
Syllabus.

but it has been fully proved, and it is clear that the collision would not have occurred if it had not been made.

Whether the steamer was or was not also in fault is not a question in this case, as that question was conclusively settled in the Circuit Court, but it may not be improper to remark that if she was so it was because she did not put her helm hard-a-port before she passed the tug, and the moment those in charge of her navigation noticed that the bark had shut in her red light and began to display her green light, showing that she had starboarded her helm and was turning to the left.

Errors committed by one of two vessels approaching each other from opposite directions do not excuse the other from adopting every proper precaution required by the special circumstances of the case to prevent a collision, as the act of Congress provides that in obeying and construing the prescribed rules of navigation due regard must be had to the special circumstances rendering a departure from them necessary in order to avoid immediate danger.*

Viewed in the light of that exceptional rule, the better opinion, perhaps, is that the entire decree of the Circuit Court was correct.

DECREE AFFIRMED.

RAILROAD COMPANY v. DUBOIS.

1. Construction of Dubois's patent, of September 23d, 1862, "for building piers for bridges, and setting the same." *Held*, to be for a device or instrument used in a process, and not for the process itself.
2. It is not a bar to an action for an infringement of a patent, that before making his application to the Patent Office, the patentee had explained his invention orally to several persons, without making a drawing, model, or written specification thereof, and that subsequently, though prior to his application for a patent, the defendant had devised and perfected the same thing, and described it in the presence of the patentee, without his making claim to it.
3. Silence of a party works no estoppel, unless it has misled another party to his hurt.

* 18 Stat. at Large, 61.

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4. The novelty of a patented invention cannot be assailed by any other evidence than that of which the plaintiff has received notice. Hence the state of the art, at the time of the alleged invention, though proper to be considered by the court in construing the patent, in the absence of notice, has no legitimate bearing upon the question whether the patentee was the first inventor.

ERROR to the Circuit Court for the District of Maryland.

Dubois brought suit against the Philadelphia, Wilmington and Baltimore Railroad Company, for damages for an infringement of a patent granted to him September 23d, 1862, for "a new and useful improvement in the mode of building piers for bridges and other structures and setting the same." The alleged improvement was asserted to have been used by the company in building their railroad bridge across the Susquehanna at Havre de Grace.

In his specification, Dubois, the patentee, after reference to diagrams accompanying his schedule, thus described his inventions, referring to the diagrams by corresponding letters; here with the diagrams themselves omitted, as occupying space, and not indispensably necessary to a comprehension of the invention.

"In the building and setting of piers for bridges and other structures in beds of rivers or streams, it has been found necessary, in most instances, to erect stationary coffer-dams at the points where the piers are to be located. This operation requires a water-tight chamber to be constructed up from the bed of the river, and then emptied of its water by a pumping process, before the building of the pier can be proceeded with. The expense and inconvenience of this operation, as well as that of all other modes of building and setting piers in rivers, greatly enhances the cost of building bridges.

"With my invention much of the inconvenience and expense thus incurred will be obviated, and a much firmer structure obtained.

"To enable others skilled in the art to perform with my invention, I will proceed to describe its construction and operation :

"To construct piers for a bridge across a river or stream from

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a solid foundation, by first driving long temporary piles into the bed of the stream, outside of a given space. These piles are left extending up above the surface of the water. Then either drive down between and near about the long piles other short piles or firmly imbed rock or other substantial material into the earth or river bed, and, if desirable, slip down over the piles one or more broad and heavy stones or timbers, and imbed the same firmly into the soil, so that they rest down upon the foundation, and form a flat surface. Next construct a strong timber or other suitable character of platform, and bolt to its upper side one section of a hollow rectangular or other desirable form of box or tube, which is used to incase and strengthen the pier; the said tube being composed of boiler-plate metal, or other suitable material, and its lower section having a bolting flange on its lower edge, running inward at right angles to its sides, so as to bolt horizontally to the platform. This platform and section of the tube are caulked and pitched, or cemented, so as to be water-tight at bottom and on all sides, except at top, where it is fully open. The first and several other sections of the tube should be strengthened laterally and longitudinally from sides and ends by means of strong rods.

