

SICKELS v. BORDEN.

{3 Blatchf. 535.}¹

Circuit Court, S. D. New York. Nov. 6, 1856.

PATENTS—NEW

IDEA—ADAPTATION—INFRINGEMENT—MEASURE
OF DAMAGES—PATENT FEE—PROFITS—STEAM
CUT-OFF.

1. The principle of the invention covered by Sickels' patent of September 19th, 1845. for a "method of tripping the drop cut-off valves of steam-engines, and regulating and adjusting the same," explained.
2. The mere discovery of a new idea is not the subject of a patent. It must, in order to be patentable, be embodied in working machinery, and adapted to practical use.

[Cited in *White v. Allen*, Case No. 17,535; *Reeves v. Keystone Bridge Co.*, Id. 11,660.]

[Cited in *Burke v. Partridge*, 58 N. H. 352.]

3. Rules for determining the infringement of a patent, stated.
4. The mere form of the defendant's machinery must be disregarded, and the substance of its arrangement, and its method of working, must be looked into, for the purpose of seeing whether the plaintiff's ideas are incorporated in it.
5. If the plaintiff's invention be a machine, it is infringed by a machine which incorporates, in its structure and operation, the substance of the invention, that is, an arrangement which performs the same service, or produces the same effect, in the same way, or substantially the same way.

[Cited in *Whitney v. Mowry*, Case No. 17,592; *Werner v. King*, 96 U. S. 218.]

6. The doctrines of the cases of *Walton v. Potter*, *Webst. Pat. Cas.* 586, and *Bovill v. Moore*, *Dav. Pat. Cas.* 361, 405, on the subject of infringement, approved.
7. If a patentee has an established patent fee, that sum, with the interest, constitutes the measure of damages for an infringement. If not, then the profits which the infringer has made by the use of the invention, may be taken as the measure.

{Cited in *Spaulding v. Page*, Case No. 13,219; *Emerson v. Simm*, Id. No. 4,443; *Washington A. & G. Steam Packet Co. v. Sickles*, 19 Wall. (86 U. S.) 617; *Goodyear Dental Vulcanite Co. v. Van Antwerp*, Case No. 5,600; *Stutz v. Armstrong*, 25 Fed. 147.]

{Cited in *Dean v. Charlton*, 23 Wis. 612; *Porter v. Standard Measuring Mach. Co.*, 142 Mass. 195, 7 N. E. 928.]

8. Where, for the purpose of introducing his invention to public notice, a patentee has accepted small patent fees in particular cases, that consideration should be taken into account by a jury, in fixing a patent fee as a measure of damages.
9. The adoption, by a jury, of the patent fee as the measure of damages for infringement by the use of a machine, operates to vest in the defendant the right to use the machine during the term of the patent.

{Cited in *Spaulding v. Page*, Case No. 13,219; *Stutz v. Armstrong*, 25 Fed. 148.]

This was an action on the case [by William B. Sickels against William Borden,] tried before Mr. Justice Nelson, for the infringement of letters patent [No. 4,199] granted to Frederick E. Sickels, September 19th, 1845, for a “method of tripping the drop cut-off valves of steam-engines, and regulating and adjusting the same.” The material parts of the specification, and the claims, were as follows:

“By the method now practised of operating the drop cut-off valve, the motion is derived from the lifter, which approaches its state of rest as the piston of the engine approaches the middle of its stroke, or its maximum velocity, and the valve is tripped by the same motion which lifts it; so that there must be very great nicety in the adjustment to regulate the extent of the cut-off at about the half stroke. The object of my invention is to remedy this, and its principle or character consists in tripping the valve by a motion independent of the lifting-rod or rods; and also in combining the various parts in such manner as to regulate the cut-off with accuracy, during the action 68 of the engine, by connecting the two shafts that

trip the two cut-off valves, end to end, by means of adjustable spring arms that take into and are, when set, held in the teeth of a sector, which vibrates on the axis of motion of the shafts, and receives its vibratory motion from the eccentric; which spring arms may be shifted in the teeth of the sector, brought nearer to, or farther from each other, and thus cut off at a less or greater portion of the stroke. * * * It will be evident, from the foregoing, that any motion, derived from any part of the engine, may be substituted for the vibration of the arms or wipers, provided the character above described be maintained; as, for instance, instead of the horizontal vibratory motion of the arm or wiper, the spring may be disengaged from the stem of the valve by a vertical descending motion as the lifter rises, and this may be derived from any moving part of the engine, other than the lifters or their rocking-shaft, such as the piston-rod, the beam, the crank-shaft, &c. What I claim as my invention, and desire to secure by letters patent, is, tripping the drop valve of the cut-off by a motion independent of the lifters, substantially in the manner and for the purposes herein described. I also claim combining the wiper that drops the valve of the cut-off, whether working horizontally or vertically, with any of the moving parts of the engine other than the lifters or their rocking-shaft, by means of the sector and arm or arms, by means of which the extent of the cut-off can be regulated at pleasure, during the action of the engine, from the full to the least portion of the stroke, as herein described.”

