

Case No. 2,292.

4FED.CAS.—65

CAHOON et al. v. RING.

[1 Cliff. 592;¹ 1 Fish. Pat. Cas. 397; Merw. Pat. Inv. 88, 662.]

Circuit Court, D. Maine.

April Term, 1861.

PATENTS—SEEDING
MACHINE—PATENTABILITY—VALIDITY—INFRINGEMENT—CONSTRUCTION—TRIAL
OF FEIGNED
ISSUE—EVIDENCE—DEPOSITION—WITNESS—CONTRADICTING OWN
TESTIMONY.

1. Letters-patent offered in evidence by the respondent, in the trial of feigned issues, for the purpose of showing want of originality in the complainants' invention, must be construed by the court; and if it appears that the patent so offered in evidence has no tendency to support the issue, it should be rejected as immaterial evidence.

[Cited in *Blanchard v. Putnam*, 8 Wall. (75 U. S.) 426.]

2. Depositions taken de bene esse, and without notice to the opposite party, in suits at common law, are not admissible in the trial of feigned issues out of equity, unless the same were sent down with the record of the issues framed on the equity side of the court.

3. After the decree ordering feigned issues has been entered, and the record of the same has been sent to the law court for the trial of the issues, the latter court will not order that any depositions previously taken on the equity side, and not sent down with the record, shall be withdrawn from the files of the equity court, or that they may be admitted as evidence on such trial in the law court.

4. Where the feigned issues presented no issue of fraud or mistake, and the bill of complaint was founded exclusively upon the reissued letters-patent, it was *held* that the original letters-patent, if objected to, were not admissible on the trial of such issues.

5. Office copies of the complainants' correspondence with the commissioner of patents pending the application for the reissue of the patent were also excluded as not pertinent to the question of novelty, or of construction.

6. Patents offered in evidence in the trial of feigned issues, and properly rejected as having no tendency to support any one of the issues, cannot be rendered admissible by any extraneous evidence. Such evidence, if from experts, may in certain cases be received in aid of the construction of the patent, but the rule still is, that the patent is not admissible, if it has no tendency to support the issue.

7. Although the respondent is a competent witness in the trial of feigned issues, still he cannot be asked any question by the defence calling for testimony which contradicts his answer.

8. Evidence of new experiments upon the machines in question, on the trial of feigned issues, in a patent suit, cannot be offered by the complainant in his rebutting testimony.

9. It is the duty of the court to construe the plaintiff's patent, as a matter of law, and to instruct the jury in what his invention consists.

10. In order to invalidate the patent of the complainant, the respondent must show that some one, prior to complainant's invention, had invented a machine for the same purpose, containing the several improvements which the complainant claims, or some of them; but the complainant's patent is valid for such of the several improvements claimed as are not thus shown to have been first invented by another.

11. Complainant being the alleged inventor of a machine for discharging seed broadcast, in vertical planes, perpendicular, or nearly so, to the line of travel of the machine, and by means of centrifugal force, *held*, that in order to invalidate the complainant's patent by machines or models introduced at the trial they must be shown to be machines operating like the complainant's, by means of an apparatus constructed, arranged, and operating substantially in the same way.

12. A prior machine for discharging seed in horizontal planes, although, by certain modifications of its construction and arrangement, it could be adapted to discharge seed in vertical planes, does not necessarily embody the principles and mode of operation in the complainant's invention, if he be found to be the first to invent and adapt an apparatus for sowing seed in vertical planes. Such prior machine would not anticipate that of the complainant if it required invention to make the necessary modifications in the construction and arrangement.

13. Models made and used merely as experiments, and which were not capable of being used for agricultural purposes, cannot affect the complainant's patent, although it appears they were made prior to his invention, and were capable of being operated for the purpose of such experiments.

14. Machines previously constructed, but never made public, and used only as private experiments, and then broken up, and the essential materials appropriated for other

purposes and ultimately lost or abandoned, could be no obstacle to the right of the complainant to take a out patent, if he had no knowledge of such prior invention.

[Cited in Piper v. Brown, Case No. 11,180; Hartshorn v. Tripp, Id. 6,168; Seymour v. Osborne, 11 Wall. (78 U. S.) 552; Wilson v. Coon, 6 Fed 627; Davis v. Brown, 9 Fed. 656.]

15. Difference in size and proportion of devices or machines, so long as the construction, principles, and mode of operation are the same, is entirely immaterial.

16. In order to determine a question of infringement between two machines, the jury are to look at the machines and compare the same, or their devices, in the light of what they do, or what office or function they perform, and how they perform it.

[Cited in Mitchell v. Tilghman, 19 Wall. (86 U. S.) 418; Hamilton v. Ives, Case No. 5,982; Thoens v. Israel, 31 Fed. 556.]

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17. Inquiry must be directed more particularly to those portions of a given part which really do the work, in preference to other portions of the same part which are only used as convenient methods of constructing the whole part.

[Cited in Union Paper-Bag Mach. Co. v. Murphy, 97 U. S. 125; La Baw v. Hawkins, Case No. 7,960; Bates v. Coe, 98 U. S. 31; Norton v. Jensen, 49 Fed. 871.]

18. If two machines do the same work, by substantially the same means, in substantially the same way, and accomplish substantially the same result, they are the same.

19. Feigned issues out of equity having been ordered before the time for taking testimony had expired, the court sitting in equity refused to enter a final decree for the complainant, upon the verdict of the jury, which was in his favor, but gave the parties further time to take testimony under the equity rule.

This was a bill in equity [by James B. Cahoon et al. against Aaron Ring] founded upon letters-patent [No. 18,083] granted to Charles W. Cahoon, September 1, 1857, for an improved seeding-machine. On the 26th of the same month the inventor assigned to James B. Cahoon the entire interest. James B. Cahoon subsequently assigned one half of the patent to Dependance H. Furbish. The patent was reissued to the complainants May 11, 1858. The claims of the reissued patent were in these terms: "First. The employment of a tubular chamber or discharger, rotating rapidly in a horizontal position, so that its outer edge or periphery will be in a plane vertical or nearly so to the horizon, and thereby communicating a centrifugal motion to the grain, &c., away from the centre of a circle whose plane is thus vertical or nearly so, to the horizon. Second. The employment of a funnel-shaped discharging chamber, for the purpose and rotating in the position above

described, having spiral flanches or their equivalents inserted therein, and operating to arrest the too direct flow of the grain, &c., through the discharger, and retaining it therein, until the necessary centrifugal force is imparted to it, before it leaves the discharger. Third. The combination and use of the above-described tubular or funnel-shaped discharging chamber, rotating in the position above described, with the disk H placed and operating in the manner described. Fourth. The combination and use of the above-described and above claimed tubular or funnel-shaped discharging chamber, rotating in the position above described, whether with or without the use of the disk H, with a hopper constructed of any proper material and fitted with the slide (b) and rock-shaft (c) with teeth (d) attached, or their equivalents, and operating substantially in the manner above described, to feed the grain, &c, into the discharging chamber.”

The bill charged that defendant's machine infringed the patent of Cahoon, and prayed for an injunction. The answer denied that Cahoon was the original inventor of his alleged improvements; set up letters-patent granted to defendant March 2, 1858; denied that defendant had ever made any machines infringing Cahoon's patent, but admitted that defendant had made and sold a few machines constructed in accordance with his patent. After replication filed, and at request of the parties, a decree was entered that certain feigned issues of fact be tried by the jury, viz.: 1. Whether the said Charles W. Cahoon, at the date of his original application, was the original and first inventor of the improvements, or any, and which of them, described and claimed in the specification of complainants' reissued letters-patent. 2. Whether respondent, without the license of the complainants, had, since the date of the reissued letters-patent, made, used, or sold any machines infringing those claims, or any, and which of them, as embraced in the said specifications.

