

paragraph 415, we find it in the character of all coal which contains less than 92 per centum of fixed carbon. It is clearly the duty of the court to read a statute according to the natural and most obvious import of the language without resorting to subtle and forced constructions, for the purpose of either limiting or extending its operation. *Waller v. Harris*, 20 Wend. 555, 561. It is also a cardinal rule in the construction of a statute that all of its parts are to be brought into harmony, if possible, and so construed that no clause, sentence, or word shall be void, superfluous, or insignificant. *Suth. St. Const.* § 240; *In re Trustees of the New York & B. Bridge*, 72 N. Y. 527. Under this rule of construction, the two sections of the act may be combined, and form one clear, concise, and logical enactment, providing that coal of any description whatsoever, containing less than 92 per centum of fixed carbon, is liable to a duty of 67 cents per ton, while anthracite coal, containing 92 per centum and more of fixed carbon, is to be admitted free. The two sections express the will of congress with respect to all coal.

With regard to appellant's contention that such a construction excludes anthracite coal from the free list altogether, for no cargo of anthracite coal contains more than 92 per centum of fixed carbon, it is sufficient to say that the statute does not impose the duty by the cargo, but on the unit of a ton; and it appears, from the evidence, that as a matter of fact samples of anthracite coal, taken and tested, show a variation in the amount of fixed carbon ranging from 86 to 94 per centum. There is, then, an imported article of coal upon which the free list provision of the statute may operate; and, if this is so, there is no ground for saying that the statute is meaningless. It is only where a word or sentence is unintelligible, or produces absurd and conflicting results, that it may be disregarded in giving effect to other provisions.

The decision of the board of appraisers is affirmed.

SIMONDS ROLLING-MACH. CO. v. HATHORN MFG. CO. et al.
HATHORN MFG. CO. et al. v. SIMONDS ROLLING-MACH. CO.

(Circuit Court of Appeals, First Circuit. April 25, 1899.)

Nos. 260 and 261.

1. PATENTS—ANTICIPATION—PRESUMPTIONS.

On a question of anticipation, if the identity of methods and results is doubtful, the doubt must be resolved in favor of the successful patentee, who, in a practical way, has materially advanced the art.

2. SAME.

A patent for a machine for making leaden bullets and shot by rolling or forging the piece of lead between cylindrical dies, the edges of which are sharpened to cut away surplus material, held not to have anticipated an invention for forging metal articles which are circular in cross section, such as car axles, etc., which operates by forging the hot metal and spreading or crowding away the surplus material, and compacting the outer surface of the article forged.

3. SAME—DIES FOR FORGING METAL ARTICLES.

The Simonds patent, No. 319,754, for improvements in dies for forging articles circular in cross section, such as car axles, etc., held not anticipated

by the Bundy English patent of May 1, 1806, for "machines or instruments for making leaden bullets and other shot," and also *held* valid and infringed as to claim 1.

4. SAME—ANTICIPATION.

The Simonds patent, No. 419,292, for a method of making rolled-metal forgings that are circular in cross-sectional area, *held* not anticipated by the Bundy English patent of May 1, 1806, and also *held* valid and infringed.

5. SAME—JOINT AND SEVERAL DEFENDANTS.

Where the suit is brought against a corporation and certain individual defendants, and infringement is found, the decree need not be limited to the joint infringement of all the defendants, but may also go against the individual defendants for their several individual infringements.

90 Fed. 201, modified.

Appeals from the Circuit Court of the United States for the District of Maine.

Frederick P. Fish and William K. Richardson, for Simonds Rolling-Mach. Co.

Benjamin Phillips (T. Hart Anderson, on the brief), for Hathorn Mfg. Co. and others.

Before COLT, Circuit Judge, and WEBB and ALDRICH, District Judges.

COLT, Circuit Judge. This suit was brought for infringement of two patents, No. 319,754, dated June 9, 1885, and No. 419,292, dated January 14, 1890. The first patent was issued to George F. Simonds for dies "for forging articles circular in cross section," such as car axles, and the second to the complainant, as assignee of Simonds, for the method of making irregular shaped metal articles, or "of making wrought-metal forgings that are circular in cross-sectional area." The court below held that the first claim of the die patent was limited to irregular shaped articles, and did not cover dies for making balls; that the second claim must be strictly construed, and therefore was not infringed; and that the method patent was valid, and infringed by the defendants. 90 Fed. 201. The complainant appeals from so much of the decree below as limits the scope of the first claim of the die patent, and holds that the defendants do not infringe the second claim. The defendants appeal from so much of the decree as declares that they infringe the first claim of the die patent and the method patent.