"The structure should now be filled to slide down over the sustaining and guide piles by cutting vertical holes, corresponding with the shape of the piles, through the platform. The structure, when thus fitted to the piles and let down to the surface of the water, floats, by reason of its buoyancy. The upper ends of the piles are now framed together with ties, so as to stand firm. The preparatory steps for building and setting the pier having thus been consummated, and additional sections provided, so as to be brought into use as required, the stone-mason commences to lay the solid pier within the floating cofferdam, using for the purpose common stone, or other material deemed suitable. As soon as a sufficient height of mason-work has been set in the first section to cause the structure to descend nearly level with the surface of the water, another section is bolted, or otherwise firmly fastened upon the top edge of the first, so as to give the proper buoyancy and safety for continuing the work. This done, the mason proceeds further with his work, and builds up the pier until it again becomes necessary to increase the buoyancy, when he bolts on other sections of boiler tubing, and proceeds with the building of the pier until

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the platform and pier rest down and become 'set' upon the foundation. He now finishes the pier above the water without using any more sections of tubing, and may, if he deems best, use fine-cut stone, or other finished material, or he may, if desirable, continue the tubing to the top of the pier, so as to obtain additional strength.

"When the pier is completed, the piles are sawed off just above the top of the platform, and their stumps, in connection with the weight of the pier, serve to prevent lateral movement of the platform and pier on its foundation.

"A metal sectional boiler-plate tube has been described as the casing for the pier, because such tube possesses great strength at small expense, and will serve to bind and support the masonry of the pier. It however is obvious that a floating water-tight coffer-dam, operating on the principle described, might be made of wood, or other material than boiler-plate metal, and when the pier is finished, the floating coffer-dam may be removed from around it, leaving the pier wholly uncovered from base to top. The removed structure may be used in erecting other piers, if desirable.

"I have given a minute description of means for carrying out my invention, but I do not wish to be confined to those means, but desire to be protected in the principle of operation embodied in a floating coffer-dam, substantially as described for building and setting piers for bridges and other structures.

"Having described one mode of carrying out my invention, what I claim and desire to secure by letters-patent is:

"1st. Building and setting piers by means of a floating coffer-dam, substantially as set forth.

"2d. The use of the tube which constitutes the dam for incasing and strengthening the pier, substantially as set forth.

"3d. The guide-piles (A A) in combination with a floating coffer-dam, substantially, as and for the purpose set forth."

The defendant pleaded three pleas:

1st. The general issue.

2d. That the letters-patent were obtained by fraud and imposition on the Patent Office.

3d. Want of originality.

Issue was joined on the first plea, and on replications to the second and third.

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At the trial it became a material question for what invention the patent was granted, and especially what the *first* claim of the patentee was intended to cover.* Was it a device, a structure, or an instrument designed for use in a process, or was it a process itself? The defendants contended that the patent, so far as it covered the first claim, was for a process of building and setting piers, which process consisted of driving temporary piles in the bed of a stream outside of a given space, then preparing a suitable foundation for a pier, then making a strong timber, or other suitable character of platform, and bolting upon its upper surface a section of a hollow rectangular or other desirable form of box, to be made of boiler-plate metal, or other suitable material, strengthened laterally and longitudinally from sides and ends by means of strong rods, and fitted to slide down over the guide piles first driven, by cutting vertical holes through the platforms, then laying the masonry of the pier in this box, made water-tight, adding sections from time to time as the increasing weight of the masonry required, and as the box with its contents sunk, until the platform and pier, incased by the different sections of the box, rested and became set upon the foundation prepared, when the guide-piles are sawed off just above the top of the timber or other platform so that their stumps in connection with the weight of the pier may serve to prevent lateral movement of the platform and pier on the foundation. Holding such opinions of the nature of the invention the defendants asked the court thus to construe the patent, and to instruct the jury that the words "substantially as described" in the specification (when speaking of the "principle of operation" which

