FISHER et al. v. AMERICAN PNEUMATIC TOOL CO.

(Circuit Court of Appeals, Second Circuit. January 8, 1896.)

No. 133.

1. PATENTS—INVENTION—PNEUMATIC TOOLS.
Patentable invention was involved in bringing together, and adapting in size, proportion, and relation, the various parts necessary to form a cylindrical pneumatic drilling tool, which may be held in, and guided by, the hand, while at work, even though like parts, operating by steam or air, in engines of various sorts, were previously known. 69 Fed. 331, affirmed.

2. SAME.
The Bates patent, No. 364,081, for a pneumatic drilling tool, shows patentable invention, and is infringed by a tool made in accordance with the Drawbaugh patent, No. 472,495. 69 Fed. 331, affirmed.

Appeal from the Circuit Court of the United States for the Southern District of New York.

This was a suit in equity by the American Pneumatic Tool Company against Robert C. Fisher and others, constituting the firm of Robert C. Fisher & Co., for alleged infringement of a patent for a pneumatic drilling tool. In the circuit court a decree was rendered for complainant (69 Fed. 331), and the defendants appeal.

Leonard E. Curtis and Thomas B. Kerr, for complainant.
Edwin H. Brown, for defendants.

Before WALLACE, LACOMBE, and SHIPMAN, Circuit Judges.

SHIPMAN, Circuit Judge. The complainant, as the owner of letters patent No. 364,081, dated May 31, 1887, issued to Albert J. Bates for an improvement in pneumatic drilling tools, brought its bill in equity against the defendants, and prayed for an injunction against the infringement of said patent by the use of the pneumatic tool described in letters patent No. 472,495, dated April 5, 1892, and issued to Daniel Drawbaugh. Upon the trial, claim 3 only was said to have been infringed. The circuit court found the issues in favor of the complainant, granted an injunction against the surviving partner of the defendant firm, and directed an accounting. From this interlocutory decree the defendant appealed to this court.

Engines operated by steam or air have long been used for a great variety of mechanical purposes requiring a large or a small expenditure of power; as, for example, to turn a shaft, to operate a rock drill, to lift and depress the piston of a pump, and to strike a dental hammer for plugging a tooth. To accomplish these results, the steam or air has been applied by means of pistons which were controlled by valves; and, speaking very generally, a piston chamber, a piston therein, a valve chamber separate from the piston chamber, a valve in the valve chamber, inlet and exhaust ports, and ports extending between the piston chamber and the valve chamber, were means resorted to by which pistons and valves were made to perform the requisite service. Each result required for its production

its own appropriate adaptation of means, which were varied as the exigencies of the case required. Prior to the invention described in letters patent No. 323,053, dated July 28, 1885, to James S. McCoy, no pneumatic drilling tool had been known. Such a tool finds its natural use in cutting, dressing, and carving marble, granite, and other stone, though it can undoubtedly be used for a variety of other purposes, and was intended to supersede the slow method of striking blows by a mallet in the hand of the operator. The chisel was still used, and was held and guided in the left hand of the workman as formerly; but the improvement consisted in substituting for the mallet a mechanical hammer, which gave an exceedingly rapid and efficient series of blows to the chisel. This hammer consisted of a cylinder which was held in the right hand of the workman; the cylinder containing a piston caused to move forward and backward, by air pressure, with great rapidity, and to deliver a blow at each downward stroke upon the upper end of the chisel. A valve in a valve chamber transversely through the piston controlled a series of air ports which caused the air "to be alternately directed against the upper and lower faces of the piston, and to be, in like manner, exhausted from the upper and lower ends of the cylinder." By the aid of this tool, 1 man could do the work of from 10 to 12 men who used the mallet, and produce finer lines and a smoother surface. The improvement of Bates, who was a subsequent and apparently independent inventor, consisted in placing the valve in a separate chamber in the upper end of the cylinder, instead of placing it in a chamber in the piston. This change permitted the hammer to be a stronger piece of metal, lessened the tendency of the valve to wear away the sides of the cylinder, gave more force to the blow, and made a more efficient tool for work upon granite. The nine claims of the Bates patent describe the invention in its various details. Claim 3 is the most general one, and is as follows:

"(3) In the pneumatic drilling tool described, and in combination with the case having an inlet and exhaust port, the cylinder, D, having a piston chamber and a valve chamber arranged separate from each other, and connected by means of ports and air passages, the piston, B, and valve, J, for controlling said piston through the medium of said ports and air passages, substantially as and for the purpose set forth."