It is apparent that the method and the die patents are not for the same invention. The former covers the method, irrespective of the specific means or instrumentalities employed; the latter covers certain specific features of dies used in carrying out the method. These are distinct inventions. The main defense to both patents relied upon in the court below and on this appeal is the alleged anticipation of Simonds' method and dies by the prior English patent granted to William Bundy. Preliminary to the consideration of this question, it may be observed that Simonds' method was radically new in the metal-forging art. It revolutionized the branch of the art to which it relates. It is practically and commercially successful. The Si-

monds method patent is for "making wrought-metal forgings which are circular in cross-sectional area." It deals with the forging of not metal. It contains a description of the method, the mode of operation, and refers to different forms of dies which may be employed in carrying out the method. The dies illustrated in the drawings are so shaped as to roll balls, car axles, and other articles circular in cross section. The dies are used in pairs, and have raised working parts. They rotate and shape the blank between them. They travel in parallel lines in opposite directions. At the beginning of the operation the forward ends of the dies are opposite one another, and at the end of the operation the rear ends are opposite one another. The complainant's expert, Mr. Livermore, gives a clear description of the Simonds method and dies:

"Briefly stated, the method consists in acting progressively upon different parts of the surface of the blank, the point of action traveling around the circumference of the blank, and at the same time traveling lengthwise of the blank; or, in other words, being in a spiral path around the blank, beginning at some point between the ends of what is to be the finished forging, and extending gradually towards the ends thereof. The action at each point consists in straining or spreading or crowding the surplus metal of the blank towards the ends, and at the same time compressing the metal that remains in the finished forging to the exact form required at that point. Thus, at any given moment between the beginning of the operation on the blank and the completion of a forging there is a portion of the length of the forging that has been brought to the final shape, and the remainder is at this time completely unformed; and as the operation continues the length of the finished portion is extended towards the ends, until finally the entire length has been completed, the end portion being finished at the last round of the spirally traveling, spreading, and compressing action." "The dies are constructed to be used in pairs in a machine in which they are caused to travel in relatively opposite directions, the distance between the dies, generally speaking (or, more accurately, the maximum distance between the working portions of the dies), being substantially equal to the diameter of the blank; so that, without taking into account the shaping effect of the dies, their action in traveling one past the other upon the blank between them is to rotate or roll the blank much as a pencil is rolled between the hands of a person when sliding one hand along the other, with the pencil lying between the two and at right angles to the line of movement. The two dies stand, at the beginning of the rolling operation, with their forward ends directly opposite one another, and during the rolling movement one die has passed completely over the other, so that at the end of the rolling operation the rear ends of the dies are opposite one another." "The dies have raised working parts, which act upon and shape the blank rolling between them, said raised parts of the dies having a groove or channel extending lengthwise thereof, the cross-sectional shape of the bottom of which channel is the same as the longitudinal outline to be imparted to the forging; so that, if a finished forging were rolled along in the channel of the die, its line of rolling contact would fit the channel. * * * These channels are not, however, of full width for the full length of each die, but are of full width only at the rear end of the die, the sides of the channeled, raised portions being cut away on diagonal lines, which converge from the rear end, where the channel is of full width, towards the front end of the die, where the channel substantially vanishes by reason of the cutting away of its sides." "The raised portion of the dies along the sides of the channel are cut away upon planes that slope outward and downward from the line of intersection with the channel. * * * The surface of the bottom of the channel * * * is called the 'forming surface' of the die, as it imparts to the forging the exact form or shape that is desired; while the sloping diverging surfaces at the sides of the forming channel * * * are called 'reducing' and 'spreading' surfaces, as they serve in the operation of the die to crowd the surplus metal of the blank towards the ends of the

forging, leaving only the metal which conforms to the shape of the bottom of the channel."