* One portion of the company's evidence had tended to show that while it used a platform, it was not one perforated with holes, for the insertion of guide-piles; that while it had used an iron tube of boiler-metal plate, it was not a hollow tube with a bolting-flange on its lower edge, so as to be bolted horizontally to the platform; that it had used no caulk, pitch, or cement; that its tube had an iron bottom, part of the tube itself; that while using the buoyancy of water it had not used it in combination with the plaintiff's apparatus; that one pier had been guided by screws alone; that another had been partly lowered by fall and block, and guided by furring.

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the patentee desired to have protected), and the words "substantially as set forth" in the first claim, refer to that process, and hence, that unless the defendants used that process as detailed, as well the platform, composing in part the floating coffer-dam fitted to slide down the guide-piles referred to, by cutting vertical holes through it, and sawing off the stumps of the piles just above the top of the platform, when the pier is completed, as also the other parts of the process claimed in the first claim, the plaintiff could not recover for an infringement of that claim. This instruction the court refused to give, construing the claim to be, not for a process, but for a device, or instrument to be employed in a process, the instrument being a floating coffer-dam constructed as described in the specification, in which the masonry of the pier might be laid and sunk to the foundation by its own gravity.

In construing the *second* and *third* claims, the court thus charged:*

"*The second* claim of the plaintiff's patent is for the use of the tube or material of which the dam is made, for incasing and strengthening the pier; that is, it shall be so constructed that it can be used for the casing and strengthening the pier, no matter whether it be first placed in position entire, or be built in sections as the masonry progresses.

"*The third* claim of the plaintiff's patent is for a combination of a floating coffer-dam, as claimed in the first claim, with guide-piles, which are driven into the bottom of the river, around the site of the proposed pier, and reach above the surface of the water, and pass through holes in the platform, and have their tops framed together with ties; when the pier is building, they are to sustain and keep upright the tube with its pier inside, and to guide it down to its foundation prepared at the bottom of the river; when the pier is finished they are then to be cut off just above the top of the platform, and their stumps left to prevent any lateral movement of the platform and pier on its foundation."

* The company had introduced some evidence tending to show that one of its caissons was constructed on shore, and then floated to its place, and set on its foundation before any masonry was put in.

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In the course of the trial, and in support of the plea that the letters-patent were obtained by fraud and imposition, the testimony of one George A. Parker, the engineer of the railroad company, defendant in the case, by whom the bridge was designed and built, and of a certain Crossman, in the service of the company, and standing in some intimate subordinate relation to Parker, was given by the defendant, the object of which was to show that the plaintiff had fraudulently obtained his patent for what was in fact the invention of Parker. It tended to show that prior to 1861, Parker, a civil engineer since 1838, and who, as already stated, had built the bridge, in the laying of whose piers the alleged infringement consisted, had conceived the plan on which the piers in this bridge were laid, going to different places to look at large bridges, and making many experiments and investigations; all with a view to building the piers for this particular bridge. That in the spring of 1861, when work on the bridge had been begun, and estimates for iron in the piers had been received, Crossman informed Mr. Parker that "a man named Dubois, who had some notions about bridge building, wanted to see him." That Parker being willing to see him, some delay intervening, a time was fixed for an interview, and the man, this Dubois, introduced; that Dubois had previously told Crossman that he wanted to talk with Parker about the foundations of the Susquehanna bridge; that he himself, when thus speaking with Crossman about the foundations, described the cribwork for foundation, but never described sectional caissons; and that when afterwards introduced to Parker, he "described" a simple wooden structure, a crib made of raft timbers, put together in the ordinary way, in form a parallelogram, to be built partly on shore and partly on the river. How he was to sink it, or how guide it to the bottom, Parker, the witness, did not remember: it was to be filled with rough stones, and was to sink as it was filled; that on this Parker asked Dubois if he was aware that his masonry would be torn away by the floods, to which Dubois replied that he would throw out ballast on the outside and bring it to the top of

