

NORTON et al. v. JENSEN.

(Circuit Court of Appeals, Ninth Circuit. October 24, 1898.)

No. 421.

1. PATENTS—PRESUMPTION OF VALIDITY.

Where two patents apparently describe and claim the same art or article, the question of identity is open for examination, with the presumption in favor of their diversity.

2. SAME—RES JUDICATA—IDENTITY OF SUBJECT-MATTER.

A judgment in a suit for infringement of a patent does not render res judicata questions arising in a subsequent suit between the same parties for the infringement of the same patent by a machine for which a patent has been granted to the defendant since the former judgment was rendered, the subject-matter of the two suits not being identical.

3. SAME—CONSTRUCTION OF CLAIMS — ACQUESCENCE IN REJECTION OF BROAD CLAIMS.

Where an applicant for a patent, after the rejection of his broad claims as the original inventor of a machine, acquiesces in such rejection, and amends and limits his claims to improvements merely, his action amounts to a disclaimer as to his broad claims, and a patent granted on such amended application is to be strictly construed, and confined to the improvements specified.

4. SAME—CAN-HEADING MACHINES.

Where amendments to an application for a patent for improvements in a can-heading machine, made to meet objections of the patent office, and on which a patent was finally granted, described for the first time an annular space created between the can-body and the mold, into which the flange of the can-head was forced in applying it to the body, such space became an essential element of the combination, and a device which omits such element is not an infringement.

5. SAME.

The Norton patent, No. 267,014, for improvements in a can-heading machine, on the facts disclosed by the file wrapper (which was not in evidence in Norton v. Jensen, 7 U. S. App. 103, 1 C. C. A. 452, and 49 Fed. 859), is not for a primary invention, and must be narrowly construed, and confined to the particular combination described. It is not infringed by a machine made under the Jensen patent, No. 443,445, for a new and improved machine for capping and crimping cans.

6. SAME.

Neither the Norton and Hodgson patent, No. 274,363, the Jordan patent, No. 322,060, both for improvements on the original Norton patent, No. 267,014, for improvements in can-heading machines, nor the Norton & Hodgson patent, No. 294,065, for a can-ending and seaming machine, is infringed by a machine made under the Jensen patent, No. 443,445, for a new and improved machine for capping and crimping cans.

Appeal from the Circuit Court of the United States for the District of Oregon.

This was a suit in equity by Edwin Norton and Oliver W. Norton, the appellants, against Mathias Jensen, the appellee, for the infringement of four letters patent, viz.: (1) The Norton patent, No. 267,014, dated November 7, 1882, as to claims 1 and 2; (2) the Norton and Hodgson patent, No. 274,363, dated March 20, 1883, as to claims 6 and 7; (3) the Norton and Hodgson patent, No. 294,065, dated February 26, 1884, as to claim 14; (4) the Jordan patent, No. 322,060, dated July 14, 1885, as to claims 1, 2, 6, 7, 11, 12, and 13. The patents, generally speaking, cover inventions for automatically putting the bottoms and heads on tin cans. The first of these patents (the Norton patent, No. 267,014) is upon what appellants claim to be the original invention of a machine for automatically applying tight, exterior fitting can-heads to can-bodies. The Norton and Hodgson patent, No. 274,363, and the Jordan patent, No. 322,060, are for improvements upon the Norton patent, No. 267,-

014. The Norton and Hodgson patent, No. 294,065, is for a combined can-heading and crimping machine. The purpose of the bill was to restrain the defendant, Mathias Jensen, from using a machine for can-ending and crimping purposes for which a patent was issued to him on December 23, 1890, numbered 443,445. This was the second patent issued to Mathias Jensen for a can-ending and crimping machine. His first patent was issued to him on January 24, 1888, is numbered 376,804, and was for "an improvement in can-crimpers and cappers." This first patent has been before this court, and, in a suit brought by these appellants against the appellee, Mathias Jensen, and one John Fox, and the patent was held to infringe the four patents now sued upon. See *Norton v. Jensen*, 7 U. S. App. 103, 1 C. C. A. 452, and 49 Fed. 859. It is strenuously contended by counsel for appellants that the rights asserted by them in that case and in the case at bar, and the matters of defense presented in both cases, are substantially the same, and that, therefore, the questions arising under the several patents of appellants now sued upon, with reference to the alleged infringement by the second Jensen machine, are res judicata between the parties. The claims of the four patents sued upon, alleged to have been infringed by Jensen's second machine, are as follows: Claims 1 and 2 of patent No. 267,014, issued November 7, 1882, to Edwin Norton, of Chicago, Ill., for "improvements in machines for putting on the ends of fruit and other cans": "(1) In a machine for applying to can-bodies heads fitting outside the same, the combination of a device for sizing the exterior diameter of the can-body to conform to the interior diameter of the can-head, and holding the same so sized while the head is applied, said sizing and holding device having its end enlarged to fit the exterior diameter of the can-head, so as to leave an annular space between it and the can-body for the reception of the flange of the can-head, with a device for forcing the can-head into said annular space, and thereby applying the head outside the can-body, substantially as specified. (2) In a machine for applying to can-bodies heads fitting outside the same, the combination of a chute or device for delivering the can-bodies to the machine, with a movable device for clamping the can-body and sizing its exterior diameter to conform to the interior diameter of the can-head, said clamping and sizing device having its end or mouth enlarged to leave an annular space between the same and the can-body clamped therein for the reception of the flange of the head, a chute or device for delivering the can-heads to the machine, and a device for forcing the can-head into said annular space at the end of said clamping and sizing device, substantially as specified." Claims 6 and 7 of patent No. 274,363, issued March 20, 1883, to Edwin Norton and John G. Hodgson, of Chicago, Ill., for an "improvement in can-ending machines": "(6) The combination of the can-body-clamping device or mold with a chute for the can-heads, a reciprocating head or piston at the base of said chute for automatically feeding the can-heads to the mouth of the mold and applying the same to the can-body, and a spring pin or device for holding the can-head in position at the mouth of the mold, substantially as specified. (7) The combination of the delivery-chute wheel having half-molds upon its periphery, reciprocating half-molds, chute for the can-heads, piston for applying the same to the can-bodies, and discharging chute, substantially as specified." Claim 14 of patent No. 294,065, issued February 26, 1884, to Edwin Norton and John G. Hodgson, of Chicago, Ill., for an "improvement in can-ending and seaming machines": "(14) The combination, with a can-body-clamping mold, of a chute or device for delivering the can-bodies thereto, a chute or device for delivering the can-heads at the mouth of said mold, mechanism for applying the can-head to the can-body, and a mechanism for binding and compressing into a seam the flanges uniting the can head and body, substantially as specified." Claims 1, 2, 6, 7, 11, 12, and 13 of patent No. 322,060, issued July 14, 1885, to Edmund Jordan, of Brooklyn, New York, assignor, by mesne assignments, to Edwin Norton and Oliver W. Norton, said patent being for an invention in "heading-machines for automatically applying the heads on the bodies of sheet-metal cans": "(1) In a can-heading machine, the combination, with two reciprocating part-molds, of a reciprocating device for conveying the can-body to a position between said part-molds, and holding it there while said molds move forward to clamp the can-body, substantially as specified. (2) The combination, with two part-molds, of a reciprocating device for con-

