both the circuit court and the court of appeals found this claim to have been infringed, and we accept their conclusion.

The decree of the court of appeals is therefore

Affirmed.