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the pier. Parker then said, "Now, I will tell you my plan," and proceeded to describe it accordingly, when Dubois remarked, "I like your plan, all except the iron." Parker then replied that the iron was the only new thing about it, the especially valuable thing. Dubois then objected to the expense of iron, when Parker made a calculation showing that it would be cheap; Dubois then said, "Your plan is the best," and asked whether Parker could not give him something to do for the bridge, as he had a lumber-yard and saw-mill at Havre de Grace. Parker promised to apply to him if there was any occasion, and they parted. In September Dubois got his patent. Afterwards meeting Dubois, Dubois said to him, "I understand you claim to be the inventor of this way of putting down the piers." To which Parker replied, "Don't speak to me again during your natural life. If you have any business with me or the company, do it through your lawyer." This was in the autumn of 1862.

On the other hand, Dubois himself being examined, testified that in June, 1862, when he asked Crossman to procure for him an interview with Mr. Parker, he described confidentially to Crossman his plan of building piers; that this plan was essentially the same as that adopted in the Susquehanna bridge; that being introduced some days afterwards to Parker, whom Crossman in the meantime had seen, in order ostensibly to get Parker's leave to introduce Dubois to him, Parker described to him, as his own, the same plan that he, Dubois, had described a few days before to Crossman, except that the same use was not made of the boiler-iron. Dubois in giving his testimony proceeded: "Witness did not then state to Parker that the plan was his own, because from circumstances he felt sure that Crossman had disclosed it. Witness at once applied for and obtained a patent. Crossman being charged with having disclosed the plan to Parker denied it, and then said perhaps he did, and would think it over. At a subsequent interview he denied it."

Upon this part of the case the defendant's counsel—by one of his prayers for instructions, *the eighth*—asked the court to charge:

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"That if the jury should find that the plaintiff, in the spring of 1861, explained his invention to the witnesses who testified upon the subject, by verbal statements only, but without reducing the same to practice by making a drawing, model, or written specification thereof; and that, prior to the application of the plaintiff for a patent, Parker, the engineer of the defendants, superintending the construction of their bridge across the Susquehanna, had devised and perfected the plan afterwards pursued for building and setting the piers of the said bridge, and was actually engaged in preparing for the work of actual construction when, as testified by the said Parker, the plaintiff called on him and heard the plan described without making any claim thereto, but afterwards applied for and obtained the patent on which the present action is founded, then the plaintiff was not entitled to recover."

One of the pleas, having been as it will be remembered, want of originality, the defendants had given to the plaintiff this notice:

"Take notice, that at the trial of the above cause, evidence will be offered to show that you were not the original and first inventor in the improvement in the mode of building piers for bridges, for which letters-patent of the United States were issued to you on the 23d September, 1862, but that a prior knowledge of the improvement aforesaid was had by the parties whose names and residences are given in a schedule hereto annexed,* and that the same had been used in the construction of the bridge of the defendants, across the Susquehanna River, between Havre de Grace and Perryville; and that the said improvement had been described in 'Mahan's Civil Engineering' anterior to your supposed invention; and further, as special matter, testimony will be offered to show that you surreptitiously and unjustly obtained your said patent for that which was in fact invented by George A. Parker, engineer of said bridge, who was using reasonable diligence in adapting and perfecting the same."

The notice was given in professed pursuance of the 15th section of the Patent Act of 1836, which enacts that a defend-

* The names and residences of Parker, Crossman, and several other witnesses, were given in this schedule.