Trial was accordingly had, at which several questions regarding the admission of testimony arose, upon which rulings were made by the court. These it seems necessary to notice, in order to a full understanding of the case. The first question of importance arose upon an offer, by the defence of the patent of one William Bullock, dated August 1, 1854. This was objected to by complainants on the ground that it was not a machine which discharged seed broadcast, and in planes vertical, or nearly so, to the horizon, which was the character of Cahoon's invention, but was a machine for dropping corn off a cylinder. It was further contended that the court must first construe the patent offered in evidence to see if it had any tendency to invalidate complainants' patent. If introduced to show the state of the art, no objection to its admission was made. Upon this offer the court ruled that evidence offered “must be construed by the court, and, if, by its true construction, it had a tendency to support the issue for which it was offered, it was admissible, but if it had no such tendency, then it must be excluded.” The court further said:

CLIFFORD, Circuit Justice. We cannot see that there can be any other rule. Assuming the one first stated by the counsel for the defence to be correct, that is, that they have a right to put into the case whatever papers they please, the effect would be to embarrass the court, confuse the jury, and, in a word, accomplish no possible good for either party. But there must be some rule, and assuming that none has been established, and that we are

now called upon to prescribe the rule, what would be the most convenient one, and the one best calculated to subserve the ends of justice? We see none save the one indicated, and that is, that if, upon the true legal construction of the paper, it has a tendency to support the issue, then it is admissible; on the other hand, if it has no such tendency, then it is inadmissible. Accordingly, we have examined this patent, and we are not able to see that, upon any construction that could be adopted, it

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can have any possible tendency to support the issue maintained by the defence, no more than a patent, if such there be, of the old-fashioned grist-mill would have. Such a mill had a hopper, and I think a stirrer, and perhaps a slide, but no one would think of offering a patent of that description as having a tendency to support this issue, simply because one of its elements or devices was a hopper. This patent contemplates a machine for sowing in drills or planting in hills; and in no possible view that we can take of it can we see that it has the remotest tendency to serve the purpose for which it is offered. We therefore exclude it.

The next question arose upon an offer of the deposition of one S. S. Hogle. The admission of this testimony was resisted upon the ground of its being *ex parte*, taken *de bene esse*, and because no notice of its being taken had been given to the opposite side; and also because it was offered to be read on the trial of an issue before a jury on the law side of the court, ordered out of equity. *Patapsco Ins. Co. v. Southgate*, 5 Pet. [30 U. S.] 604, and the sixth, seventh, sixty-eighth, and sixty-ninth rules in equity, were cited; and 1 Barb. Ch. Pr. 452. Upon this the following ruling was given:

CLIFFORD, Circuit Justice. If this was a matter over which this court had any discretion, there might be a different ruling. But it is a question of law, and the court must rule upon the law. Our practice is based upon the English practice. By one of the rules of the court it is expressly provided that, where there is a want of provision in the laws of congress and the rules of the court, the practice in the high court of chancery in England shall prevail. Rule 90. In that country issues are framed in chancery, and sent to the law tribunal to be tried. And, by a well-known practice of the court, the depositions taken in chancery cannot be used in the trial at law, except such as are ordered to be used by the court from which the issues go. So that if depositions were on file in this case on the chancery side, we do not see how it would be possible for this court to allow them to be used on the trial of these issues, inasmuch as the parties omitted to have the necessary order passed in the cause at the time the record was made up. It is true less reason exists for that strictness in our practice than in England, where the two trials take place in different tribunals. But inasmuch as the supreme court have adopted the rule that, in all cases not provided for by the statute, nor by the rules of the court, the English practice shall prevail, we do not well see how the court can admit this deposition. We must see what condition the case would be in if it should be appealed to the supreme court. When thus appealed, there would be found in the record no order for the use of depositions taken upon the equity side, and of course the error in allowing them to be used would be patent upon the record; it would be

a violation of the rules of the court, and would necessarily vitiate the verdict. It may be said that this deposition is not offered upon that ground, but upon the ground that it has since been taken to be used upon the law side. But upon looking at the caption, it appears that it is expressly stated that it was taken upon the equity side.

Subsequently the court was requested to make an order that testimony taken upon the equity side of the court might be used at the trial of the issues at law in the case. This request was refused, inasmuch as the record upon the equity side was made up, and the case was at that time in the law court.

Offer in evidence of the patent of one C. O. Luce and others, and the original rejected application of S. S. Hogle, were made and ruled out upon the same ground as the patent of Bullock. The original patent of Cahoon was then tendered as evidence to show what the invention of the patentee was at the date of said patent. Upon this it was held that "it could not be received upon the issues pending before the jury, no issue of fraud having been framed, but merely the two issues of novelty and infringement." The court also ruled that the office copies of the correspondence in relation to the granting of the reissued patent to Charles W. Cahoon, were also inadmissible. The several patents whose admissibility had been denied by the court were next offered in connection with the testimony of experts afterwards to be introduced. This was rejected, because the court could have no opportunity to ascertain, before admitting the patents with such explanatory testimony, whether or not such testimony laid a foundation for the admission of the patents.

A question was proposed to the respondent on the stand, "if he made and sold any of his machines since the date of the reissued letters patent to Cahoon." This was objected to as contradicting his answer, in which the respondent alleged that he "had made and sold a few of his machines for seeding, constructed in accordance with his patent." The opinion of the court in announcing the ruling is given below:

CLIFFORD, Circuit Justice. There are one or two principles of law to be considered in construing the pleadings in this case: the first one, the primary one, is, that the bill and answer must be construed together; the second one is, that it is incumbent upon the respondent in every particular to answer directly and precisely to every material allegation in the bill. Particular and precise charges must be answered particularly and precisely, and not generally. *Woods v. Morrill*, 1 Johns. Ch. 103. That is an elementary principle.

Another principle of still more importance,

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which also is itself an elementary one long since established, is that whatever in the bill in itself material, is omitted and passed over without answer, provided it is well pleaded, is thereby conclusively admitted. Mr. Greenleaf, in his treatise on the Law of Evidence,

twice treats of that principle. In his first volume (section 27) he says: "If a material averment well pleaded is passed over by the adverse party without denial, it is thereby conclusively admitted." He is there speaking of pleadings both at law and in equity. But he treats the question more specifically in his third volume, and more directly upon the question immediately under consideration. In section two hundred and seventy-six he says: "The bill alone may sometimes be read by the plaintiff as evidence against the defendant of his admission of the truth of the matter therein alleged, and not noticed in his answer. The principle governing this class of cases is this, that the defendant, being solemnly required to admit or deny the truth of the allegations, has by his silence admitted it 'Qui tacet cum loqui debet consentire videtur.' But this applies only to facts either particularly charged to be within the knowledge of the defendant, or which may fairly be presumed to be so." It does not apply to facts charged on information and belief to be within the knowledge of the defendant, nor does it relate to facts respecting which it is not charged, or from the nature of the subject-matter to be implied, that they are within his knowledge.

It will at once be perceived that the matters charged here are necessarily within the knowledge of the defendant, for the charge is that he made the machines. The same principle is also quite as well stated in 2 Daniel, Ch. Pr. 977, particularly in a note in these words: "Where the bill charges the fact to be within the knowledge of the defendant, or which may fairly be presumed to be so, if the defendant is silent as to the fact, it will be determined as admitted." To this note are appended various authorities which need not be read, as they are accessible by reference to the volume. In the case of *Surget v. Byers* [Case No. 13,629], it is thus stated by Mr. Justice Daniel of the supreme court:

"It is a rule of pleading in the courts of common law that every material averment which is not denied will be regarded as admitted.

"This rule would seem to apply a fortiori before a tribunal which discourages all exceptions of a formal character. The respondent had the power either by demurrer or plea, or by direct denial in his answer, to object to the structure of the bill, or to the competency of the parts or members thereof; and surely it was his duty to warn the complainant, to enable him to meet such exception, if designed to be insisted upon."

We think it is a settled rule in pleading in chancery that in respect to an allegation well pleaded, and material to the issue, and one where it is charged that the facts set forth were within the knowledge of the defendant, that his silence upon the subject amounts to a conclusive admission.

Starting, then, with this principle, we should at once reach the conclusion that if no answer had been made to this allegation in the bill, the admission would have been conclusive. And that raises two questions: first, is the fact well pleaded in the bill? and, secondly, if well pleaded in the bill, is the case discriminated out of the principle laid down in the books on account of anything contained in the answer? First, is the matter

well pleaded in the bill? The bill alleges that since the time of the reissue of the letters-patent, the respondent has, without license, &c., “made, used, and sold large quantities of machines substantially and in principle embracing in the construction and mode of operation the feature or part of the invention before described.” It is not perceived how language could allow of anything more specific either in respect to the matter of fact charged or the time when it is alleged that the machines were made.