veying the can-body to a position between said part-molds and holding it there until clamped thereby, substantially as specified." "(6) The combination, with a pair of molds for clamping the can-body, of a plunger-head and a slide to adjust the can-head opposite the mold, substantially as specified. (7) The combination, with a pair of can-body-clamping molds, of a plunger-head, a reciprocating slide to move the can-head opposite the mold, and a chute for delivering the can-heads to said slide, substantially as specified." "(11) The combination, with a pair of can-body-clamping molds, of a chute for the can-heads, a slide for moving the can-head opposite said molds, and a lever and cam for operating said slide, substantially as specified. (12) The combination, with two part-molds, of a can-head chute, a slide to move the can-head opposite the mold, a lever and cam for operating said slide, a plunger and plunger-head, and a cam and lever for operating said plunger, substantially as specified. (13) The combination, with two part-molds, of a reciprocating conveyor to convey to and hold the can-body between said molds, and a cam and lever for reciprocating said conveyor, substantially as specified."

Patent No. 267,014, issued to Edwin Norton, November 7, 1882, is claimed, and was held to be, in the case of Norton v. Jensen, supra, an invention of a primary character. It was held that Norton's invention must be "considered as being of a primary character, standing at the head of the art as the first machine ever invented for applying tight, exterior fitting can-heads to can-bodies automatically." That patent was therefore held to be entitled to a broad and liberal construction. It appears affirmatively, however, that the file wrapper of patent No. 267,014 was not offered in evidence in the case of Norton v. Jensen, supra. But it was offered in evidence in the more recent case of Norton v. Wheaton, 44 U. S. App. 118, 17 C. C. A. 447, and 70 Fed. 833. In that case this court held that "the contents of the file wrapper, not in evidence in the case of Norton v. Jensen, 7 U. S. App. 103, 1 C. C. A. 452, and 49 Fed. 859, show that Norton, in his application for the patent, claimed to have invented, not an automatic or any other kind of machine for putting ends on fruit or other cans, but to have invented 'certain new and useful improvements in machines for putting on' such ends." This wrapper, which figures to such an important degree in the litigation affecting the validity of the various patents for automatically applying the heads on the bodies of sheet-metal cans, was introduced in evidence in the case at bar, and is as follows: "To All Whom It may Concern: Be it known that I, Edwin Norton, of Chicago, county of Cook, and state of Illinois, have invented certain new and useful improvements in machines for putting on the ends of fruit and other cans, of which the following is a specification: This invention relates to a machine for putting on the ends of fruit and other cans, wherein the joint by which the ends are secured to the body is of the variety commonly called the 'slip-joint,' in contradistinction from a seamed or turned joint. The objects sought are the performance of this operation automatically and with speed and efficiency. This invention consists in a clamping-mold, the interior dimensions and form whereof correspond with the exterior dimensions and form of the can-body, and the end whereof is chamfered away. In this invention the can-body is first placed within a clamping-mold conforming accurately in shape and dimensions to the exterior of the can-body, and while confined in this mold the end of the can is forced upon the body by a piston entering the mouth of the mold, room being provided for the entrance between the mold and can-body of the flange borne upon the end of the can by chamfering away the interior of the mold slightly as far as said flange extends. The mold is also preferably made tapering at the mouth, where the can end is received, so as to guide the end accurately to the body, and insure the registering of one with the other. In the furtherance of speed, I place a series of these molds, accompanied by pistons, upon arms radiating from and revolving around a common center, or upon a wheel, and at proper times actuate the molds to clamp and release the cans and the pistons to put on the ends by means of suitable devices with which they are connected or come in contact during the rotation of the arms or wheel."

Norton then proceeds to describe his invention very particularly, by a reference to the drawings. He then made the following claims for his inven-

tion: "(1) In a can-ending machine, the combination of a clamping-mold conforming to the exterior of a can-body, a piston for forcing the cap or end piece upon the body, and devices for operating said mold and piston, substantially as specified. (2) In a can-ending machine the combination of a clamping-mold conforming to the exterior of the can-body, and chamfered away at the end so as to give room for flange of the cap or end-piece, a piston for forcing the end-piece upon the body, and devices for operating both mold and piston, substantially as specified. (3) In a can-ending machine, the combination of clamping-mold, conforming to the exterior of the can-body, a chute for admitting the can-ends, a piston for applying the ends to the body, and devices for operating both mold and piston, substantially as specified. (4) In a can-ending machine, the combination of a series of clamping-molds, mounted and rotating about the common center, devices for opening and closing said molds, a piston or pistons for each mold, and a device or devices for operating said pistons, substantially as specified. (5) The combination with a movable can-clamping and discharging mold, of a device for forcing the can-end upon the can-body while clamped in said mold, substantially as specified. (6) The combination with a clamping-mold for the can-body, of a chute or device for delivering the can-bodies to said mold, a device for presenting and retaining the can-end in position at the mouth of the mold, and means for forcing the can-end upon the can-body, substantially as specified."

The patent office, after due examination, rejected all of these claims, and assigned the following reasons: "Claims 1, 2, and 5 are rejected on each of the following: Pierce, December 21, 1880, No. 235,700, soldering machines. Dillon & Cleary, October 12, 1880, No. 233,079, and Brooks, March 23, 1880, No. 225,685, die seaming, and English patent, A. D. 1873, No. 4,237. Claims 3 and 6 are rejected on Pierce, and, since the chute which he shows may be applied to any one of the other references, the claims are rejected on all the other references, taken in connection with Pierce. Claim 4 is rejected on Pierce and on the English patent, each showing a series of clamps, and a stationary piston for inserting the head into each mold and its contained can as it comes opposite the piston. In view of the broad description, including various modifications of applicant's machine, these patents meet the fourth claim."