The infringement alleged was in the use of the patented invention on the engine of the steamboat Metropolis, running between New York and Fall River.

Charles M. Keller and Edward N. Dickerson, for plaintiff.

Francis B. Cutting and Edwin W. Stoughton, for defendant.

NELSON, Circuit Justice (charging jury). The first question to which your attention should be directed, is the construction of the patent. This is essential, in order to enable you, in the first place, to ascertain the extent of the plaintiff's right; and, in the second to determine whether or not the arrangement of the defendant violates that right. To aid you in this investigation, it will be advisable, in the first instance, to look at the principle of the new set of ideas involved in the patentee's discovery, and which, it is claimed, have been embodied into a working machine, and adapted to practical use.

It is stated by the patentee, both in his patent and in his testimony on the trial, (and there seems to be no controversy among the experts respecting it), that previous to September, 1845, (the date of the patent), the valve-stem, which was used for the purpose of disengaging and dropping the valve, and thereby cutting off the steam from the cylinder, was disengaged by the motion of the lifter of the valve; and that, as a consequence of this, there was a difficulty in cutting off the steam beyond the half stroke, and, as stated by the patentee, a nice and difficult adjustment was required, in order to effect the separation at that point. To remedy this difficulty is the purpose of his improvement. He gives up the lifting motion, which had before been used for tripping the valve, and substitutes in its place a motion from the engine independent of the lifting motion. In the particular arrangement described by him, he takes the motion from the eccentric strap, at right angles to the usual valve motion, and detaches the valve by that motion, through the instrumentality of the proper machinery, by means of a vibrating sector operating upon an arm or wiper. This arrangement presents to the mind a new set of ideas, as constituting the subject matter of this invention. It is new, according to all the experts. Previously to this, the motion to trip had been taken

from the lifter; and, therefore, it required a new development and application of power, to avoid the difficulty arising out of the use of the motion of the lifting-rod. The power of the eccentric had not before been applied for the purpose. The novelty of the invention consists in the new set of ideas by which the patentee saw the possibility of dispensing with the lifting motion as a means of detaching the valve and allowing it to drop, and in deriving power from some other part of the engine. He took it from the eccentric strap, and adapted it to his purposes by an arrangement of machinery independent of, and uncontrolled by, the lifting motion. The improvement, however, does not limit the patentee to the motion or power derived from the eccentric strap, for he says that it may be taken from any other moving part of the engine, always excluding the lifting-rod.

I agree with the counsel for the defendant, that the mere discovery of the idea of deriving power for the tripping of the valve from the eccentric strap, or from any other moving part of the engine not controlled by the lifting-rod, would not constitute the subject of a patent, although the idea were new. That idea is, however, the foundation upon which the improvement rests, and without which it would not have been discovered. The new set of ideas which of themselves are not the subject of a patent, must, in order to become patentable, be embodied in working machinery, and adapted to practical use. It is the embodiment of machinery for practical purposes which furnishes beneficial results to the public, and renders the discovery patentable. This has been effected by the patentee, by the arrangement 69 of machinery whereby the eccentric strap, by means of intervening arms and levers, which control the arm or wiper, operates to detach the valve. This combination of machinery embodied the new ideas of the patentee, and adapted

them to practical use, and thus rendered them the proper subject of a patent.

Many parts of the machinery necessary for working a steam-engine, and which have been brought out in the progress of this trial, have no necessary bearing upon this controversy. The patent is simply for an arrangement of machinery to control the tripping of the valve. Of course, for the practical working of the machinery, it is necessary that some contrivance should be interposed to take care of the valve in its descent to its seat, to prevent its breaking in pieces. But the easing of the valve to its seat, so as to prevent slamming or damage to the valve, although essential, has nothing to do with the contrivance for effecting the detachment. Different persons may prefer different modes of easing the valve to its seat after it is detached. One of the several contrivances possible you have seen in the machine of the defendant. In this machine the valve is eased down by the arm of the sector. Another contrivance (which is the favorite one of the patentee, and one to which he refers in his patent) is the water-dash-pot—a close vessel containing water, which checks the valve in its rapid descent to its seat. By the contrivance of Mr. Corliss, (which has been before this court), the valve is eased to its seat by compressed air. There may be many other contrivances for the same purpose. Suffice it to say, that these contrivances have nothing whatever to do with this controversy. Hence it is not important for you to inquire which of the several arrangements is the best one.