In effect the allegation is that they were made since the date of the reissue of the patent, and of course it embraces all the time to the filing of the bill. It would have been no more explicit if it had contained the allegations, since the 11th of May, 1858, to the time of filing the bill. The form of the charge, therefore, as contained in the bill, is explicit, and it charges a fact within the knowledge of the defendant.

Now is there anything in the answer in relation to this allegation to take it out of the operation of the principle already stated? On one point there undoubtedly is. He says “he has made a few machines for seeding in strict accordance with the description contained in his specifications.” He does not admit that he made one of the plaintiff's machines, but he does admit that he made a few of his own, in language as explicit as could well be chosen.

He says nothing as to the time, although he is answering the specific charge in the bill that it was done within a prescribed time. But in respect to the time his answer is silent. And the rule of law, therefore, applies with all its force; that being called upon specifically to state a fact, he passes it over in silence, thereby conclusively admitting it.

In their rebutting testimony, the plaintiffs endeavored to introduce certain experiments of experts upon the Cahoon machine, and one called the Hogle machine, in order to prove that the Hogle machine was, of necessity, continuous in its discharge, while the Cahoon machine was not. This was objected to by the defence, as introducing a new set of experiments, after the plaintiff had

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rested his case. Upon this the court ruled as follows:

CLIFFORD, Circuit Justice. Before stating that conclusion, we will remind the counsel of the posture of the case, which must be taken into account in order to see the exact and precise application of the rule. This is a trial at law, although it had its origin in a proceeding in equity. In a trial at law, the defendant is required to give notice, a general notice, of the nature of the evidence that he proposes to offer in order to invalidate a patent, as in this case. It is reasonable, therefore, to conclude that, so far as respects that notice, it embraced the Hogle machine, as one of the matters to be relied upon to invalidate the patent of the plaintiff in this case. When the plaintiff opened his case, he had some general knowledge, arising from that notification, of the character of the defence which he had to meet. He accordingly introduced various specimens of his

machine, for the purpose of reference and explanation during the trial. At that stage of the case the defendant could not introduce any. When the defence was opened, it became the right of the defendant to introduce such models as he thought would serve to illustrate his own machine, and also such forms of the plaintiff's machine, if any there were, varying in construction from those which had been introduced by the plaintiff himself. On these two showings, so far as machines are concerned, the case has proceeded, and is proceeding. The plaintiff now desires to put into the hands of his witness certain modifications of some one of the various models of his machine; and if he merely offered this as a diagram, as a chalk, there would be much less difficulty in allowing it. But if admitted for that purpose, and limited there, it would not enable the plaintiff to put into the case what he desires in connection with it. Experiments made as a chalk or with a separate and independent device are not admissible. They must be made with a machine; and when a modification is offered it affords ground for the other side to allege that it is a different machine; and the effect of allowing it to come in would be, of necessity, to allow the defendant—after the plaintiff concludes his rebutting evidence—to put in, if he desired to do so, other modifications of the machine, and to recall and re-examine his experts. And the practical effect of that would be, we think, to repeal the rule, in respect to the examination of witnesses, which is that the plaintiff may examine upon such points in respect to the issue as he desires, and that the defendant, in his cross-examination, is limited to the matters opened by the plaintiff; and if he wishes to prove more by any witness, he must wait until he has opened his case, and then call the witness again, but he must then call him as his own. So in respect to the matters of evidence. The plaintiff, when he opens his case, must put in his affirmative evidence. The defendant, then, in his reply, may put in his evidence; and the plaintiff is then limited to rebutting testimony. Should a new machine be admitted, and the defendant not be allowed to call back his witnesses, and re-examine them, it would be obvious injustice to the defendant. We think, therefore, that in a just, legitimate, and fair application of the rule, we must refuse to allow the evidence to be put in, in regard to the experiments-made upon the new modification of the plaintiff's machine.

The witness was then asked to state the results and character of the experiments he had made, in order to verify his opinion of the difference between the two machines. This question was admitted by the court. At the close of the trial the court charged the jury as follows:

Among other proceedings in the suit not necessary to be mentioned, issues of fact were ordered to be tried at law, by an order passed November 19, 1858. Ware, District Judge, sitting. The order was as follows: "This cause having been opened, by reading the bill, answer, and general replication, and it appearing by the answer that the validity of the letters-patent held by the complainants is denied by the respondent, and also that the respondent denies that he has infringed the same, it is therefore ordered by the court, that the parties do proceed to the trial of the following issues, to the jury, to wit: First. Whether the said Charles W. Cahoon, at the date of his original application for letters-patent for an improvement in machines for sowing seed and fertilizing materials broadcast, to wit, on the 14th of May, A. D. 1857, was the original and first inventor of

all the improvements, or any, and which of them, described and claimed in the specification annexed to the reissued letters-patent, bearing date the 11th of May, A. D. 1858. Second. Whether the said respondent, without the license of the complainants, has, since the day of the reissued letters-patent, made, used, or sold any machine infringing the claims, or any, and which of them, embraced in the specification annexed to the said reissued letters-patent And it is further ordered, that, on the trial of the said issues, the complainants shall be plaintiffs, as in an action at law, and the respondent shall be defendant, and that the same be tried in this court, on the 15th of February, A. D. 1859.”

CLIFFORD, Circuit Justice. Your attention will be chiefly drawn to the questions presented for your determination in that order. They are two, and should be separately considered and decided. Under the first issue, you are instructed that it is your duty to inquire and ascertain whether Charles W

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Cahoon was the original and first inventor of the several improvements in machines for sowing seed broadcast, claimed in the letters-patent, reissued to the plaintiffs; or, in other words, you are to inquire and ascertain whether any one else, prior to the invention by Cahoon, had invented those improvements or any of them, and, if any, which of them. To maintain the issue on their part, the plaintiffs have introduced the reissued letters-patent bearing date May 11, 1858, together with the specification and drawings annexed to the same. They have also introduced a model and proof, tending to show that in all substantial respects it is the same as the original model of the machine now in the patent office. You are instructed that the patent, including the specifications and drawings, is prima facie evidence that Charles W. Cahoon is the original and first inventor of the several improvements described in the respective claims of his patent, and that the burden of proof is upon the defendant to show a prior invention; and if he has not to your satisfaction, then your finding under the first issue should be for the plaintiffs. Evidence, however, has been introduced on both sides, and it becomes your duty to determine the point, in view of all the facts and circumstances in the case; but in weighing the testimony you will bear in mind that the burden of proof on this branch of the case is upon the defendant to prove that some other person is the prior inventor of the improvements, or some one of them described in the Cahoon patent, and if not of all those improvements, that the patent is valid for the residue. In considering this question, as well as the one arising under the second issue, it becomes necessary that you should know and carefully observe what those improvements are. That question must be determined by the court, as a question of law, arising upon the construction of the patent, including the specifications and drawings.

You are accordingly instructed that the improvement covered by the first claim is as follows. It consists of a tubular chamber or discharger rotating rapidly on a horizontal axis, so that its outer edge will be in a plane vertical, or nearly vertical, to the horizon, and perpendicular to the line of travel of the machine, and operating, by the centrifugal force generated by the revolution of the chamber or discharger, to throw out the seed in a

plane of discharge that is vertical, or nearly vertical, to the horizon, and perpendicular to the line of travel of the machine. It also becomes necessary to define the meaning of the term or phrase, "tubular chamber or discharger," as used in this claim of the patent; and on this point you are instructed that when, taken in connection with the context of the specification and drawings, as it must be, it means a hollow discharger, whose diameter is larger at the place of discharge than at the place of entrance of the seed, which, being placed and operated on a horizontal shaft, so as to bring its outer edge into the described position, will, by the centrifugal force generated by its revolution, throw out the seed broadcast in a plane vertical, or nearly vertical, to the horizon. The plane in which the seed is to be thrown out, and which is required by the terms of the claim to be vertical, or nearly vertical, to the horizon, is the plane of discharge of the seed, marked by the position of the outer edge or periphery of the discharger, and not the plane or planes through which the seed moves after it has left the discharger in its progress through the air until it reaches the ground; and such plane of discharge is vertical, or nearly vertical, to the horizon, within the meaning of the patent, when it is substantially the opposite of a horizontal plane, it being the obvious and clearly to be inferred purpose of the inventor to make an apparatus which should operate in discharging seed in a plane as nearly the reverse of a horizontal plane as can in practice be attained.