Norton thereupon amended his application by inserting after the word "efficiency," in his original application, the following: "Heretofore machines have been constructed for applying the heads to that class of cans where the flange of the head is inserted inside the can-body, or where the head is crimped on the can-body. In such machines the interior of the can-body is ordinarily sized so as to fit and receive within it the can-head by means of an interior mandrel or former, which is forced inside the can-body while it is secured within a mold or holder, and then the can-head is dropped or pressed into place inside the can-body, as illustrated in letters patent No. 235,700, granted to George H. Pierce December 21, 1880. As the can-bodies are originally formed around an inside mandrel, the interior diameter of the can varies, if at all, very slightly, and the side seam also ordinarily forms no projection on the inside of the can, as it does on the outside; so that the operation of applying the heads to this class of cans would be comparatively simple and easy, even if the heads were required to fit the can-bodies tightly, which, however, is not the case. But heretofore no successful method has yet been devised for automatically applying heads or covers to that class of cans wherein the flange of the cover slips or fits over the body of the can, forming the ordinary slip-joint. In that class of cans it is essential that the heads or covers, when snapped on the can-body, should fit the same very tightly and accurately; and as the exterior diameters of the can-bodies always vary somewhat, owing to the varying thickness of the different parts of the stock from which they are made, the operation of snapping or fitting the heads on the can-bodies is one of considerable difficulty, and when done by hand, as it heretofore always has been done, it requires skilled labor, and is a slow and tedious operation. The heads or covers for the cans are formed by a stamp, so that their interior diameters are always precisely the same, and in my machine the can-bodies are placed within a can-sizing and clamping mold, and compressed thereby until the exterior diameter of the can-

body is made to conform accurately to the interior diameter of the head, and so held while the head is forced upon the can-body, the mold or holder being cut away or enlarged at each end to conform to the exterior diameter of the head, thus leaving an annular space between the can-body and mold conforming to the thickness and width of the flange on the can-head or end, into which annular space the head is forced, and then the mold is opened and the headed can discharged."

In lieu of the six claims made by his original application, which were rejected, as stated, by the patent office, Norton substituted four other claims as amendments. The fourth claim was again rejected by the patent office, but the first three were allowed; and, as thus allowed, a patent was issued to Norton. The third claim is not involved in this case; the first two are, and have already been set out. In a note appended by Norton to the amendments made to his original application, he thus further explained the character and scope of his invention: "The principle and mode of operation of the present invention is entirely different from that of the machine shown in the references, and is designed to effect a very different result or purpose. The references all show devices for putting the heads inside of the cans. Instead of the inside mandrel shown in the Pierce patents for sizing and flaring the interior of the can, in applicant's invention no such method of operation is, or could be, adopted. In applicant's invention the can is sized from the outside. None of the references show a mold or clamp for the can-body having an annular space between the can-body and mold, into which the head is forced, nor do any of the references show sizing the exterior of the can from the outside, both of which are essential features of applicant's invention. By the amended claims, as well as by the amendment to the specification, it will be seen, we think, that applicant's invention is properly limited and distinguished from the prior art, as disclosed by the references."

Two facts of vital importance in this case appear from the wrapper, viz.: First, Norton, in his original and amended specification, never took the position of being an original inventor, but, on the contrary, simply claimed to be an improver. He claims to have invented certain new and useful "improvements in machines for putting on the ends of fruit and other cans"; second, when the patent office rejected all of his claims in the original application on the ground that they were anticipated by other inventions, Norton failed to contest, or enter any protest to, this ruling of the patent office, but amended and limited his claims so as to conform to the ruling.

In the specification forming part of letters patent No. 443,445, which covers Jensen's second machine, he states that he has "invented a new and improved machine for capping and crimping cans"; that "the invention consists in an improved mode of applying the same principle as adopted in my prior invention, shown and described in United States letters patent No. 376,804, granted to me January 24, 1888"; that "the object of the invention is to increase capacity and insure certainty, especially in capping and crimping cans after the same are filled, without spilling the contents." After minutely describing his invention with reference to the drawings accompanying the same, and the mode of operation, Jensen made the following claims: "(1) In a machine for capping and crimping cans, a heading device provided with two semicircular plates, each plate having one-half conical guide at each end, and adapted to close on either one of two sides alternately, and thereby form an entire cone-guide or tapered hole on one side, while opening and separating on the other side, substantially as shown and described. (2) In a machine for capping and crimping cans, the combination, with a recessed table having two fixed, conical guiding-holes opposite each other, of two semicircular plates fitted in the said recess, adapted to close and form an entire conical guiding-hole on either one of two sides alternately, and, in conjunction with either one of said fixed, conical guiding-holes, two passages adapted to receive and guide the can-caps, one at a time, over said entire cone-guide when closed on either side, and means to move and stop the can-heads, one at a time, in said passage, while the ends of the can-bodies, one at a time, are guided through said entire cone-guide into the can-head, and a headed can released at the opposite side, substantially as shown and described. (3) In a machine for capping and crimping cans, the combination, with a table having two tapered guiding-holes fixed opposite each other, of two semicircular

plates fitted into said table, and adapted to close at either one of two sides and form an entire tapered guiding-hole in conjunction with either one of said fixed holes, stop-pins on the said table through slots in the said plates to insure the said conjunction, and means to move and stop the can-heads, one at a time, over the small end of said entire guiding-hole when closed on either side, and while the end of a can-body is forced through said hole into the can-head, and a headed can removed at the opposite side alternately, substantially as shown and described. (4) In a machine for capping and crimping cans, the combination, with a revoluble can-heading device provided with flanges to push the can-caps forward with the revolution of said heading device, of a fixed plate or device adapted to guide the can-caps, one at a time, into said heading device, and hold it while the end of a can-body is forced into it, with means to actuate the same, substantially as shown and described. (5) In a machine for capping and crimping cans, the combination, with a revoluble disk horizontally arranged, and provided with an even surface to carry the can-heads on, of a fixed guideway adapted to guide the can-heads while carried on said even surface, a stop to stop the can-caps while said even surface slides under the same, and means to move the can-caps, one at a time, from said disk into a heading device, substantially as shown and described. (6) In a machine for capping and crimping cans, the combination, with a revoluble disk horizontally arranged, and provided with a smooth and even surface to carry the can-bodies on, of a fixed guideway adapted to guide the can-bodies while carried on the said smooth surface, a stop over said smooth surface to stop the can-bodies while said disk revolves, and means to move the can-bodies, one at a time, from said stop into a can-heading device, substantially as shown and described. (7) In a machine for capping and crimping cans, the combination, with a revoluble disk horizontally arranged, and provided with a smooth and even surface to carry the can-bodies on, of a fixed guideway to guide the can-bodies while carried on said smooth surface, a stop over said smooth surface to stop the can-bodies while said disk revolves, with means to move the can-bodies, one at a time, from said stop into a heading device, and again remove the headed cans from the same to a crimping device, substantially as shown and described. (8) In a machine for capping and crimping cans, a crimping device mounted on a frame comprising a revoluble disk mounted in and flush with a table fixed in said frame, an arm pivoted in fixed bearings under said table, having a plate cushioned in the end thereof, and adapted to raise and lower the said disk, a second disk mounted and rotated in fixed bearings above the said table, adapted to receive and revolve the can when raised on the said first disk, a third revoluble disk journaled in an arm pivoted in a fixed support on the said table, and means to automatically place the cans, one at a time, between said first and second disks, and revolve the same while the periphery of said third disk is applied against the flange of the can-head, with means to release and discharge the crimped can, substantially as shown and described. (9) In a machine for capping and crimping cans, the combination, with a horizontally-arranged disk rotated in fixed bearings, and flush with a table having a smooth surface adapted to carry the cans in an upright position, of a stoppage across said smooth surface to stop the cans while said disk revolves under, a swinging arm or device adapted to move the can-bodies from said stoppage to and from a crimping device, so that one follows another in succession, and means to actuate the same, substantially as shown and described."