The contention of the defendant is that this claim describes a part of an engine, not limited to be used upon a hand tool or a small tool, or to a tool whose engine has a valve inside the cylinder which contains the piston chamber, or to a tool whose piston has the function of a striker, and is a general claim for a type of engine which was familiar to mechanics, and could be modified or changed at will, to perform any particular work, or was for a substitution of an old type for the McCoy type, and therefore not patentable, or, if the claim can be sustained, that it is limited, by its terms and by the prior art, to details not used by the defendant. In order to construe the claim intelligently, the character and peculiarities of the invention, as disclosed in the specification and in the antecedent McCoy invention, are of importance. The pioneer pneumatic tool of McCoy was described in his specification to be "a tool for working in

stone, and for other purposes, wherein a current of air or steam forced into the tool causes a piston or striker to deliver rapid blows upon a rod or bar, to the outer end of which the cutting point is attached." The third claim of the Bates patent describes an improvement upon its predecessor in a narrow though important particular, and the scope of the invention is that of an improved drilling tool. The piston of each patent was disconnected from the chisel holder, and its function was therefore that of a striker only. A piston connected with a chisel which pulled the chisel away from the work at each upward stroke was a failure in the carving of stone, because it is impossible for the workman to keep the cutter in proper contact with the material. The successive cuts are on different planes. It necessarily follows that the device, as a whole, was a hand tool, and of moderate size. The theory upon which it was constructed was the production of a smooth and delicately cut surface by the delivery of blows with great rapidity, and therefore the hammer was to be moved, by the direct action of the air, through ports and passages, so as to insure rapidity, and thus prevent the chipped or nicked appearance of slow or hand work. Claim 3 is to be read in the light of these facts, and is not, broadly, for a part of an engine, irrespective of the work it is to accomplish, but it is for the engine part, or mechanical hammer, of an improved pneumatic drilling or cutting tool, and which has the peculiarities which the specification describes. While the precise locality of the valve, as shown in the drawing, is not necessary, it must be separated from the piston; and, to make the hammer of great rapidity, the valve is required to be within the cylinder, so that the length of the air passages shall be within very moderate limits. As the claim is thus construed, the closely-similar combinations which preceded the Bates tool were those in the McCoy tool, already mentioned, and in the Fitts patent, No. 265,950, dated October 17, 1882. The particular in which the Bates tool was an improvement upon the McCoy device, and which is clearly stated in claim 3, has already been described. The Fitts invention, which most nearly corresponds to the Bates tool, was a dental plugger or hammer. It was a small tool, and, as a matter of safety, the blows of the hammer must be comparatively slow. Therefore his valve was shifted or moved mechanically by a slide, and not by the air, directly. Moreover, the piston chamber and valve chamber were not contained in a common cylinder. In the pumping engine of the Maxwell & Cope patent, No. 56,242, of July 10, 1866, the casing is not divided into a piston chamber and a valve chamber arranged separate from each other. The slow rock drill of the Doering patent, No. 72,465, dated December 22, 1867, has a valve chamber external to the cylinder. The object of the improvement in the large engine shown in the Waring patent, No. 185,805, dated December 26, 1876, was to have its valve automatically opened by steam alone, without the aid of external appliances. In that respect its mechanism is like that shown in the Bates patent, and the relations of the valve and piston chambers to each other make the two devices look alike. The Waring piston was not a striker, but

was designed to give a heavy thrust, and the whole engine was for heavy work. The valve and piston portion could never be modified so as to give the light, rapid blows of the Bates tool, without alterations which would be the work of the inventor. These structures are the nearest anticipations which were introduced by the defendant. In none of these, except in the McCoy tool, was rapidity of motion important. The work which they were called upon to do required comparatively slow movements of the piston, and each of them was illy adapted to the necessities of the Bates tool.