We will now call your attention to the second improvement described in the patent, which is the one covered by the second claim. It consists of a funnel or conical-shape discharging chamber, having flanches or their equivalents inserted therein, and operating by arresting the seed on its passage from the conducting-tube leading from the hopper, to prevent the seed from dropping upon the ground, and by assisting to carry it round the axis of revolution, to impart to it the necessary degree of centrifugal force in a shorter space of time than the surface of the discharger alone could impart to it; such discharger, so provided with flanches or their equivalents, thus operating, being rapidly rotated on a horizontal shaft, and by means of the centrifugal force thus generated, and the position of the outer edge of the discharger, throwing out the seed in a plane vertical, or nearly vertical, to the horizon. You are also instructed that the expression, "funnel-shaped discharging chamber," in this claim, defines the same thing as the words "tubular chamber or discharger," in the first claim, and means a conical chamber, or one whose diameter is larger at the place of discharge than its diameter is at the place of entrance of the seed; and provided it has that condition of a funnel or conical chamber, and will, with the aid of the flanches or their equivalents, when operated in the described position, do the work described in the patent, it is immaterial whether the cone of the chamber be regular or irregular, or longer or shorter from its apex to its base. In this connection, you are instructed that the flanches or their equivalents, described in this claim, embrace any device which, by being placed so as to operate in the discharge of the seed, to prevent its falling directly upon the ground in its passage through the discharger, and to carry it round the axis of

revolution of the discharger, and thus to accelerate its centrifugal force, will produce the operation and perform the duty effected by the flanches particularly described in the patent, and shown in the drawings. That all the conditions and limitations of this claim, in respect to the position in which the discharger is to be operated, and the plane of discharge of the seed, are the same as those of the first claim.

Your attention will now be drawn to the third improvement, which is the one covered by the third claim. It is obvious that the words “tubular or funnel-shaped discharging chamber,” which are the words of the claim, define the same thing as the words “tubular chamber or discharger,” as used in the first claim, and mean the same as the funnel-shaped discharging chamber, described in the second claim. The third improvement consists of a disk or piece of metal, or its equivalent, placed in front of, and combined with, a centrifugal discharger, arranged in the position, and operating to sow seed in the manner explained in relation to the first and second claims; the use of such disk being to prevent the entrance of currents of air into the discharger, which might interfere with the proper distribution of the seed, by blowing it out of its proper position while it is still in the chamber, and by equivalents of this disk are meant any pieces or single piece of metal, whatever may be their shape, or in whatever manner attached to the apparatus, so long as they are properly shaped and properly attached, in such a way as to produce the effects or substantially the same effects, in substantially the same way as are produced by the round flat piece of metal, represented in the drawings of the Cahoon patent.

It will only be necessary for you to examine the fourth improvement, when considering and determining the questions involved and presented for your determination on the first issue. That improvement is the one covered by the fourth claim in the patent, and consists of a hopper of some kind or other whose office is to hold a supply of seed and deliver it to a discharging chamber rotating rapidly in the position before explained, and acting to sow seed in a plane of discharge, as before pointed out, when the hopper is combined with such a centrifugal discharging chamber, and with a stirrer arranged in the hopper and acting to stir the grain, and also with a gate at the mouth of the hopper, by means of which the opening at the small end of the hopper can be enlarged or diminished, so as to regulate the quantity of grain that will pass out of the hopper, and consequently the quantity of seed, that will be sown by the centrifugal discharger in any determined period of time; and the improvement specified in this claim is one that is claimed when the disk or its equivalent is used, or when it is not used.

Some reference has been made to the motive-power of the machine or machines of the plaintiffs, and upon that subject you are instructed, that, although the specification and drawings describe a particular apparatus for giving motion to the centrifugal discharger and the stirrer described in the patent, and also an apparatus for supporting and moving the machine when in actual use yet that the means so described for giving motion either to the discharger or to the machine itself do not constitute any part of the invention as described in the claims of the patent, and that the invention would be the same, though other convenient and efficient means were substituted and used for that purpose; and this

remark applies as well to the means employed to transport the machine when in actual use, as to those used for giving motion to the discharger and the stirrer.

Guided by these principles as to the construction of the patent, you will proceed to consider and determine the several questions presented in the first issue; and upon that subject you are instructed that, in order to invalidate the several claims embraced in the letters-patent, the defendant must show that some one, prior to Cahoon's invention of the several improvements claimed, had invented a machine for sowing seed broadcast, containing the several improvements above described, or some of them; and the patent is valid for such of the several improvements above described as are not thus shown to have been invented by some one else, prior to the invention by Cahoon. On this point you are further instructed, that, in order that any of the models or machines introduced by the defendant should be sufficient to invalidate the patent of Cahoon, it must be shown to your satisfaction that such model or machine is an apparatus which discharges the seed in a vertical plane of discharge, perpendicular, or nearly perpendicular, to the line of travel of the machine, through the agency of centrifugal force, and by means of an apparatus constructed, arranged, and operating substantially as the Cahoon apparatus does, which has already been described, as claimed in his patent. It is insisted on the part of the defendant, to the effect that an apparatus for discharging seed in sowing broadcast, though invented, constructed, and designed to throw out the seed in horizontal planes, and adapted to produce and accomplish that mode of operation, yet if such apparatus, by having certain changes and modifications made in its construction and arrangement, could be adapted to the discharge of seed in vertical planes, that then such apparatus, while in its original form, and unchanged in structure and organization, embodies the principles and mode of operation of the structure and invention described in the Cahoon specification. It is impossible for the court to concur in that proposition. On the contrary, we instruct you that if you shall find that discharging

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charging seed in vertical planes, in the manner and by the means described in the Cahoon specification, is a new and useful [or different and better]² method of sowing seed broadcast, and that Cahoon, as is claimed in his patent, was the first person to invent and adapt an apparatus so as to accomplish that method of sowing, such prior horizontal machines cannot invalidate his patent. This last instruction is applicable to all the evidence in the case respecting the several models or machines, arranged and designed for discharging seed in horizontal planes by centrifugal force, and revolving on vertical axes. Two of those machines, namely, the S. S. Hogle and Glendy Moody machines, ought also to be considered by you in another point of view, which we will now proceed to state. In respect to those machines, you are instructed to inquire whether either of those persons made an operating machine, or whether they only made models, or drawings from which machines might be constructed. If the latter only were made, and although such models might be capable of operation for the purpose of experiments, yet unless it is proved to your satisfaction that a machine, or machines, capable of being used for actual

agricultural purposes, was or were made prior to Cahoon's invention, then, as matter of law, we instruct you that such alleged inventions never were completed, and cannot affect the validity of Cahoon's patent.

One other model or machine introduced by the defendant remains to be considered. It is the vertical model or machine of Curtis O. Luce, which he says he made in the early part of February, 1856, while he was sick, at his own house, in Freeport, in the state of Illinois. Several questions arise respecting that model, which it is important you should consider and determine, in view of the rules of law applicable to this part of the case. It is insisted, in the first place, by the plaintiffs, that this model or machine never had such an existence as would anticipate the invention of Cahoon, or invalidate the claims in his patent. In the second place, they insist that it was constructed merely as an experimental machine, and that it was subsequently broken up, and the materials used for other purposes, and that its essential parts were lost, and that the supposed invention was abandoned. Both of these questions must be determined by you from the evidence, under the rules of law which we will presently state. In considering the first question, that is, whether the model or machine had such an existence as would anticipate the Cahoon invention or invalidate the claims in his patent, you will inquire, in the first place, and determine from the evidence, whether it was made and completed prior to the invention of Cahoon; and, in the second place, whether in point of fact it was a machine, embodying the improvements, and which of them, claimed by Cahoon, as above described; and if you find that it was not made and completed prior to the invention of Cahoon, or if so made and completed, that it did not embody any of the said improvements, as already defined, then you are instructed that it cannot have the effect to anticipate the Cahoon invention, or to invalidate the claims set forth in his patent. Should you find that it was made and completed prior to the Cahoon invention, and that it did embody the improvements in the Cahoon patent, as already defined and explained, you will then inquire whether it was, in point of fact, a machine completed and reduced to practice in contradistinction to an experimental machine, or a machine made by the supposed inventor, in the prosecution of experiments and inquiries, and that unless it appears to your satisfaction that such machine was actually used as a seed-sower in sowing seed for agricultural purposes, you are warranted in presuming that it was a mere experiment, and if so, you are instructed that it would not invalidate the plaintiffs' patent, provided Cahoon was an original inventor of his improvements without knowledge of that machine, and did not derive any of them from Luce. It is insisted by the defendant, in answer to the several propositions of the plaintiff now under consideration, that Cahoon cannot be regarded as the "original and first inventor of the improvements claimed in his specification, if it appears that a model or machine like the one now introduced was made and completed by Luce, in February, 1856, even though it also appears that it was afterward broken up, its materials used for other purposes prior to the invention of Cahoon, the essential parts of it lost, and the invention abandoned. His argument proceeds upon the ground that no one can be the original and first inventor of a thing once constructed, so long as the remembrance of the thing remains in the mind, or can be called to the recollection of any one still living, who had previous knowledge of its existence.