Upon the evidence adduced in the case, and in view of the prior decisions of this court, as contained in *Norton v. Jensen*, supra, and limited by the subsequent decision of *Wheaton v. Norton*, supra, the learned judge of the court below held that the Norton patent, No. 267,014, should be strictly construed, and, being so construed, that the invention and patent of Jensen to his second machine did not infringe the appellants' invention and patent. It was also held that the Jensen machine did not infringe any of the other inventions and patents sued on in this case. The bill was therefore dismissed, and the present appeal is brought to review that decision.

John H. Miller and Munday, Evarts & Adcock, for appellants.
John T. Lighter, for appellee.

Before ROSS and MORROW, Circuit Judges, and HAWLEY, District Judge.

MORROW, Circuit Judge, delivered the opinion of the court.

The first question to be determined is whether the matters and things in controversy in the present suit are *res judicata* by reason of the judgment in the case of *Norton v. Jensen*, 7 U. S. App. 103, 1 C. C. A. 452, and 49 Fed. 859. The parties in both suits are the same. Edwin Norton and Oliver W. Norton were the complainants in the case referred to, while Mathias Jensen and one John Fox were the defendants. John Fox is not a party to the case at bar, it appearing that he is now dead. His absence from the case may be treated as immaterial. It is also true that the claims of the four patents involved in this case were sued on in the case referred to, and there held to be valid as against Jensen's first machine. But here the identity between the two cases ceases. A different patent of Jensen's is now involved. It is not the same patent involved in the previous suit, but a second patent, which the patent office deemed proper to allow him. The presumption is that Jensen invented something new, or he would not have secured this second patent. Where two patents apparently describe and claim the same art or article, the question of identity is open for examination, with the presumption in favor of their diversity. Rob. Pat. § 896. At any rate, the defendant is not to be barred from presenting a full defense upon the merits by the application of the doctrine of *res judicata* with reference to another patent. While we appreciate fully that the doctrine of *res judicata* is a salutary one, intended to mitigate the evils which follow prolonged and repeated litigation, still the decisions show that the courts have always restricted its application to cases where, among other identities, the subject-matter was the same in both cases. *Cromwell v. Sac Co.*, 94 U. S. 351; *Russell v. Place*, Id. 606; *Lumber Co. v. Buchtel*, 101 U. S. 638; *Wilson's Ex'r v. Deen*, 121 U. S. 525, 7 Sup. Ct. 1004; *Bissell v. Spring Valley Tp.*, 124 U. S. 231, 8 Sup. Ct. 495. The case at bar differs from the prior case of *Norton v. Jensen*, in that a different patent is now involved. There is *prima facie* a lack of identity in the subject-matter of the two cases, and therefore upon the face of the record there is no estoppel either in judgment or in evidence. As was well said by Mr. Justice Field in the case of *Russell v. Place*, *supra*:

"According to Coke, an estoppel must 'be certain to every intent'; and if, upon the face of a record, anything is left to conjecture as to what was necessarily involved and decided, there is no estoppel in it when pleaded, and nothing conclusive in it when offered as evidence." Citing *Alken v. Peck*, 22 Vt. 260, and *Hooker v. Hubbard*, 102 Mass. 245.

Whether the defendant has infringed the complainant's four patents, in favor of which judgment was rendered in the former case, depends upon the evidence adduced in this case. That question obviously cannot be determined by the evidence presented in the other case. The defendant's machine, involved in this case, purports to be a different machine from the one enjoined in the former case. Defendant contends that it is entirely different, and does not infringe the complainant's four patents declared valid as against Jensen's first

machine in the former case. On the other hand, the complainants contend that the changes, such as they are, existing between Jensen's first and second machines, are slight and immaterial. Which of these contentions is true can only be determined by the evidence adduced in the present case, and not by the evidence introduced in the former case.

This brings us to the second question on this appeal, which involves a consideration of the evidence presented in the case, as to whether Jensen's second machine, covered by patent No. 443,445, does infringe appellant's machines covered by the four patents sued upon. Preliminarily, however, it must first be determined what construction the claims of Norton's alleged original patent, No. 267,014, are entitled to, —whether to the broad and liberal construction given to them by this court in *Norton v. Jensen*, or to the strict construction held to be applicable by this court in the subsequent decision rendered in *Wheaton v. Norton*. The introduction of the file wrapper in the present case effectually disposes of this question. As heretofore stated, the file wrapper was not introduced in evidence in the former case of *Norton v. Jensen*, but it was introduced in the subsequent case of *Wheaton v. Norton*. This file wrapper, the most material parts of which have been set out in the statement of the case, shows that the original claims made by Norton for his invention were disallowed and rejected by the patent office, and that he thereupon amended and limited his claims so as to conform to the determination of the patent officials. The record of the proceedings before the patent office, as disclosed by the file wrapper, shows that Norton, upon the rejection of his claims, substantially abandoned the position of being an original inventor of a machine designed for automatically applying tight, exterior fitting can-heads on can-bodies, and so amended and limited his claims as to take the unequivocal and unmistakable position of an improver. The difference between the two, in the construction of patents, is very marked, and places an entirely different aspect on the case. An original inventor, a pioneer in the art, he who evolves the original idea and brings it to some successful, useful, and tangible result, is, by the law of patents, entitled to a broad and liberal construction of his claims; whereas an improver is only entitled, and justly so, to what he claims, and nothing more. Furthermore, an application for a patent which has been rejected, and is subsequently amended to conform to the objections of the patent office, is strictly construed. In *Sargent v. Lock Co.*, 114 U. S. 63, 5 Sup. Ct. 1021, a patent was granted to an inventor for improvements in time locks, after applications for patents had been repeatedly rejected. In declaring the rule by which the claims of the patent should be construed, the supreme court, through Mr. Justice Blatchford, said:

"Limitations and provisos imposed by the inventor, especially such as were introduced into an application after it had been persistently rejected, must be strictly construed against the inventor, and in favor of the public, and looked upon as in the nature of disclaimers."

See, also, *Water-Meter Co. v. Desper*, 101 U. S. 332; *Gage v. Herring*, 107 U. S. 640, 2 Sup. Ct. 819; *Fay v. Cordesman*, 109 U. S. 408, 420, 3 Sup. Ct. 236.

In *McCormick v. Talcott*, 20 How. 402, 405, the inquiry was whether McCormick was the first person who invented, in a reaping machine, the apparatus called a "divider," performing the required functions, or whether he had merely improved an existing apparatus by a combination of mechanical devices which performed the same functions in a better manner. The court, speaking through Mr. Justice Grier, said:

"If he [the patentee] be the original inventor of the device or machine called the 'divider,' he will have a right to treat as infringers all who make dividers operating on the same principle, and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such. But if the invention claimed be itself but an improvement on a known machine, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by use of a different form or combination, performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first."