The patentee having discovered that he could trip the valve by a motion independent of the lifting motion, and, therefore, not controlled by that motion, it is very obvious that such independent motion may be used to trip it at any desirable point of the stroke of the piston, because it is an independent motion, and (as was very well said by one of the experts) a

positive motion used for tripping. Therefore, it may be used, at the discretion of the engineer, or of the person constructing the machinery, to detach the valve at any point of the stroke of the piston that may be the most useful. This led to the second claim in the patent. By the interposition of the sector and arms, the engineer is enabled to detach the valve at will at any point of the stroke of the piston, during the operation of the engine.

It was suggested, and to some extent urged by the counsel for the defence, in the progress of the trial, that there was no novelty in the patentee's arrangement. This is a question of fact for the jury to determine, upon a view of all the evidence in the case. I will not review the evidence, because all the experts called on both sides conceded that the idea of taking the power to detach the valve from some part of the engine other than the lifter, was new, and all of them admitted that it was valuable. After these unqualified concessions by the witnesses for the defendant, it is unnecessary to enter into an examination of this question. Whether Mr. Bennett had this idea is immaterial; since, according to his own testimony, whatever improvements he devised and put into operation on the Despatch, were abandoned, and his machinery was sold for old iron, after a partial trial. After this, it would be a waste of time to follow out any inquiry respecting the organization of his machine.

The next inquiry is, whether or not the new set of ideas lying at the foundation of the patentee's invention, and embodied and adapted to practical purposes by him, is found in the tripping apparatus of the Metropolis. If the ideas of the patentee have not been embodied in that apparatus, there is no infringement, and the plaintiff is not entitled to recover. If they have been, then there has been an appropriation of his property, and he is entitled to your verdict.

It was urged by the counsel for the defendant, upon the basis of the testimony of the experts, especially that of Mr. Allen, that the defendant's arrangement is essential to the working of his machinery, and that, therefore, it is not to be separated into parts, in determining whether or not it is an infringement of the plaintiff's rights. This view may be taken as correct, but with this qualification—that if, on an examination of the defendant's combination, the peculiar arrangement of the patentee is found to be embodied and working there, as in the patentee's arrangement, however it may be combined with other machinery, the patentee's discovery is appropriated, the same as if it were used alone and separate from those connections; and it will be the duty of the jury to determine whether there is, in the combination and arrangement of the defendant, any such incorporation of the new set of ideas lying at the foundation of the patentee's invention.

The new form of the machinery embodying the new ideas, is not a material part of the patentee's invention, for the reason that the embodiment of his ideas into working machinery is rather the work of the skilful mechanic than that of the inventor. Many inventors of improvements in machinery, not being mechanics themselves, are obliged to obtain the aid of skilful mechanics in embodying their ideas in practical working machinery. Different mechanics would perhaps embody them by different arrangements of machinery—all conforming, however, to the principles and ideas of the inventor. Hence, the mere form of the defendant's machinery must be disregarded, and the jury must look into the substance of 70 its arrangement, and its method of working, for the purpose of seeing whether the ideas of the inventor are incorporated in it. If they are, the patent is infringed.

One of the defendant's experts, an apparently intelligent engineer, inferred that the defendant's arrangement was substantially different from that of

the patentee, because, by following out the specification of the patentee, which minutely describes the construction of his apparatus, he could not make the arrangement used by the defendant. This proposition is also embodied in one of the prayers of the counsel for the defendant, but its unsoundness is obvious, upon an established principle of the patent law, which declares that formal changes of machinery do not evade a patent. However different, apparently, the arrangements and combinations of a machine may be from the machine of the patentee, it may in reality embody his invention, and be as much an infringement as if it were a servile copy of his machine. According to the patent law, if the machine complained of involves substantial identity with the one patented, it is an infringement. If the invention of a patentee be a machine, it is infringed by a machine which incorporates, in its structure and operation, the substance of the invention; that is, an arrangement which performs the same service, or produces the same effect, in the same way, or substantially the same way.

In a case before the king's bench in England (*Walton v. Potter*, *Webst. Pat Cas.* 586), Chief Justice Tindall made the following observations, with every word of which I agree: "Where a party has obtained a patent for a new invention, or a discovery he has made by his own ingenuity, it is not in the power of any other person, simply by varying in form or in immaterial circumstances the nature or subject matter of that discovery, to obtain either a patent for it himself, or to use it without the leave of the patentee; because that would be, in effect and in substance, an invasion of the right." The chief justice, therefore, said to the jury: "What you have to look at, upon the present occasion, is not simply whether, in form or in circumstances that may be more or less immaterial, that which has been done by the defendants varies

from the specification of the plaintiff's patent; but you are to see whether, in reality, in substance, and in effect, the defendants have availed themselves of the plaintiff's invention, in order to make that fabric which they have sold in the way of their trade." One machine is the same in substance as another, if the principle be the same in both, although the forms may be different. In *Bovill v. Moore*, Dav. Pat Cas. 361, 405, Lord Chief-Justice Gibbs says: "I remember that was the expedient used by a man in Cornwall, who endeavored to pirate the steam-engine. He produced an engine which, on the first view of it, had not the least resemblance to Boulton and Watt's," (who were the patentees). "Where you looked for the head you found the feet, and where you looked for the feet you found the head; but it turned out that he had taken the principle of Boulton and Watt. It acted as well one way as the other; but, if you set it upright, it was exactly Boulton and Watt's engine. So, here, I make the observation because I observe it is stated that one acts upwards and the other downwards. One commences from the bottom, and produces the lace by an upward operation. The other acts from above, and produces it by an operation downwards. But if the principle be the same, it must be considered as the same in point of invention."