A patent is authorized by the sixth section of the act of congress of the 4th of July, 1836 [5 Stat. 119], where the party has discovered or invented a new and useful improvement, not known or used by others before his discovery or invention. By the fifteenth section it is provided, that, if it appears on the trial of an action, brought for the infringement of a patent, that the patentee was not the original or first inventor, or discoverer of the thing patented, the verdict shall be for the defendant. Those particular words, if construed literally, would afford some countenance to the argument of the defendant. That construction, however, has been denied by the supreme court, upon the ground that it would not carry into effect the intention of the legislature. Another clause of the fifteenth section of the same act provides, that

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if it shall appear that the patentee believed himself to be the first inventor, the patent shall not be void on account of the invention, or discovery, having been known or used in any foreign country, it not appearing that it had been patented, or described in any printed publication. In the case thus provided for, the party who invents is not, strictly speaking, the first and original inventor; but the law in such a case, says Chief Justice Taney, in *Gayler v. Wilder*, 10 How. [51 U. S.] 477, assumes that the improvement may have been known and used before his discovery. Nevertheless, his patent in that case is valid if he discovered it by the effort of his own genius, and believed himself to be the original inventor; and the court go on to say, that the clause in question qualifies the words before used, and shows that by knowledge and use the legislature meant knowledge and use accessible to the public. You are accordingly instructed to inquire and determine, from the evidence, whether Luce made his alleged invention of the vertical machine public, and if he did not, but had used it for no purpose, except simply for his own private experiments, and if it had been broken up prior to the 14th of May, 1857, and its materials used for other purposes, and its essential parts lost, and the invention forgotten or abandoned, that such an invention and use would be no obstacle to the taking out of a patent by Cahoon, or those claiming under him, and that the model, or machine, now in evidence, on that state of facts, would not invalidate the Cahoon patent, if he was an original inventor of his improvements, without any knowledge of said machine, and did not derive any of them from Luce. Upon this same subject you are also instructed, that, as a single specimen only of such a machine was made, whether capable of use, and whether actually used, or not, by the party making it, for the purpose of testing its operation, if you find from the evidence that the same was kept in his own possession from the knowledge of the public, and was subsequently broken up and its materials used for other purposes, or that the substantial parts of it were finally lost, prior to the 14th of May, 1857 [date of Cahoon's original application],³ and that its construction was only recalled to the memory of the maker by the present controversy, and when so recalled, that the essential parts of the machine did not exist, so that the public could derive the knowledge of it from the machine itself, but only from the memory of the alleged inventor, the existence of such prior machine will not invalidate the patent under consideration, even if the invention of Cahoon was subsequent in date, and although such machine may have

embodied all of the improvements subsequently invented by Cahoon, if he was an original inventor of his improvements, without knowledge of such machine, and did not derive any of them from Luce.

In view of the rules of law, as you have received them from the court, you will proceed to examine all the models, or machines introduced by the defendant on this branch of the case, and compare them with the improvements described in the Cahoon patent, as already construed and defined, and with the machine introduced by the plaintiffs so far as they are constructed and arranged in substantial conformity to the principles and mode of operation therein claimed and described. Difference in size and proportions, so long as the construction, arrangement, principles, and mode of operation are substantially the same, is entirely immaterial. Any machine made by the patentee, or those claiming under him, whose construction, arrangement, principles, and mode of operation are substantially the same as the one described in the specification, though differing in size and proportions, is as much within the protection of the patent as the structure therein described, provided it is of sufficient size, and has the proper proportions to accomplish the requisite work, and actually accomplishes it, substantially by the same means and substantially in the same way. According to the testimony of Curtis O. Luce, his model of the vertical machine was made in February, 1856, as before remarked, while he was residing at Freeport, in the state of Illinois, and it was in that state that all his experiments with it were made. He says that the model in evidence is the identical machine he made, excepting the distributing wheel and the hopper, and he thinks the wheel and the hopper now on the model are substantially the same as the ones he originally constructed. That wheel was built by one Taylor, under his directions, for which he paid him a half-dollar. He does not say who built the motive-power, but does say that he had it on hand, and that it was built before he was sick, for another purpose. It is a vertical model, constructed and arranged on a horizontal axis, and the witness says it was intended for rapid revolution. He used it more or less in a shop, thirty or forty by sixty feet, from the middle of February, 1856, to April of that year, and occasionally afterwards, to show its operation to friends. The cast, as he says, was about thirty feet, that is, fifteen feet on each side of the line of travel, and the witness says that he has; operated the machine, once with the wheel and hopper now on it, which were constructed at Westbrook in this state, at the request of the defendant, since the commencement of this trial. Only one person knew of his invention, and that was John Taylor, who made the original seed-wheel, and he assigns the reasons why he kept it secret, which need not be repeated, as they must be within your recollection. He thinks it was a practical machine, and says he used

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it to sow seed in the shop a good many times, but did not make any experiments with it in the field at Freeport, for the reason that from February to April there was snow on the ground, and no other machine was made for use. The brass part of the machine was made for another purpose, but was not completed, and he finished it up, and thinks he added the axis. Afterwards he removed from Freeport in the state of Illinois, to Brandon in the state of Vermont, where he now resides. When he moved he took the machine apart, that is, he

took off the hopper and wheel, and put the whole machine, thus separated, in his tool-chest. Shortly after he made this model he made another in a different form, that is, the horizontal machine, which is also introduced by the defendant. He went to New York the last of April, 1856, and while there had a conversation with Messrs. Munn & Co., patent solicitors, and he says he explained to Mr. Munn the operation of both machines. His invention for the horse-power machine was patented, and his right of the same, within the territory of New England and the city of New York, he has sold to Nourse and Mason. On his own account he has made thirty-nine of his horse-power machines since he has resided in Brandon, and has five more under way. You will recollect the fact that the horse-power machine is constructed on a vertical axis, and that the wheels revolve in a horizontal plane of discharge. His vertical or upright machine was never patented, and only one specimen of it was made, namely, the one already introduced, which was carried to Brandon, in the state of Vermont, in his tool-chest. His chest was kept in a closet, or in some other small apartment, in his house, and he states that his boy, a small lad, used to take out the machine and play with it, and he supposes lost it. When he last saw it he does not remember whether or not it was all together, and where it was at that time he cannot tell. He was twice visited by the defendant, during the last fall, and at one of those interviews the defendant, in a conversation about machines, inquired how he came to get up one, and in that conversation the witness thinks he referred to the vertical machine. At that time he did not know whether he could find it or not, but upon looking he found the brass part in a box in his house, and showed it to the defendant. It then had neither hopper nor wheel; those, as before remarked, had been lost, and the ones now exhibited have been made by the witness at the request of the defendant, since the adjournment of this case in June last. When he went to New York the only model he had with him was the one for the horse-power machine, which is now in the patent office. He says he had no drawings, but that he explained what he had made, and wanted to claim both principles, but that Munn told him it was unnecessary; that if he obtained a patent for one of the principles, he could use the machine either way. Evidence has been introduced to affect the credit of this witness, and it is proper that you should take that testimony into consideration, and determine for yourselves how far you can rely upon his statements. His deposition taken de bene esse, under the act of congress, at the request of the plaintiffs, has been introduced to contradict the witness. In that deposition he says: "I gave a description of the machine that I patented, and also the first machine I made, for which I did not apply for a patent, and which was a hand-sower with one wheel, vertical upon a horizontal shaft; the grain passed into a tube or wheel, closed in front, and was thrown out vertically through apertures formed for that purpose, something like a water-wheel. I never made but one machine of that kind; there was nothing inside the machine to stir the grain; that machine was taken apart and some of the materials used for other purposes." Anson A. Nicholson has also been called as a witness for the plaintiffs, and testifies to certain declarations made by Luce, on two occasions, which are introduced for the purpose of contradicting him. All these matters are for your consideration. On the side of the defendant, the witness, Luce, was recalled, by consent, and his explanations are also before you. It is for you to determine, upon the whole evidence, what degree of credit, if any, you can safely give to the statements of the witness.