The next and obvious question is, could not some one of the various types of engines have been adapted, by mere mechanical skill and by known workshop expedients, to the Bates requirements? The defense of noninvention is, in this case, entirely theoretical. The question relates to an important and complex art,—that of engine building,—in which experience is both valuable and is at hand; but experience has not, apparently, tested itself on the subject. The assertion is that inasmuch as the motive power of steam or air has been employed in many engines, and the means of such employment have been shown in many patents, nothing is necessary for the application of such power to produce a new result, but to select, and perhaps adapt, old and well-known appliances. But as was said by Judge Wheeler, in the circuit court, with respect to the McCoy and Bates tools, "the building, adapting in size, proportion, and relation, and so inclosing such parts as to form a tool of such power, capable of guidance to such work by hand, would seem to involve high and most useful inventive skill, well worthy of a patent upon the tool itself, or improvements of that kind upon it." While it is true that modern scientific skill has developed an exceedingly great variety of ways in which the agency of steam can be made useful, the element of novelty is generally present in the particular means which produce a new result. And it is not reasonable to infer from the variety of old appliances that the ascertainment of means to properly move and control the movement of a new tool of the delicacy, accuracy, force, and rate of speed required for such an instrument as a dental tool demanded no invention, but required merely a selection by the mechanic from the types of engines at hand in a workshop, or in a volume of drawings. In addition, the history of the tool of this patent shows that the ascertainment of the appropriate means, or of an improvement upon existing means, which should properly move a hand cutter for the carving of marble, also called for an inventive mind. Though marble cutting and engine building were each old arts, no improvement upon the mallet and chisel appeared until the tools of McCoy and Bates came into existence. If the turning of a rock drill into a marble or granite cutter was a thing to be had for the asking, it would seem that the transformation would have been more promptly made.

The strength of the attack upon patentability does not, however, consist in the lack of invention in the improvement of claim 3, as that claim has been construed. The strength of the defense consisted in establishing the truth of the premise that the claim was

not limited to a specific improvement upon a pneumatic drilling tool, but can be fairly construed to be a broad claim, without limitation in regard to details, for a new part of an engine for general use. If the premise is true, the conclusion would follow that the supposed invention of the claim had closely-related predecessors. But in our opinion the defendant's construction is erroneous.

Upon the question of infringement, the Bates cylinder is surrounded by a case, and the air channels were entirely formed upon the outer surface of the cylinder. In the defendant's tool, the cylinder has no case, so far as the part which covers the piston is concerned, but has a casing upon the part which covers the valve chamber. In the part which contains the piston chamber, the air channels extend through the solid sides. This modification is immaterial upon the question of infringement. The decree of the circuit court is affirmed, with costs.

THE FLORENCE.

THOMAS v. THE FLORENCE.

(Circuit Court of Appeals, Second Circuit. January 8, 1896.)

ADMIRALTY APPEALS—SALVAGE AWARDS.

The amount of a salvage award will not be changed by an appellate court, except in an exceedingly strong case of abuse or palpable mistake in the exercise of discretion.

Appeal from the District Court of the United States for the Southern District of New York.

This was a libel in rem by William Thomas, master of the steamship Parkmore, for himself and others, against the steamship Florence, to recover compensation for salvage services. The district court made a salvage award of $8,500, with an additional sum for expenses. See 65 Fed. 248, where the facts will be found stated at length in the opinion rendered by Brown, District Judge. From this decree the libelant appeals, claiming that the award was not sufficient in amount.

Evarts, Choate & Beaman (Treadwell Cleveland, advocate), for appellant.

Wing, Putnam & Burlingham (Harrington Putnam, advocate), for appellee.

Before WALLACE, LACOMBE, and SHIPMAN, Circuit Judges.

PER CURIAM. We should have been better satisfied with a somewhat larger award in this case than was allowed by the court below, but cannot find that it was so manifestly inadequate as to justify its revision by an appellate court. It did not proceed upon wrong principle or any misapprehension of the facts, and different minds could reasonably reach a different conclusion upon the matter. We cannot interfere with it without violating the salutary rule