These are the principles by which the jury must be guided, in an examination of the contrivance of the defendant which is claimed to be an infringement, and to embody the new ideas, the principle, the method of working, which is found in the arrangement of the patentee. As I have already said, after a principle has been discovered, after a new set of ideas have been struck out by genius and thought, as in this case, their embodiment in machinery, their adaptation to the working out of the practical results contemplated by the inventor, is very much the work of the skilful mechanic. Any one, after becoming acquainted with

the ideas of an inventor, may work them out in a manner and by machinery very different from the arrangement preferred or used by the inventor; but his merit will be far less than that of the pioneer who has developed to the community all that is new and valuable in the invention—as, in the case before us, the use of a motion independent of the motion of the lifter, for the purpose of detaching the valve.

It remains for you, in view of all the facts in the case, and of the general principles which I have endeavored to explain, to say whether or not the patentee's invention is to be found incorporated, in substance, in the arrangement and combination of the defendant. If it is, it will be your duty to find a verdict for the plaintiff; otherwise, for the defendant.

The only question remaining for your consideration, is that of damages. There are two modes of arriving at these: If the patentee has an established price in the market for his patent-right or what is called a patent-fee, that sum, with the interest, constitutes the measure of damages. If the patentee has no established price as a patent-fee, then you are to inquire as to the loss or injury which he has sustained by reason of the infringement; and the profits which the infringer has made by the use of the invention, may be taken as the measure of damages. Of course, the defendant cannot complain of that, because, if in fact he is an infringer, he has been using the property of the plaintiff; and whatever profits he has made out of its use, belong, in equity, to its owner. It is a question here, whether or not an established patent-fee 71 for this improvement has been proved by the evidence. There is evidence that the patentee sold one of his patent-rights in Philadelphia for \$250, and that he sold another in Baltimore for \$500. He sold several rights to the government, at a rate which, applied to the Metropolis, would amount to about \$9,000. As it respects the sales for \$250 and \$500, you have the explanation of the

patentee himself. He says that his object in selling at such prices, was to get the invention into public use, and that, on that account, he made sacrifices of what he deemed its real value, so that the public might see the successful working of his improvement. Undoubtedly, this circumstance is not peculiar to this patentee. His account is perhaps the history of most inventions on their first introduction to public notice. It requires effort, influence, and sacrifice, on the part of the inventor, to introduce them into notice, so that they may acquire the confidence of the community. The public are distrustful of new inventions, and rightfully so. Not one out of one hundred patents issued at the present day is worth, in my judgment, the parchment upon which it is written. It is only now and then that a valuable improvement is produced, and it soon becomes the subject of litigation and contest. And even the most meritorious require time, effort, influence, and the sacrifice of money, to bring them into use. It is quite proper that these views should be taken into account upon the question of the patent-fee. If you are satisfied that the improvement was sold for less than its real value, for the reasons stated by the patentee, and that sacrifices were made for the sake of introducing it into public use, these considerations should be taken into account, in fixing a patent-fee as a measure of damages. It is also important that you should take into account the fact that, if you adopt the patent-fee, whatever you may, upon the evidence in the case, determine that fee to be, it will operate to vest the right to use the invention on the Metropolis throughout the term of the patent. And you should state whether you adopt, as the measure of damages, the patent-fee, or the profits from the use of the invention; because, in the former case, the right to its further use passes, and, in the latter case, it does not pass. Your verdict, in the latter case, will be a compensation for the use of the invention during the

sixty days it was used on the Metropolis, before the suit was brought.

The jury found a verdict for the plaintiff for \$720, and stated that it was only compensation for the sixty days' use of the invention.

{NOTE. A motion was subsequently made for an attachment against the defendants for violating the injunction granted in this case. The motion was denied as to all the defendants except the defendant Augustus Sturgis against whom a bailable attachment was issued. Case No. 12,833.}

{For other cases involving this patent, see note to Sickels v. Mitchell, Case No. 12,835.}

¹ {Reported by Samuel Blatchford, Esq., and here reprinted by permission.}

This volume of American Law was transcribed for use
on the Internet

through a contribution from [Google](#). 