Other machines are also introduced by the defendant, as having a tendency to show that Charles W. Cahoon is not the original and first inventor of the improvements described in his patent. Among the number is the machine of Glendy Moody, which is before you in two or three forms. He was called as a witness, and his testimony has been reviewed by the counsel on both sides, and need not be repeated. Like the horsepower machine of Luce, those models are constructed and arranged on a vertical axis, and it will be for you to determine whether they were not evidently constructed, arranged and designed to discharge seed in a horizontal plane of discharge. In such machines the seed-wheel revolves in a horizontal plane, and, so far as position is concerned, they are the opposite of the Cahoon machine, as it is described in his specification. Moody applied for a patent, and his application was rejected, on the 23d of April, 1846. S. S. Hogle's machine is the last in the series introduced by the defendant. Its history is derived chiefly from the testimony of Henry D. Lathrop. He was a workman in the employ of S. S. Hogle, who resided in Bedford, in the state of Ohio, at the time the machine was made. Models of this machine, in two or more forms, are in the case. In all of them, the seed-wheel, or discharger, is constructed upon a vertical axis, and revolves in a manner to discharge

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seed in a horizontal plane of discharge. Drawings of a vertical, or upright machine, made with chalk, are mentioned by the witness, Lathrop, in the course of his testimony, which has been the subject of remark by the counsel on both sides. It seems they were made, and presently effaced to give place to others of an experimental character. No such model was ever made, and of course none such could have been used. All the remark we think it our duty to make respecting those drawings, if such they may be called, is, that such testimony is entitled to very little weight, if any, in the determination of the questions under consideration.

Experts have been examined upon both sides, respecting the differences and similarities of the several models, as compared with the several improvements described in the plaintiffs' patent. Their opinions are evidence for your consideration, and it is within your province to determine what weight the testimony ought to receive. Three such witnesses have been examined, by the plaintiffs, and two by the defendant. Differences are observable in their testimony, and those differences have been very fully considered, and discussed by the counsel for the respective parties. All we desire to say further upon this branch of the case, is to remind you that the burden of proof on the several questions presented on this issue is upon the defendant; and we think you ought to give the matter a very deliberate consideration, before you reach the conclusion, upon this evidence, that Charles W. Cahoon was not the original and first inventor of the improvements described in his patent, as they have already been defined by the court.

Should you find that he is not the original and first inventor of any of the improvements so described and defined, then your verdict should be for the defendant, on all the questions involved in both issues. Want of novelty renders the patent invalid, and of course there can be no infringement of a right which has no existence. On the other hand,

should you come to the conclusion that Charles W. Cahoon was the original and first inventor of the improvements in his patent as described and defined, you will then proceed to the consideration of the questions presented in the second issue. At this point it becomes necessary to make a brief reference to the pleadings in the suit. It is charged in the bill of complaint that the respondent, in violation of the exclusive rights of the complainants, hath since the date of the reissued letters-patent, and without license from them, made, used, and sold large quantities of machines, substantially and in principle embracing in construction and mode of operation a certain feature of the invention described in the plaintiffs' patent. In effect the answer denies that the defendant has made any machine which in principle embraces in construction and mode of operation any feature of the Cahoon invention. It admits, however, that the defendant has made a few machines for seeding, in strict accordance with the description contained in his specification. Considering the answer, in connection with the bill, as it must be considered, the effect is, that the defendant has conclusively admitted that he did make a few of his own machines after the date of the reissued patent and before the time when the bill in this case was filed. But he does not admit that the machines he so made infringe the improvements defined and described in the Cahoon patent. On the contrary, he alleges and claims a full and perfect right to make and vend such machines.

These remarks will be sufficient to show you the exact nature of the question. It is, whether the machines made by the defendant, and admitted in the answer, do or do not infringe the improvements, and which of them in the plaintiffs' patent as already defined and described. In other words, the defendant admits that he has made a few machines according to his own patent, but denies that those machines as made constitute an infringement of the claims in the plaintiffs' specification, and relies upon his own patent to justify his acts in making the machines. On the question of infringement, as thus explained, the burden of proof is upon the plaintiffs, to show to your satisfaction that the machines of the defendant, which it is admitted he made, do infringe some one or all of the claims of the patent under which they derive their title. Whether they do so or not is a question of fact, to be determined by you from all the evidence-in the case, under the rules of law, which we will now proceed to state.

Your attention will be first directed to the several improvements of the plaintiffs' patent in the order in which they stand in the specification, and as they have already been construed and defined. They are as follows: (Here follows a recital of the four claims as printed.)

Commencing with the first improvement, you are instructed to find that the defendant's machine infringes the first claim of the plaintiffs' patent as already construed; if you find that his machine contains a tubular chamber or discharger, or a funnel-shaped discharger, having the position of its axis and of the plane of discharge substantially the same as embraced in the plaintiffs' first claim, as already defined, and operating to sow seed in substantially the same way, that is to say, by centrifugal force, in a vertical plane of discharge perpendicular to the line of progress of the machine, by receiving the seed near its centre, by transferring it to the periphery or outside, and during such passage of the

seed giving to it centrifugal force, and finally discharging the seed from the part of the discharger farthest from its

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axis in a vertical plane of discharge,—and you will also find that the machine of the defendant infringes this claim as already defined and explained, if you find in his machine a substantial equivalent of a discharger arranged and operating substantially in the way and by the means just pointed out and described, and by an equivalent is meant something that does substantially the same thing in substantially the same way. But if you do not find that the defendant's machine contains a discharger, operating and arranged as has just been described, or a substantial equivalent of it, then, so far as this claim is concerned, you will find that the defendant's machine does not infringe.

Whether your finding on this point is for the plaintiffs or for the defendant, you will then proceed to consider the question of infringement so far as regards the second improvement, in the plaintiffs' patent; and you are instructed to find that the machine of the defendant infringes the second claim in the defendant's patent as already defined, if you find in his machine a centrifugal discharger, or its equivalent in arrangement and manner and means of operating, as just described, in combination with flanches or the equivalents thereof as described in the plaintiffs' patent, the office of the flanches or their equivalents being to strike against the seed after it has entered the discharging chamber, and carry the seed round in front of the flanches, thus imparting to the seed centrifugal motion more rapidly than it would be by the discharging chamber alone, and preventing the seed from falling to the ground before it acquires centrifugal force; and if you do not find in the defendant's machine substantially this combination, or the equivalents of it in all its parts, in substance and reality, you are to find that the machine of the defendant does not infringe this second claim.

Irrespective of what your finding may be on the first and second claims, you will then proceed to consider the question of infringement, so far as regards the third claim of the plaintiffs' patent as already construed and defined; and on this point you are instructed to find that the machine of the defendant infringes this claim, if you find in the defendant's machine a disk or the equivalent thereof, combined with a centrifugal discharger, or tubular or funnel-shaped discharging chamber, or the substantial equivalent thereof, arranged and operating as has been explained in reference to the plaintiffs' first claim, the work performed by this disk being to prevent currents of air from blowing into the discharging chamber, and interfering with the proper arrangement, and consequently with the proper distribution of the seed; and if you do not find in the defendant's machine this combination or the equivalent for each member of the combination acting when so combined, substantially in the manner set forth in the plaintiffs' patent as already defined, then you are to find that the machine of the defendant does not infringe this third claim.

No instructions will be given you under the second issue, in respect to the fourth claim, as it is not contended by the counsel for the plaintiffs that the machine of the defendant in any manner infringes the fourth improvement in the plaintiffs' patent.