Dr. Coleman Sellers, complainant's expert, says, respecting the Simonds method:

"It is evident that the advantage to be derived from this method of rolling is that steel can be worked at the lowest forging heat, precisely as a blacksmith would work it, and by means of dies that put no undue strain upon the metal, but give the work necessary for a compact forging."

The claim of the method patent is as follows:

"The method herein described of making rolled-metal forgings by acting upon all parts of a metal bar in spiral lines, so as at each part in succession and upon such lines to cause the bar to rotate, and to strain and spread the metal axially, and compress it to the required shape and size."

The Bundy English patent was granted in 1806. It was for an invention of "machines or instruments for the purpose of making leaden bullets and other shot." It was not for forging hot metal. It does not appear that leaden bullets were ever made with the Bundy machine, or that it made any impression on the art of metal working. The specification says:

"The two molds, D, D, have a groove or flute cut in each of them on the side facing the other,—that is, upon the lower side of that which is fixed to the bar A, and upon the upper side of that upon the bed C,—each being half a cylinder, and making, when closed together at the two extremes, F, F, a complete cylindrical hole, the diameter of the ball intended to be made. This hole is continued regularly and equal from F to G, the edges of which then taper gradually off to the extreme circumference of the cylinder, which terminates at the ends of the molds, D, D, at H, H. Suppose, then, a cylindrical piece of lead (or any other proper substance, the end of which is seen at I) nearly of the same diameter (but not less) as the cylindrical hole in the two molds, D, D, when closed together at the two extremes, F, F, is placed across and between the two molds, D, D, at H, H. By drawing the bar, A, A, A, horizontally by a parallel motion to the right, the cylindrical piece of lead will be rolled and gradually pressed and cut away by the sides of the grooves or flutes in the two molds, D, D, which are made sufficiently sharp for that purpose."

There is certainly a close resemblance between the Bundy dies for making lead balls and (apparently) their mode of operation, and the Simonds dies for forging balls and their mode of operation. But the complainant contends that there are important differences, which may be stated as follows: Bundy makes only leaden bullets. Simonds forges various articles circular in cross section from a heated metal blank. Bundy cuts away the surplus lead by sharp cutting edges, and shapes the remainder. Simonds spreads or crowds away the surplus hot metal, and compacts the outer surface of the article forged. Bundy provides corrugations within the grooves to rotate the leaden balls. Simonds places his corrugations outside the grooves so as to rotate the mass of the heated blank. Bundy made no impression on the art. Simonds' patent is the foundation of a new industry. We are not prepared to say that the cutting and molding of the cold lead by the Bundy dies is the same as the spreading and compacting of the hot metal by the Simonds forging dies. Nor are we fully convinced that in mode of operation and result the dies are essentially different.

If the question of identity of method and result is doubtful, the doubt must be resolved in favor of the successful patentee, who has

in a practical way materially advanced the art. *Washburn v. Gould*, 3 Story, 122, 144, Fed. Cas. No. 17,214. In *Bundy* the corrugations for causing the rolling of the metal are located at the bottom of the forming groove of the die, while in *Simonds'* they are located outside the forming groove. It appears that dies with *Bundy* corrugations would be inoperative for forging hot metal. Further, *Bundy* speaks of the sides of the grooves of the two molds being "sufficiently sharp" to press and "cut away" the lead. This does not accurately describe the *Simonds* die for spreading, crowding, and compacting the surplus hot metal on the outer surface of the forged article. Again, and perhaps of greater consequence, we are not fully satisfied from the evidence in the record relating to the experiments which were made that the *Bundy* patent describes practically operative means for making lead bullets. It can, at least, be said, we think, that the *Bundy* patent does not disclose practically operative means for forging metal articles circular in cross section. Upon the whole we do not find in the *Bundy* patent a description of the *Simonds* method in such "full, clear, and exact terms" as are necessary to anticipate the *Simonds* patents. *Hanifen v. Godshalk Co.*, 28 C. C. A. 507, 84 Fed. 649; *Heap v. Tremont & S. Mills*, 27 C. C. A. 316, 82 Fed. 449, 452; *Consolidated Car-Heating Co. v. American Electric Heating Corp.*, 82 Fed. 993, 997, on appeal 29 C. C. A. 386, 85 Fed. 662, 665. As it is not seriously contended that any prior patent in the forging art anticipates the *Simonds* method, it follows that the *Simonds* method patent is valid, and that the defendants infringe this patent.