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ant may plead the general issue and after notice give evidence that the patentee was not the original and first inventor; or that the thing patented had been described in some public work anterior to the supposed discovery, or that the patentee had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another who was using reasonable diligence in adapting and perfecting the same, "in either of which cases" the act declares that "judgment shall be rendered for the defendant." It proceeds:

"That whenever the defendant relies in his defence on the fact of a previous invention, knowledge, or use of the thing patented, he shall state, in his notice of special matters, the names and places of residence of *those whom he intends to prove to have possessed a prior knowledge of the thing, and where the same had been used.*"

Testimony having been given tending to show want of originality, the defendant in his last prayer asked the court to instruct the jury:

"That, upon the issues joined, the question was open before them, whether the plaintiff was or was not the first and original inventor of the improvement described in the patent of the 23d September, 1862, offered in evidence; and that in considering the said question, the jury may and ought to consider the evidence in the cause in relation to the state of the art of building and setting piers known at the time of the alleged invention of the plaintiff described in said patent."

The court refused to give this instruction, but instructed the jury thus:

"In reference to the question, whether the plaintiff is the original and first inventor of the three claims made by him in his said patent, the jury have a right to take into consideration the knowledge which they may find to have been possessed, prior to the date of plaintiff's patent, by the several witnesses whose names are given in the notice of defence in this case, and who have been examined; and also the description of such constructions in 'Mahan's Civil Engineering,' and the patent of Parker, dated 6th September, 1864; and also all description of his invention made by plaintiff to any one prior to the date of

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his said patent, in the year 1861 or '62; and also to the conversation (whatever the jury may find that to have been) between the plaintiff and the engineer of defendants in 1862, prior to the date of plaintiff's application for a patent."

It also charged (in its 6th instruction) that if the jury found that the defendant had infringed and that the plaintiff was the true inventor, they could, in ascertaining the actual damages the plaintiff had sustained, &c., take into consideration the state of the art at the time of the plaintiff's invention, its utility over old modes, and the saving which had accrued to the defendant.

The defendants now brought the case here, on error, for refusal to give the instructions asked, and on account of the instructions given.

Messrs. W. Schley and T. Donaldson, for the plaintiff in error:

1. The first claim is for *the specified means* of effecting the result of placing a pier in a stream in a condition of preparedness for the reception of the bridge. Those means embrace a floating coffer-dam, constructed, used and guided, as described in the specification; and also embrace the specified devices and contrivances for constructing, using and guiding, the said coffer-dam, up to the point of the completeness of the pier.

The language of the claim is for "building and setting piers." It is not for *the coffer-dam*, nor for *the use* of the coffer-dam separately, but for the use of the coffer-dam, described in the specification, constructed as therein mentioned, gradually lowered by the weight of the masonry, and guided, in its descent, by guide-piles, in the manner mentioned in the specification, all co-operating to produce the result to be accomplished, namely: building and setting a finished pier in a river or stream.

In the first paragraph of the specification, the patentee claims to have invented "a new and useful improvement in building piers for bridges and other structures, and *setting the same.*" His first claim is for this *improvement*, and was intended to cover the whole.

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In another part of the specification, after mentioning certain preparatory steps, he proceeds to show how the platform was to be constructed, the first section of the hollow tube to be bolted thereon, &c., "for the building and setting the pier;" and then follows a description of the whole process of building and lowering the pier in its gradual guided descent until, in his own language, "the pier rests down and becomes 'set' upon the foundation."

The first claim is for a *process*. A process may, undoubtedly, be the basis of a patent, where no part of the means employed, separately considered, is new, or claimed as new. The combination of co-operating constituent elements, so combined and operating as to produce a new useful result, or a known result in a new and useful way, is patentable. In such a case, the patent stands upon the combination or process.*

In the construction given, as to this first claim, it is limited to so much of the process as is necessary to *building the pier*. It ignores the idea of a *process* for building and *setting*. It does not regard the *guide-piles*, as embraced by the first claim, nor *the holes* in the platform, as part of the means employed in the mode of accomplishing what he claims as his invention in this first claim.

In view of the evidence introduced by the defendant,† it was very material that the jury should have been properly instructed as to this first claim.

2. The second claim of the plaintiff is "for the use of the tube, which constitutes the dam for incasing and strengthening the pier, substantially as set forth."