These are all the instructions we propose to give you upon the matters involved in the issue now under consideration, except to lay down certain rules by which you ought to be guided and governed in comparing these machines, or the several devices or elements of which they are composed. With a view of doing justice to both parties, and as matter of law, we instruct you, that, in determining the several questions of infringement, you are not to judge about similarities, or differences, by the names of things, but are to look to the machines, or their several devices or elements, in the light of what they do, or what office or function they perform, and how they perform it; and to find that a thing is substantially the same as another, if it performs substantially the same function or office in the same way, to attain the same result; and that things are substantially different when they perform different duties, or in a different way, or produce a different result. For the same reason, you are not to judge about similarities, or differences, merely because things are apparently the same, or different apparently in shape or form; but the true test of similarity, or difference, in making the comparison, is the same in regard to shape or form as in regard to names; and in both cases you must look at the mode of operation or the way the parts work, and at the result, as well as the means by which the result is attained. In all your inquiries about the mode of operation of either machine, you are to inquire about and consider more particularly those portions of a given part which really do the work, so as not to attach too much importance to the other portions of the same part, which are only used as a convenient method of constructing the entire part under consideration. You will regard the substantial equivalent of a thing as being the same as the thing itself, so that, if two machines do the same work, in substantially the same way, and accomplish substantially the same result, they are the same; and so if parts of the two machines do the same work in substantially the same way and accomplish substantially the same result, those parts are the same, although they may differ in name, form, or shape; but in both cases, if the two things perform different work, or in a way substantially different, or do not accomplish substantially the same result, then they are substantially different.

Slight differences in degree cannot be regarded as of weight in determining a question

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of substantial similarity or substantial difference. One thing may be a little longer or a little shorter than another, or it may work a little better or a little worse, and yet the two may be substantially the same; and whether they are so or not, and whether the difference in degree is sufficient to constitute a substantial difference in the thing or not, are questions of fact for your determination. Mere difference in degree, however, when properly applied to the facts of the case, in comparing these machines, or the several devices or elements of which they are composed, is entitled to very little weight.

Several days have been spent upon this branch of the case, in the examination of the experts called on the one side and the other; and every point arising out of their testimony, so far as it is applicable to a comparison of these machines, or their several devices, has been fully argued by the counsel on both sides. In view of all the circumstances, we do not think it expedient or necessary to repeat the testimony. The experts have not only given their opinions on these questions, but have very fully stated the reasons on which their opinions are founded, and both their opinions, and the reasons given for them, have been fully discussed at the bar. Those called by the plaintiffs have stated to you, in very strong terms, that in principle and mode of operation the two machines are substantially the same. One at least of those called by the defendant is equally positive that they are substantially different, and whether the other ought to be regarded as having expressed an equally confident opinion in the same direction or not is a question for your consideration, as you understand it. It is your duty to consider, and weigh all the testimony in the case, whether offered by the plaintiffs or the defendant, and to give it such weight as in your judgment it is entitled to receive.

Several witnesses were called and examined by the plaintiffs, to prove certain declarations made by the defendant, during the negotiations for an agency, which at one time, it seems, both the defendant and the patentee, as well as one of the plaintiffs, supposed he would have for the sale of the plaintiffs' machine, in one of the western states. Other declarations of the defendant are also in testimony, which appear to have been made about the time, or shortly after those negotiations were broken off. Those made during the negotiations were offered, as tending to prove that the defendant then had the opportunity and facilities for becoming acquainted with the construction and mode of operation of the plaintiffs' machine, before his own invention was made. Those declarations should be considered in connection with the explanations made in this trial by the defendant, when he was called and examined as a witness upon the stand. One of the declarations, apparently falling within the second class, appears to stand upon a different footing. William R. Sawyer testifies to the effect that he asked the defendant one day if he was going out west to sell machines for one of the plaintiffs. The defendant said no; he was going to have one of his own, and added, "he had seen all he wanted to see." It is your province to determine what the defendant meant when he said "he had seen all he wanted to see," and you will give the remark, if you believe the defendant made it, just such weight as you think it is entitled to receive. Witnesses have also been called on both sides as to the operation of the plaintiffs' machine in the field. That testimony was admitted merely as explanatory of the operations of the machine, and it is your duty to consider it only in that point of view. You will not omit to compare the machines, as they are described in the respective patents, and you should decide the several questions presented in this issue, in view of all the evidence in the case, applicable thereto, giving all due consideration to the arguments of the counsel on the one side and the other, and to the suggestions of the court. Evidence not in the case you cannot and ought not to consider. Trial by jury, though an inestimable right, is not a trial without a court, and it is not so regarded either by the constitution of the United States or by the laws of congress. It is as much the duty of the court to determine questions raised, as to the admissibility of evidence, as it is that of "the jury to determine its weight, after it is received. It is the

imperative duty of the court to rule out testimony which in law is not admissible; and should the court omit to perform that duty when objection is seasonably made, it would afford ground of exception, and, if subsequently found to be materially objectionable, would make it necessary to grant a new trial, and, if not so corrected, the judgment of the court, in ordinary proceedings, might be reversed on appeal, if in equity, or by writ of error, if it was a proceeding at law. You will take it, therefore, to be law, for the purposes of this trial, that all testimony offered in this case, and not admitted, was properly rejected, and you will give it no consideration whatever. All the questions raised will hereafter be reviewed in due form of law, and if any substantial error has been committed, it will be corrected. Errors of the court cannot be corrected by the jury; and should the jury assume that province, it might, and in many cases probably would, lead to still greater errors, for which, under our system of jurisprudence, there is no adequate remedy. All the evidence in this case is for your consideration [and I think you ought to employ your best endeavors in that behalf, to gratify their wishes],⁴ and it is your imperative duty not to consider any matter of

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evidence not admitted, and consequently not in the case.

The jury returned a verdict for the plaintiffs upon both the issues.

A motion for new trial was made by the respondent, in which exception was taken to most of the material features of the charge, and the rulings of the court rejecting the testimony offered by respondent, and admitting that proposed by the complainants, before explained. This motion was overruled. Before the hearing on the motion for new trial, the time for taking testimony had expired, and the complainants insisted, when the case came up in the equity side of the court, that they were entitled to a final decree upon the verdict of the jury and the testimony taken on the trial of the issues of fact, and moved the court accordingly; but the court declined to grant the motion, and gave the parties further time for taking testimony for the final hearing. The parties then filed in the cause a written stipulation, that evidence taken at the trial of the issues should be deemed taken and published as taken for the final hearing under the equity rules, but that either party might suggest any alleged errors; and power was conferred upon the court to make all necessary and proper corrections. By the terms of the stipulation it was also agreed that either party might take and file in the cause, within the time limited for taking testimony, any further evidence not embraced in that introduced in the trial of the feigned issues, and might offer the same at the final hearing, together with any documentary evidence which was rejected at the trial; but the effect or admissibility of all such was to be decided by the court. The models and machines used at the trial, and most of the rejected documentary evidence, were accordingly offered at the final hearing, and received without objection.