In *Railway Co. v. Sayles*, 97 U. S. 554, 556, the supreme court, speaking through Mr. Justice Bradley, said, in regard to brakes for eight-wheeled railroad cars:

"Like almost all other inventions, that of double brakes came when, in the progress of mechanical improvement, it was needed; and, being sought by many minds, it is not wonderful that it was developed in different and independent forms, all original, and yet all bearing a somewhat general resemblance to each other. In such cases, if one inventor precedes all the rest, and strikes out something which includes and underlies all that they produce, he acquires a monopoly, and subjects them to tribute. But if the advance towards the thing desired is gradual, and proceeds step by step, so that no one can claim the complete whole, then each is entitled only to the specific form of device which he produces, and every other inventor is entitled to his own specific form, so long as it differs from those of his competitors, and does not include theirs."

In view of the evidence presented in the case at bar, we think the decision of this court in the case of *Wheaton v. Norton*, supra, stated the correct rule of interpretation and construction which should be given to Norton's original patent, No. 267,014. We now consider the machines invented by the contesting parties, their construction, and respective mode of operation:

In *Wheaton v. Norton*, 44 U. S. App. 118, 17 C. C. A. 447, and 70 Fed. 833, Circuit Judge Ross, rendering the opinion of this court in that case, clearly and succinctly states the general process of can manufacture as it relates to the mechanism for placing can-heads on cans, particularly with reference to the invention of Norton, which was involved in that case as well as in the case at bar. The learned judge uses the following language:

"In sheet-metal can manufacture, where the heads are applied to the outside of the body, the heads are struck from circular sheets of metal by means of dies, one of which is a plunger of the shape and size of the inner diameter of the can-head flange, and the other of which is a matrix or raised die of the depth of the flange and of the diameter of the exterior of the flange. The circular disk of sheet metal being laid on this matrix, and the plunger depressed to force the sheet into it, the result is that the flange is upturned around the margin of the sheet-metal disk, and is of definite dimensions, both as to its thickness and as to its exterior and interior diameter. Can-heads made by the same dies are therefore always of the same size. Can-bodies

are, however, not always of the same size, whether they be made by hand or by machinery. They are formed over a horn or mandrel, which at best can only give them uniform interior diameter, even if it were possible to press the blank sheets around the mandrel with uniform force, or to make the joint forming the side seam with uniform accuracy. Besides this, the can-bodies thus made are liable to vary in both internal and external diameter. They are also subject to variation in external diameter, even if of uniform size inside, because of the varying thickness of the sheet metal of which they are made; such variation sometimes occurring in the same sheet, and in different parts of the form of the can-body. As it is necessary that the can-heads, which are of uniform diameter, shall in all cases closely fit against the exterior surface of the end of the can-body, it is therefore requisite that an external compressing means shall be employed to compress or reduce can-bodies which are slightly too large for the proper size to enter the can-head. This externally applied compressive force must be in action at the time the can-head is applied to the can-body, because the relaxation of such force would allow the can-body to expand to its original size, and to assume any irregularity of shape which it previously possessed, and thus unfit it to receive the head. Therefore the compressive force applied to the can-body must continue to hold the can to its form and size while the head is being put thereon. As the head is to closely fit the exterior of the can-body, and the two are to be applied simultaneously to each other at all points in their circumference, it is essential that both the head and the body be held in exact alignment with each other while the two parts are being brought together. It is therefore essential that whatever device be constructed to carry into effect this purpose must be so constructed as—First, to bring the ends of the can-body to the necessary size and diameter to receive the can-head; secondly, the head and body must be accurately held in proper alignment, so that, in the act of bringing them together, the flange of the head may closely fit the outside of the body; thirdly, there must be a direct and uniform movement of either the can-head or can-body simultaneously at all points in the circumference upon the can-body, and to carry forward the operation of heading to its completion; and, fourthly, the means for sizing the can and for shaping it to a perfect circle and size must be external to the can, and so adapted as to open to release the can after the heads shall have been applied."

With reference to the nature of Norton's so-claimed original patent, No. 267,014, Judge Ross, in the same opinion, said:

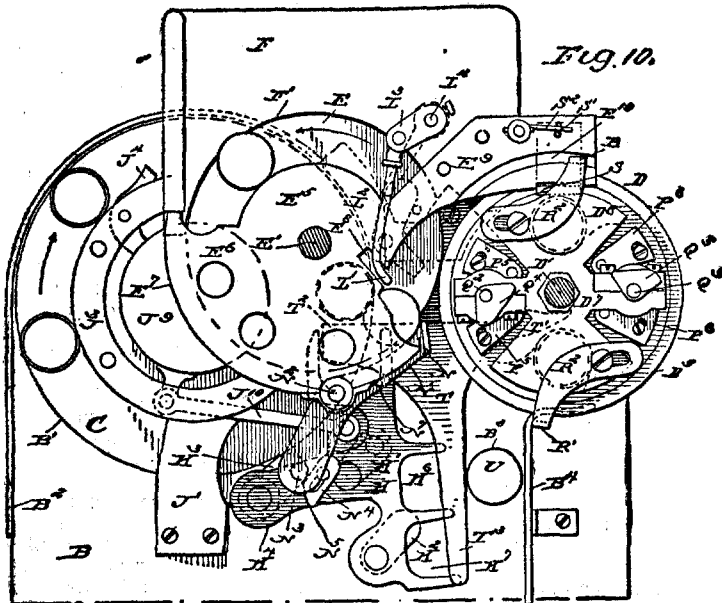
"Comparing the original with the amended claims of Norton, it is not difficult to see the difference between what he sought to have allowed him, and what he was compelled to accept in order to get his patent. Take claim 1. As originally made, it read: 'In a can-ending machine, the combination of a clamping-mold conforming to the exterior of the can-body, a piston for forcing the cap or end-piece upon the body, and devices for operating said mold and piston, substantially as specified.' Here, as will be observed, nothing whatever is said about any annular space in the end of the mold, but the claim is simply for the combination of a clamping-mold conforming to the exterior of the can-body, and a piston for forcing the cap or end-piece upon the body, with the operating devices. As here made, claim 1 was clearly anticipated, as held by the patent office, by the patent of Pierce, the device of which consisted in part of an opening and closing mold or clamp, the upper end of which is chamfered away to enable the end of the can-body to be expanded after the reception of the can-head, which is forced to its place in the can by means of a piston while the can-body is tightly held by the mold. Claim 1, as thus originally made, was therefore rejected by the patent office, and the applicant substituted in lieu of it this claim, which was allowed: 'In a machine for applying to can-bodies heads fitting outside the same, the combination of a device for sizing the exterior diameter of the can-body to conform to the interior diameter of the can-head, and holding the same so sized while the head is applied, said sizing and holding device having its end enlarged to fit the exterior diameter of the can-head, so as to leave an annular space between it and the can-body for the reception of the flange of the can-head, with a device for forcing the can-head into said annular space, and thereby applying the head outside the can-body, substantially