The words "substantially as set forth" require that we should recur to the specification to see what sort of a tube is there described. And it seems to be plain that he claims a *sectional* caisson. His direction is,—to bolt to the upper side of the platform "one section of a hollow rectangular

* *Prouty v. Draper*, 1 Story, 568; *Prouty v. Ruggles*, 16 Peters, 336, 341; *Davis v. Palmer*, 2 Brockenbrough, 298, 304; *McCormick v. Talcott*, 20 Howard, 405; *Vance v. Campbell*, 1 Black, 427.

† See it *supra*, p. 51, in note.

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box or tube." He speaks, again, of "the first and several other sections," and of "additional" sections.

But the court construes this claim as embracing the use of the tube, "whether it be first placed in position entire, or be built in sections as the masonry progresses." In this ruling the court, we think, was in error.

3. The eighth prayer of the defendant ought to have been granted. By the second plea, fraud and imposition, in the obtaining of the patent, were directly charged, and issue was joined on a replication to this plea. Strong evidence was given tending to show the alleged fraud. If found it would have been destructive of the patent.

On another ground the instruction should have been given. The testimony of Mr. Parker shows, and Dubois himself admits that, in the conversation between them, Dubois did not disclose the fact, if such was the fact, nor even pretend, that he was the inventor of the mode of building and setting bridges, which Parker, as the engineer of defendant, intended to follow, in constructing and setting the piers. It is a strong case for the application of the doctrine of estoppel *in pais*. His silence was a justification to Mr. Parker in pursuing the course which he had explained to Dubois he intended to pursue.*

The last prayer was framed on the theory that the evidence in relation to the state of the art of building and setting piers, known at the date of plaintiff's patent, was proper to be considered by the jury upon the question whether the plaintiff was the first and original inventor of what he claimed as new.† The court, in its sixth instruction, limited the consideration of the state of the art to the question of damages alone.

Messrs. W. H. Armstrong and S. Linn, contra.

Mr. Justice STRONG delivered the opinion of the court.
The court below, refusing to give the first instruction

* Doe v. Oliver, 2 Smith's Leading Cases, 417 and notes.

† See Vance v. Campbell, 1 Black, 427.

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asked for by the defendants, construed the first claim in the plaintiff's patent to be, not for a process, but for a device, or instrument to be employed in a process, the instrument being a floating coffer-dam constructed as described in the specification, in which the masonry of the pier might be laid and sunk to the foundation by its own gravity. In this it is now insisted the court erred. We are of opinion, however, that the construction given to this claim was correct, and that the defendants were not entitled to an affirmative response to their prayer. Undoubtedly a patentee may claim and obtain a patent for an entire combination, or process, and also for such parts of the combination or process as are new and useful, or he may claim and obtain a patent for both. That this patentee did not intend by his first claim to appropriate the process of building and setting piers which he had previously described in his specification is made evident by several considerations. The words by which the claim is immediately preceded tend strongly to show this. The patentee had described the common method of building and setting piers, by a stationary coffer-dam built up from the bottom, out of which the water was pumped. The inconvenience and expense of this he proposed to obviate. He then added, "to enable others to perform *with* my invention, I will proceed to describe its *construction* and operation." Did he mean construction of a process? Following this was a description of a floating caisson, or coffer-dam, with all the details of its construction, and also of guide-piles, with a mode for their use in directing the coffer-dam in its descent with the pier to the foundation. He then added, "I have given a minute description of means for carrying out my invention, but I do not wish to be confined to those means [by which he plainly meant process], but desire to be protected in the principle of operation embodied in a floating coffer-dam, substantially as described, for building and setting piers for bridges and other structures." This can hardly mean anything else than a claim for the principle of operating in building and setting piers through the instrumentality of a floating coffer-dam, substantially such as he had previ-