We come next to the die patent. This patent is entitled, "Die for forging metal articles circular in cross section." The specification says that the inventor has "invented certain improvements in faces for car-axle dies designed to be used in pairs." The specification further says:

"My invention consists in dies designed to be used in pairs, and provided with forming surfaces raised upon the plane face of the die, and with reducing and spreading surfaces running diagonal to the line of movement of the die, and standing oblique to the plane of the die. My invention further consists, in providing the reducing and spreading surfaces above mentioned, when necessary, with corrugations or irregularities, to engage the metal and insure the rotation of the work."

The claims are as follows:

"(1) Dies adapted to form metal articles circular in cross-sectional area, with the working parts raised upon a plane surface, and provided with forming surfaces running in line with the movement of the die, to give the shape required, and diverging reducing and spreading surfaces to force the metal laterally, substantially as described. (2) Dies adapted to form metal articles circular in cross-sectional area, having forming surfaces to give the shape required, and reducing and spreading surfaces to force the metal laterally, provided with corrugations or irregularities, to engage the mass of metal and insure its rotation, substantially as set forth."

We agree with the court below that the second claim is narrow, and is limited to the corrugations "substantially as set forth." The defendants' dies not having the same corrugations, or the corrugations located in the same situation on the dies, do not infringe this claim. This does not apply to *Ball Dies No. 1*, and *Boot-Calk Dies No. 1*, used only by defendant *Hathorn*, for they have the corrugations

in the same location described by Simonds. As to the first claim, however, we do not think it excludes dies for making balls, and is limited to dies for forging car axles, boot calks, and other irregular shaped articles analogous to car axles. We are of opinion that this claim fairly covers "dies for forging metal articles circular in cross section," substantially as described, and that it embraces the dies for forging balls which are used by the defendants. This suit was brought against the Hathorn Manufacturing Company and three individual defendants. The court below limited its decree in favor of the complainant to the joint infringement of all the defendants. We see no sufficient reason, under the present bill, why the defendant Hathorn should not account for his several or individual infringements. We understand this to be the general rule. *Herring v. Gage*, 3 Ban. & A. 396, 402, Fed. Cas. No. 6,422; *Tatham v. Lowber*, 4 Blatchf. 86, 87, Fed. Cas. No. 13,765; *New York Grape Sugar Co. v. American Grape-Sugar Co.*, 42 Fed. 455. The decree of the circuit court is modified as to the construction of the first claim of patent No. 319,754, and as to the liability of defendant Hathorn for his several infringements, and the case is remanded to that court for proceedings not inconsistent with this opinion. Costs in this court are awarded to the complainant, the Simonds Rolling-Machine Company.

WARREN v. CASEY et al.

(Circuit Court of Appeals, Third Circuit. May 1, 1899.)

No. 29, March Term.

1. PATENTS—INFRINGEMENT—EYEGLASS CASES.

A patent for an eyeglass case, having a cover or lid of stiff material, bulged out in the middle, or buckled, so that the edges thereof fit close on the edges of the front piece while at the middle of the cover room is left to fit over the projecting or bulged portion of the front piece of the eyeglasses, *held* not infringed by a case which, among other differences, has a flexible and resilient lid, which is not bulged or buckled, but has a plain surface.

2. SAME—INFRINGEMENT.

The Warren patent, No. 589,676, for an eyeglass case, construed as limited in view of the prior state of the art to the particular device described, and *held* not infringed.

Appeal from the Circuit Court of the United States for the Eastern District of Pennsylvania.

This was a suit in equity by Roy L. Warren against John Casey and others for alleged infringement of a patent for a new and improved case for eyeglasses. The circuit court held that the patent was void for want of invention, and was also not infringed, and accordingly dismissed the bill. 91 Fed. 653. The complainant appealed.

Hector T. Fenton, for appellant.

E. H. Fairbanks, for appellee.

Before ACHESON, Circuit Judge, and BUFFINGTON and KIRKPATRICK, District Judges.