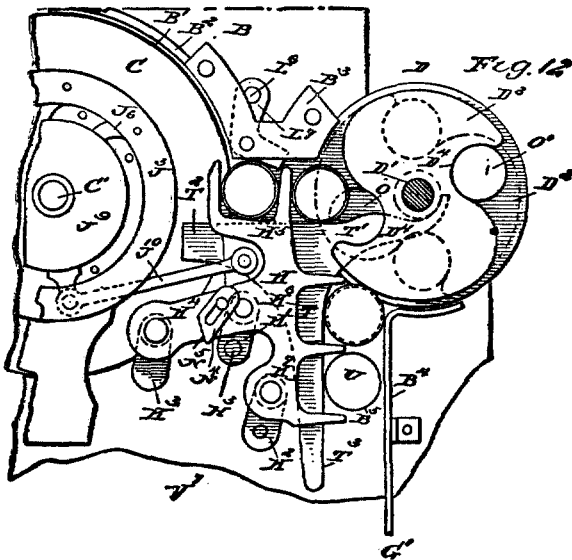
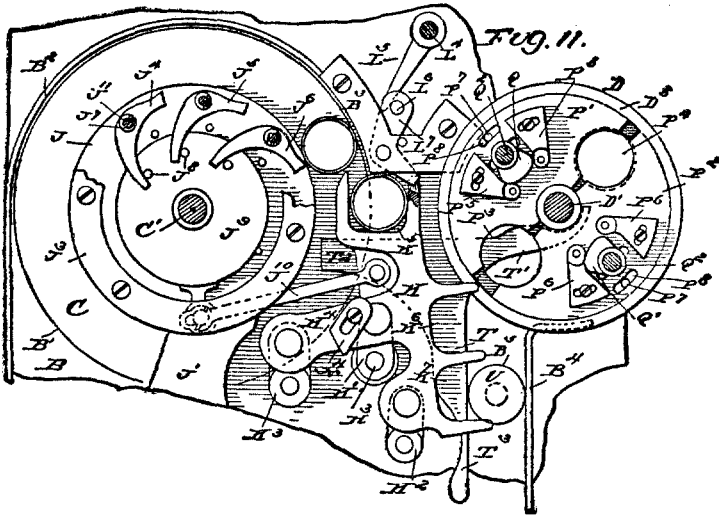
as specified.' Now, here, is an element inserted in claim 1 by the applicant which the original claim did not contain, namely, a mold so constructed as to leave at its end an annular space between the mold and can-body for the reception of the flange of the can-head, with a device for forcing the can-head into the annular space, and thereby applying the head outside the can-body. That the annular space so introduced is an important and essential element of Norton's invention was expressly declared by himself in the note to his amended specifications and claims, where he said: 'None of the references [that is to say, none of the patents to which his attention had been called by the patent office] show a mold or clamp for the can-body having an annular space between the can-body and the mold, into which the head is forced, nor do any of the references show sizing the exterior of the can from the outside, both of which are essential features of applicant's invention.' And in his specifications the applicant also expressly asserted the essential nature of the annular space of the mold, for he there says: 'As shown in Figs. 2 and 3, the end of the mold is chamfered away interiorly to give room to the flange of the cap or can-end to pass outside the can-body. This is a very essential feature. * * *' Thus, the inventor himself, when seeking the patent, declared that one of the essential elements of his invention is the annular space between the can-body and mold into which the can-head is forced, thereby, as in terms declared in claim 1, applying the head to the outside of the can, in which respect, the inventor further declared, his invention differs from any of the patents to which he was referred by the patent office. Another essential element common to all of the complainants' claims, as finally made, allowed, and embodied in their patent, is the piston, or device for forcing the can-head into the annular space. * * * Claim 2 of the complainants' patent, in addition to the elements in claim 1 thereof, embraces a chute or device for delivering the can-bodies, and a chute or device for delivering the can-heads to the machine, and claim 3 is 'for simultaneously applying the heads to both ends of a can, the combination of a series of movable devices,' such as is claimed in claim 1, to wit, the mold for clamping the can-body and sizing its exterior diameter to conform to the interior diameter of the can-heads, with an annular space at its ends for the reception of the flange of the can-heads, with devices for simultaneously forcing the can-heads into the annular space, and on each end of the can-body. An annular space is a space existing between the circumferences of two concentric circles having different diameters. It exists in the mold of complainants' device, with its two diameters, the smaller of which is equal to the diameter of the exterior of the can-body and to that of the interior of the flange of the can-head, and the larger of which is equal to the diameter of the exterior of the can-head flange. The function of the smaller diameter of the complainants' mold is to size and round the can-body by external pressure, and that of its larger diameter, constituting the annular space, is the reception and guiding, in line with and upon the can-body, of the flange of the can-head when forced therein by the piston; thus tightly applying, with precision and at the same time, all of the parts of the interior of the flange of the can-head to the outside of the can-body, while the latter is, during all of the time of the heading process, firmly held by the mold in an immovable position. In the complainants' device, two wheels are employed to rotate on a common, stationary axis, and to carry at their peripheries molds in a circumferential series. Each of these molds consists of a fixed inner semi-circular jaw and two quarter-circular jaws, the latter being hinged to the former, and adapted to open and close the mold like the two halves of a double-lidded vessel, wherein the half lids open outwardly. Means are provided for opening and closing these hinged parts of the mold, consisting of crank arms or levers, a slide connected by links with the lever, and a fixed cam provided with a groove or grooves which receive a pin that projects laterally from the slide, and causes the slide to move radially inwardly and outwardly as the wheels revolve. At one point in the revolution of the wheels, and at a point where the hinged parts of a mold will open, a chute for can-bodies is arranged to deliver a can-body into the mold. The mold for receiving the can-body is closed in its further revolution by the fixed cam. To each mold are also applied two end chutes down which can-heads may descend into proper position opposite the ends of the can-body inclosed in the mold. Two piston heads on pistons

or shanks are arranged to move inwardly towards the mold, one from each side, and to simultaneously push the can-heads into the annular spaces, and thus upon the ends of the can-body. The desired movements of these pistons are obtained by springs and cams; springs being arranged to throw and hold the pistons in their retracted positions, and cams being employed to thrust the pistons inward in forcing the can-heads into the annular spaces and thereby upon the can-bodies. The mold is made in two parts, so as to open and receive the can-body, and to discharge it after it is headed. In his specifications the inventor said: 'A model constructed after my invention (that is, so as to conform to the exterior of the can-body) fits the body accurately, and presses with equal clamping force upon every part thereof.' When closed upon the can-body, the mold holds it in an immovable position, the can-head being carried from the can-head chute by means of the piston or forcing device into the annular space of the mold, and thereby applied to the outside of the can-body. After the pistons have passed the can they are retracted by the springs, and the mold is opened by the fixed cam so as to discharge the headed can from the mold."