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ously described. The language is awkward, but it is reasonably intelligible. It was not the principle of operating by what was embodied in a process, such as had been described, that he desired to be protected in, but that embodied, or wholly contained, in a coffer-dam. This he had described as an improved substitute for a stationary dam. If it was not the method or process that he sought protection for, it is incredible that he would have described it as *embodied* (that is, collected into a whole) in one of the devices used in the process. Now, reading the first claim in connection with this language of the specification that immediately precedes it, we cannot doubt that the claim is for the instrument, or device, denominated a floating coffer-dam, substantially such as described in the specification, to be used in building and setting piers. It is clear the invention was regarded by the patentee as a different thing from the mode of using it. "Having," said he, "described one mode of carrying out my invention, what I claim and desire to secure by letters-patent is, 1st, building and setting piers by means of a floating coffer-dam, substantially as set forth; 2d, the use of the tube which constitutes the dam for incasing and strengthening the pier, substantially as set forth; 3d, the guide-piles A A, in combination with a floating coffer-dam, substantially as and for the purpose set forth." If his intention was to claim the process, or a process substantially such as described in the specification, it was easy to say so, and it was worse than useless to mention only one of the means or instruments by which the process was conducted. Looking, also, at the third claim, which is plainly for a combination of devices, a combination of a floating coffer-dam with guide-piles, substantially as described, and for the purposes described, to wit, building and setting piers, it is evident the first claim was for the caisson, or coffer-dam. Why claim such a combination if the first claim was for a process of which the guide-piles and the floating dam were essential component parts?

At the argument much importance was attached, on behalf of the plaintiffs in error, to the fact that the language

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of the claim is, "building and *setting*" piers by means of a floating coffer-dam, and it was urged that, in the construction given to it by the court, the idea of "setting" the pier is ignored. But the setting of a pier by means of a floating dam is inseparable from the construction of a pier. It is a part of the process of building. The building consists in laying the masonry of the pier within the dam, causing it to descend by its own gravity towards the bottom until it reaches the foundation. This descent is the setting. The floating coffer is, therefore, an instrument not only for building, but for setting piers. Hence, if the claim was, as we think, for the floating dam alone, when used for the purpose designated, and not for its use in combination with the other devices, and with the process described in the specification (what the inventor called "one mode of carrying out his invention"), it was well described as a means for building and setting piers.

The plaintiffs in error also complain that the court construed the second claim of the patent to be for the use of the tube, or material of which the dam is made, for incasing and strengthening the pier, no matter whether it be first placed in position entire or be built in sections as the masonry progresses. It is argued the claim embraced only an iron sectional tube or caisson. It is very manifest, however, that the construction given to it was right. The specification expressly describes the tube as "composed of boiler-plate metal or other suitable material," and, again, it states "that a floating water-tight coffer-dam, operating on the principle described, might be made of wood or other material than boiler-plate metal." It is equally plain that a tube composed of sections was not exclusively meant. The claim refers to the specification, and that explains both its construction and its possible use in strengthening the piers. By reference to it it will be seen that the tube is not necessarily constituted of several sections. Its formation is described to be, constructing a strong timber or other suitable character of platform, and bolting to its upper side one section of a hollow rectangular, or other desirable form of box or tube, which

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is used to incase or strengthen the pier, the tube being composed of boiler-plate metal or other suitable material. This platform and section of the tube are then caulked and pitched, or cemented, so as to be water-tight at bottom and on all sides, except at top, and strengthened, laterally and longitudinally, by means of strong rods. It is then complete and ready for all the uses for which it is designed. Sections are added only when required by the depth of the water, and when the tube has sunk in consequence of the masonry laid in it nearly to a level of the water surface, though, if desired, they may be continued to the top of the pier. There is nothing that would justify our holding that the claim demands a tube composed of more than one section. It is the use of the tube, whether longer or shorter, no matter what its shape or material, or of how many parts consisting, that the claim sought to cover.

What has been said is sufficient to show that, in our opinion, the Circuit Court did not misinterpret the first, the second, or the third claim of the patentee.