The nature of the operation of Jensen's second machine, reference being had to the drawings, is as follows:

"When the machine is set in motion, the filled can-bodies are passed, one or more at a time, over the table, B, onto the revolving disk, C, between the arms, J¹, of the fixed disk, J, and the guide-rail, B². The caps of the cans are passed with their flanges downward over the table, E, onto the disks, E, to be carried along by the latter until they strike against the stop-pins, L¹ and N. The can-bodies on the disk, C, move forward until temporarily interrupted in their forward movement by the levers, J⁴, J⁵, and J⁶, which serve to insure proper meeting of the can-bodies with the fork, K⁵, of the arm, K, which moves the can-body from the disk, C, across the table, B, against the lever, L⁷, so that the releasing device, L, is actuated, and at about the same time the lever, N¹, is operated on by the cam, N⁴, so that the cap held by the stops, L¹ and N, is freed and moves forward at the time the can-body moves onto the table, D², over the respective plungers, O or O¹. The flange, R or R¹, then overtakes the cap and pushes it forward





while the plate, E^o, is guiding it into, and against the end of the passage, D^o, over the conical guiding-hole, P, so that it is just in time to receive the upper end of the can-body, which is pushed upward through the guiding-hole, P, into the cap by the plunger, O or O¹. When the can-body has fairly entered the cap, the plates, P¹ and P², are actuated to close and lock the opposite side for a succeeding can to be capped in the same manner, and this also separates the plates, P¹ and P², from the capped can, which is then lowered on the plunger, O or O¹, while a succeeding can-body is forced up into a cap in the opposite side of the heading-device, D, the same as the first, and when the capped can is sufficiently lowered then it is against the curved arm, T¹, by which it is guided out of the heading device. The fork, K^e, of the arm, K, now takes hold of the capped can, and moves it forward be-

tween the arms, T, and the guide-rail, B⁴, over the disk, U, which then rises at the receding of the fork, K⁶, and presses the cap of the can into the recessed disk, G², so that the can and the disk, U, revolve with the said disk, G², and then the crimping-disk, V, is moved against the flange of the cap and presses the same inward, thus crimping the cap securely onto the upper end of the can-body. When this is accomplished, the crimping-disk, V, is disconnected from the cap of the can, and the latter descends with the downward-sliding disk, U, until said disk is seated in its seat, B⁵, in the table, B. The fork, K⁷, of the arm, K, now engages the can and moves it forward in the guideway to about the center of the disk, V, and at the next movement of the arm, K, the outer prong of the fork, K⁷, touches the rear side of the can and again moves it forward in the guideway. The next can following is moved against the first can, so that the latter slides up the incline, W¹, and moves with its side against the arm, W, so that the can is tipped over and falls onto the rails, W², and the continuation of the rail, B⁴, to roll off to the soldering machine. It is understood that were the disks, C and E, continuously supplied with caps and cans, then the mechanisms for regulating the can-bodies and releasing the can-heads would not be necessary, as the fork, K⁶, can only move one can at a time from the disk, C, and the caps would readily be stopped on the disk, E, by a simple spring that would yield sufficiently to allow a can-head to pass when one of the flanges, R or R¹, strikes it. The spring would again retain its position to hold the next can-head until the other flange, R or R¹, strikes and moves it away like the first; but, considering its greater capacity, it cannot be fully supplied at all times by one man, unless he be unusually expert and careful. Hence the regulating mechanism is supplied, so that the can-bodies placed at random on the disk, C, may be properly entered into the heading device without being crushed, and the caps prevented from entering therein when there is no can-body to receive them."

It is contended by counsel for appellants that the new Jensen machine, whose operation and general nature have just been described, is substantially like the old Jensen machine, which in the previous case of *Norton v. Jensen*, supra, was held to be an infringement of the claims of the four patents sued on in this case. It is claimed that such differences which exist are slight and immaterial; that, to all intents and purposes, the new Jensen machine is similar, in construction, mode of operation, and result obtained, to the old Jensen machine. It will be necessary to compare, very briefly, the old and new Jensen machine, and then these machines with the Norton machines. In the previous case of *Norton v. Jensen*, it was held, among other things, that the old Jensen machine infringed Norton's invention, patent No. 267,014, in that it had the "annular space" peculiar to Norton's invention, and that the can-feeder in the old Jensen machine served as a substitute and equivalent to Norton's gravity chute. These conclusions were reached by giving to the Norton patent the benefit of the broad and liberal construction to which patents for original inventions, or, more properly speaking, for those of a primary character in the art, are entitled. It is very questionable whether such conclusion would have been reached had the two claims of the Norton patent been subjected to the strict construction applicable to patents for mere improvements. It is conceded in the opinion of the court in that case that the old Jensen machine contained improvements over the Norton machine. Looking at and comparing the old and new Jensen machines, we find that the new Jensen machine, as altered and changed from the old machine, does not contain any such a thing as an "annular space" in a sizing and heading device having its end

enlarged to fit the exterior diameter of the can-head, nor anything that reasonably approximates to it, nor does it possess the gravity chute peculiar to Norton's invention. It does contain a can-feeder, but that is not operated by gravity, nor does it contain the device for that purpose peculiar to the Norton chute. It is, on the contrary, a positive conveyer. The cans are placed on the revolving disk, and the mechanism carries the cans to the can-heading machine. The Norton chute can in no sense be regarded as an equivalent of the Jensen chute, any more than the latter could be regarded as a mechanical equivalent of the former. Nor does the Jensen machine contain the piston or device for forcing the can-head on the can-body, or either of their mechanical equivalents, whether contained in the original Norton machine, covered by patent No. 267,014, or in the improved machines, covered by patents No. 274,363 and No. 322,060. In the Jensen machine the can-body is moved towards the head, while in the Norton machine the can-head is moved towards the can-body. Further differences from a mechanical standpoint might be enumerated, but it is obvious that in a patent for a combination, which is what Norton claims, the alleged infringing machine must contain all of the elements of the combination, or their mechanical equivalents. *Prouty v. Ruggles*, 16 Pet. 337; *Stimpson v. Railroad Co.*, 10 How. 329; *Eames v. Godfrey*, 1 Wall. 78; *Seymour v. Osborne*, 11 Wall. 516; *Dunbar v. Myers*, 94 U. S. 187; *Fuller v. Yentzer*, Id. 298; *Merrill v. Yeomans*, Id. 568; *Water-Meter Co. v. Desper*, 101 U. S. 332; *Miller v. Brass Co.*, 104 U. S. 350; *Rowell v. Lindsay*, 113 U. S. 97, 5 Sup. Ct. 507. The new Jensen machine manifestly does not infringe, as it does not contain all the elements of the combination patent of Norton, or their mechanical equivalents. It does not contain the "annular space," nor the device which goes to make up the "annular space"; it does not contain the Norton gravity chute; it does not contain the tapering sizing mold as an equivalent of Norton's mold. Aside from these mechanical differences, it affirmatively appears that the new Jensen machine is superior to the Norton machine for heading hand-made cans, because the Jensen machine operates upon the extreme end of the can-body, which is to receive the can-head, and, by sizing and swedging the rim of metal, this part of the can-body is reduced to the size and dimensions to exactly enter the can-head, whereas the clamping-mold of the Norton machine operates only upon that part of the can-body which does not enter the can-head; and, while the effect is to size and mold the entire can-body, it is manifest that this mode of operation is entirely different from the other, and that it does not reach that degree of accuracy or efficiency in securing uniform, tight-fitting can-heads, obtained by the Jensen machine. The Jensen machine is also different in operation, and superior to the Norton machine, in applying heads to filled cans. This is explained by the fact that the can-bodies in the Jensen machine are held erect while the can-heads are placed thereon, whereas in the Norton machine the cans are somewhat tilted. It further appears that the Norton clamping-mold device, operating upon the circumference of the whole can-body, except the narrow rim which receives the can-head, compresses the can and slightly reduces its capacity. If,