The next assignment of error, not disposed of by the observations we have already made, is, that the court refused to charge the jury as requested in the defendants' eighth prayer.* The theory of this prayer was twofold. The defendants had pleaded that the letters-patent of the plaintiff were obtained by fraud and imposition on the Patent Office, and the prayer assumed that his not claiming the invention when Parker described his plan for building and setting the piers of the bridge established the fraud pleaded. The prayer also assumed that the plaintiff's silence, when Parker's plans were revealed, coupled with the facts that Parker was, at the time, preparing for the work of actual construction, that he subsequently proceeded with his plan, and that the plaintiff's patent was afterwards applied for and obtained, amounted to an estoppel in pais. It is impossible, however, to discover how the plaintiff's silence on the occasion mentioned tended at all to show a fraud upon the Patent Office,

* See it, *supra*, at top of p. 55.

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much less that it constituted a fraud in law, so as to justify the court in ruling that he could not maintain his action. And the defendants, when sued for an infringement, were not at liberty to set up as a defence that the patent had been fraudulently obtained, no fraud appearing upon its face.*

Nor was there any case presented by the prayer that amounted to an estoppel. No principle is better settled than that a party is not estopped by his silence unless it has misled another to his hurt.† There was no evidence of any such misleading stated in the prayer or found in the case. The patent was granted September 23, 1862. It nowhere appears that before that day the defendants had expended one dollar in building their piers. Moreover, the point does not negative knowledge by Parker of the plaintiff's invention before the conversation of which it speaks took place; and there is some reason found in the evidence for believing that the plaintiff's plans had been revealed to Parker by Crossman, to whom the plaintiff had partially explained them, before that conversation. The court could not, therefore, have given the instruction asked, even if the plaintiff was under obligation to disclose his invention to Mr. Parker, which we are not prepared to assert.

The only remaining assignment of error is, that the court declined instructing the jury as requested, that in considering the question whether the plaintiff was or was not the first and original inventor of the improvement described in his patent, they might and ought to consider the evidence in the cause in relation to the state of the art of building and setting piers known at the time of the alleged invention of the plaintiff. Upon this subject the court did charge the jury that they had a right to take into consideration the knowledge which they might find to have been possessed, prior to the date of the plaintiff's patent, by the several witnesses whose names were given in the notice of defence, and who had been examined; and also the description of such constructions in Mahan's Civil Engineering, and

* Rubber Company v. Goodyear, 9 Wallace, 788.

† Hill v. Epley, 7 Casey, 334.

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the patent of George A. Parker, and also all description of his invention made by the plaintiff to any one prior to the date of his patent in 1861 or '62, and also the conversation (whatever they might find it to have been) between the plaintiff and the engineer of the defendants in 1862, prior to the date of the plaintiff's application for a patent. This was all the defendants had a right to ask. They had given notice of nothing more. They had not apprised the plaintiff that the novelty of his invention would be assailed by any other evidence than such as they had particularized in their notice of defence. While, therefore, evidence in regard to the state of the art was proper to be considered by the court in construing the patent and determining what invention was claimed, it had no legitimate bearing upon the question whether the patentee was the first inventor.

DECREE AFFIRMED.

RAILROAD COMPANY v. HARRIS.

1. Where a Maryland railroad corporation whose charter contemplated the extension of the road beyond the limits of Maryland, was allowed by act of the legislature of Virginia—re-enacting the Maryland charter in words—to continue its road through that State, and was also allowed by act of Congress to extend into the District of Columbia, a lateral road in connection with the road through Maryland and Virginia; *Held*: (the unity of the road being unchanged in name, locality, election and power of officers, mode of declaring dividends, and doing all its business,) *First*. That no new corporations were created, either in the District or in Virginia, but only that the old one was exercising its faculties in them with their permission; and that, as related to responsibility for damages, there was a unity of ownership throughout.
Second. That in view of such unity the corporation was amenable to the courts of the District for injuries done in Virginia on its road.
Third. That this responsibility was not changed by a traveller's receiving tickets in "coupons" or different parts, announcing that "Responsibility for safety of person or loss of baggage on each portion of the route is confined to the proprietors of that portion alone."
2. The principle of pleading that a demurrer, after several pleadings, reaches back to a defective declaration, has no application where the defect is one of form simply.