then, the machine could be made to apply the head to an erect can, it would still be inferior to the Jensen machine, because the operation of the clamping-mold would have the tendency of causing the contents of the filled can to overflow, or to rise above the side of the can, thus soiling the joint between the can-head and can-body, and otherwise rendering the process imperfect. That the new Jensen machine is an improvement on the Norton machine, as covered by patent No. 267,014, is amply sustained by the evidence. This disposes of the Norton patent No. 267,014.

The remaining three patents may be briefly disposed of. Two of them (No. 274,363, dated March 20, 1883, granted to Norton and Hodgson, and No. 322,060, dated July 14, 1885, granted to Jordan) are for improvements on the original Norton patent, No. 267,014. The learned judge of the court below held that neither of these patents was infringed by the new Jensen machine. The evidence supports this view. This leaves patent No. 294,065, dated February 26, 1884, issued to Norton & Hodgson, for a can-ending and seaming machine. It is contended by counsel for appellants that this machine is of a primary character, and therefore the patent is entitled to a broad and liberal interpretation. But in the specification it only purports to be for "a new and useful improvement in can-ending and seaming machines." The object of the invention is to provide an automatic machine for applying the heads or ends to sheet-metal cans, and seaming the same. Furthermore, it appears to have been anticipated by the Miller patent, No. 232,535, which contains this combination. The New Jensen machine does not contain any of the material elements of the combination patents referred to. The differences between the appellants' machines and that of Jensen are material, and do not constitute infringement. It is unnecessary to go into detail in the evidence, nor to refer specifically to all of the mechanical differences in the construction and mode of operation of the machines sued on and the one alleged to infringe. That has been done very ably and clearly by the learned judge of the court below. The important feature of this case, as distinguished from the former case of *Norton v. Jensen*, is that the introduction of the file wrapper in this case shows beyond controversy that Norton claimed to be, and is, but an improver, and not an original inventor, of can-ending, crimping, and seaming machines. That being so, the construction to which the claims of his various patents are entitled is that of a strict construction, and not to the broad and liberal construction which the status of the case of *Norton v. Jensen* gave it. Both Norton and Jensen, being but improvers in the art of placing ends on cans, are entitled to just what they claim for their respective inventions, and nothing more. Applying this strict construction to the various patents sued on with respect to the one alleged to infringe, we are clearly of the opinion that the new Jensen machine does not infringe any of the four patents sued upon. The judgment of the court below is affirmed, and it is so ordered.

CITY OF CLEVELAND v. CHISHOLM et al.

(Circuit Court of Appeals, Sixth Circuit. November 14, 1898.)

No. 560.

1. APPEALS IN ADMIRALTY—REVIEW BY CIRCUIT COURT OF APPEALS

On an appeal in admiralty from the district court to the circuit court of appeals, the case is reviewable both upon the law and the facts.

2. SAME—REVIEW OF QUESTIONS OF FACT—WEIGHT GIVEN TO DECISION BELOW.

Though questions of fact are reviewable by the circuit court of appeals on appeals in admiralty, where the cause was tried before the judge, who saw and heard the witnesses, and the record contains the testimony of a large number of witnesses in direct conflict, a judgment based upon questions of fact will not be reversed, unless against the decided preponderance of the evidence.

Appeal from the District Court of the United States for the Northern District of Ohio.

This is an appeal from a judgment of the district court against the city of Cleveland for damages sustained by the steamer William Chisholm through a collision between the steamer and a drawbridge constructed and managed by the city of Cleveland. The opinion of SAGE, District Judge, clearly states the case and his conclusions of fact and law, and is as follows:

"The claim of the libel is for damages resulting from the collision of the steamer William Chisholm with the upper Seneca street drawbridge across the Cuyahoga river at Cleveland. The averments of the libel are that the steamer started from the Upper Furnace Dock, above the bridge, about 8:45 p. m., being in every respect staunch and strong, well manned, and equipped with the usual and necessary complement of officers and men, and that she was in tow of a harbor tug. As she approached the bridge she made a proper entrance into the starboard draw, which was the customary and usual draw for such vessels proceeding down the river. A craft was moored on the starboard or northerly side of the river, just below the bridge; and in consequence it was necessary for the steamer to, and she did, take a course close to the center protection, which extends above and below the center pier on which the bridge swings, and should extend out from the sides of the pier, and be of sufficient strength to ward off a vessel without coming in contact with the bridge when properly swung. When the steamer was about halfway through the bridge and was proceeding slowly and in the usual and proper course and manner, it was noticed by those in charge that the lower end of the bridge had been permitted by those operating it to swing out, and a little beyond the protection of the navigable part of the draw. The attention of those operating the draw was called to this circumstance, but they failed to correct the position of the draw; and, although the steamer was promptly backed, her forward fender on the port side rubbed against the bridge between the center pier and the lower end, and pushed that end of the bridge away. Thereupon those operating the bridge permitted it to swing around so that the upper end was out and over the side of the Chisholm, coming into collision with her cabin just abaft the boiler house; and although she was backing strong, and was brought to a standstill as quickly as possible, the bridge tore out the cabin, carried away the cranes and boat davits, and the roof of the cabin, and otherwise broke and injured the vessel to such an extent that the cost of making the necessary and proper repairs amounted to the sum of \$3,368.05, and the vessel was necessarily detained by reason thereof for a period of eight days, during which time her charter value, and the loss to libelants by being deprived of her use, was the further sum of \$511.08, making the total damage of \$3,879.05. Libelants aver that the Chisholm and her officers and crew were without fault, and, on information and belief, that the collision and damage