G. T. Curtis and E. & F. Fox, for complainants.

W. Whiting and Shepley & Dana, for respondent.

CLIFFORD, Circuit Justice. According to the bill of complaint, the invention secured to the complainants by the reissued letters patent consisted, among other things, in constructing a tubular chamber or discharger for the purpose of throwing the grain, seed, &c., from the machine, by giving to it a centrifugal force, derived from the rapid revolution of the discharger, and in so placing and revolving the discharger in a horizontal position, that the outer edge or periphery of the discharger will be in a plane vertical, or nearly vertical, to the horizon, and the grain, seed, &c., will be thrown by a centrifugal motion away from the centre of a circle whose plane is thus vertical, or nearly vertical, to the horizon. It is this feature of the invention that is described in the bill of complaint as the one involved in the controversy, and is the same as that described in the first three claims of the reissued letters patent. Recurring to the specification, it will be seen that the patentee claims, first, the employment of a tubular chamber or discharger, rotating rapidly in a horizontal position, so that its outer edge or periphery will be in a plane vertical, or nearly vertical, to the horizon, and thereby communicating a centrifugal motion to the grain, seed, &c., away from the centre of a circle whose plane is thus vertical, or nearly vertical, to the horizon; secondly, he claims the employment of a funnel-shaped discharging chamber, for the purpose, and rotating in the position above described, having spiral flanches or their equivalents inserted therein, and operating to arrest the too direct flow of the grain, seed, &c., through the discharger, and retaining it therein, until the necessary centrifugal force is communicated to it before it leaves the discharger, as above described; and, thirdly, he claims the combination and use of the above described and above-claimed tubular or funnel-shaped discharging chamber, rotating in the position above described, with the disk placed and operating in the manner above described. Those three claims of the patent are involved in the controversy, and two principal questions are presented by the pleadings. Complainants allege that Charles W. Cahoon is the original and first inventor of the improvements therein described, and that the respondent, after the reissued letters-patent were issued, and before the filing of the bill of complaint, had made, used, and sold large quantities of machines substantially and in principle embracing those improvements. Both of those allegations are denied in the answer of the respondent. He denies that Charles W. Cahoon is the original and first inventor of the alleged improvements, or either of them; and he also denies that he ever made, used, or sold any machine containing any improvement claimed by complainants. But the last denial is accompanied by the admission that he had made and sold a few machines constructed in strict accordance with the description contained in the specifications of his own patent, which, as he insists, he had a full and perfect right to make and vend. To maintain the issue on their part, so far as respects the novelty of the invention, the complainants, in the first place, introduced the reissued letters-patent, together with the model and the drawings annexed to the specification. They also introduced certain machines, and offered proof to show their operation, and that they were constructed according to the specifications of the reissued letters-patent. Unquestionably, the patent, accompanied by these proofs, was prima facie evidence that the patentee was the original and first inventor of the improvements, and accordingly the court instructed the jury, at the trial of the issues of fact, that, upon the introduction

of that evidence, the burden of proof, so far as the novelty of the invention was concerned, was shifted upon the respondent to show a prior invention, and consequently that if he had not done so, to their satisfaction, then their finding under the first issue should be for the complainants. Evidence, however, was introduced on both sides; and to enable the jury to apply it understanding, it became necessary for the court to construe the patent of the complainants. Those instructions were subsequently reviewed by the court at the hearing of the motion for new trial, and fully affirmed, and they are now adopted by the court as a correct exposition of the several claims of the patent under consideration. Commencing with the improvement covered by the first claim, we are of the opinion, and accordingly hold that it consists of a tubular chamber or discharger, rotating rapidly on a horizontal axis, so that its outer edge will be in a plane vertical, or nearly vertical, to the horizon, and perpendicular to the line of travel of the machine, and operating, by the centrifugal force generated by the revolution of the chamber or discharger, to throw out the seed in a plane of discharge that is vertical, or nearly vertical, to the horizon, and perpendicular to the line of travel of the machine. Tubular chamber or discharger, as the term is used in this claim of the patent, means, when taken in connection with the context of the specification and the drawings, a hollow discharger whose diameter is larger at the place of discharge than at the place of entrance of the seed, and which being placed and operated on a horizontal shaft, so as to bring its outer edge into the described position, will, by the centrifugal force generated by its revolution, throw out the seed broadcast, in a plane vertical, or nearly vertical, to the horizon. To prevent any misunderstanding, it is necessary to remark that the plane in which the seed is to be thrown out, and which is required by the terms of the claim to be vertical, or nearly vertical, to the horizon, is the plane of discharge of the seed, marked by the position of the outer edge or periphery of the discharger, and not the plane or planes through which the seed moves after it has left the discharger, in its progress through the air, and until it reaches the ground. Looking at the language of the claim, it is obvious that the inventor intended to make an apparatus which should operate in discharging seeds in a plane as nearly the reverse of a horizontal plane as can in practice be attained, and such plane of discharge, we think, is vertical, or nearly vertical, to the horizon, within the meaning of the patent, when it is substantially the opposite of a horizontal plane.

Attention will now be called to the second improvement, which is covered by the second claim. It consists, in our view, of a funnel or conical-shaped discharging chamber, having flanches or their equivalents inserted therein, and operating by arresting the seed on its passage from the conducting tube leading from the hopper, so as to prevent the seed from dropping upon the ground, and by assisting to carry it round the axis of revolution, so as to impart to it the necessary degree of centrifugal force in a shorter space of time than the surface of the discharger alone could possibly do, without such aid. Such discharger, like the tubular one mentioned in the first claim, rotates rapidly on a horizontal shaft, and by means of the centrifugal force thus generated, and the position of the outer edge of the discharger, throws out the seed in a plane of discharge vertical, or nearly vertical, to the horizon, as described in respect to the other claim. Funnel-shaped discharging chamber,

as the term is used in this claim, signifies the same thing as the words "tubular chamber or discharger" in the first claim, and means a conical chamber, or one whose diameter is larger at the place of discharge than at the place of entrance of the seed. Whether the cone of the chamber is regular or irregular, or longer or shorter from its apex to its base, is, we think, wholly immaterial, provided it has the above-described condition of a funnel or conical chamber, and will, with the aid of the flanches or their equivalents, when operated in the described position, do the work specified in the patent. "Tubular or funnel-shaped discharging chamber" are the words of the third claim, and it is obvious that they mean the same thing as the words "tubular chamber or discharger," used in the first claim, or "funnel-shaped discharging chamber," employed in the second claim. As described, the improvement consists of a disk or piece of metal or its equivalent placed in front of, and combined with, the centrifugal discharger arranged in the position, and operating to sow seed in the manner explained in relation to the first and second claims. Such disk is used to prevent the entrance of currents of air into the discharger, which might interfere with the proper distribution of the seed by blowing it out of its proper position while it was still in the chamber. Considering the use of the disk, it is clear, we think, that the word "equivalent," as applied to it, must have a pretty broad signification, so as to include any pieces of metal, whatever may be their shape, or in whatever manner attached to the apparatus, so long as they are properly shaped and properly attached in such a manner as to produce the same effect or substantially the same, in substantially the same way as is produced by the round flat piece of metal represented in the drawings of the complainants' patent. Infringement is not charged in the bill of complaint in respect to the improvement described in the fourth claim, but it becomes necessary to advert to it under the first ground of defence set up by the respondent. It consists of a hopper of some kind or other, whose office is to hold a supply of seed, and deliver it to a

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discharging chamber, rotating rapidly in the position before explained, and acting to sow seed in a plane of discharge, as before pointed out, when the hopper is combined with such a centrifugal discharging chamber, and with a stirrer, so called, arranged in the hopper and acting to stir the seed, and also with a gate at the mouth of the hopper, by means of which the opening at the small end of the hopper can be enlarged or diminished, so as to regulate the quantity of seed or grain that will pass out of the hopper, and consequently the quantity that will be sown by the centrifugal discharger in any determined period of time.

Upon the first issue, the jury found that Charles W. Cahoon, at the date of his original application, was the original and first inventor of each and all of the improvements described and claimed in the specification. Additional evidence was, however, introduced at the final hearing, pursuant to the stipulation in the cause; but after a careful revision of the whole, we are of the opinion that the respondent utterly fails to show a prior invention, or that the same was old, well known, or in public use, as alleged in the answer. Some of the letters-patent and other documents introduced at the final hearing had been rejected at the trial of the issues, and are now for the first time before the court

as evidence in the cause. Under those circumstances, it seems to be proper that the whole evidence should be reviewed, both in connection with the verdict, and also as if no issues of fact had been tried by a jury. Letters-patent to Levi Rice, dated August 21, 1837, were offered in evidence by the respondent. When offered to the jury it was rejected, but is now admitted, under the stipulation filed in the cause. It was a patent for a centrifugal disseminator, consisting of a horizontally revolving platform with radiating cleats to strengthen the platform, and give additional force to the distribution. He also introduced a rejected application of Glendy Moody, filed the 3d of December, 1845, and rejected on the 23d of April in the following year. It purported to be an application for a patent for an improvement in machines for sowing seeds broadcast, and is described as a hollow discharger, consisting of hollow arms or spouts, radiating from a central vertical shaft at right angles to the discharger, constituting a series of passages, radiating from a common central position. Two small wooden models were made by the alleged inventor, in conformity with the description in the application, but it does not appear that he ever made a working machine. His application was rejected at the patent office, because the alleged invention was the same as that of Rice, already described. Pursuing the order of the date of the documents, we come next to the application of S. S. Hogle, which was also introduced by the respondent at the final hearing. It was for a machine consisting of a reversed conical shell terminating in a flange surrounding its base, and having inside of it another cone or conical disk, also terminating in a similar flange, and both revolving together on a vertical shaft, so that the grain is thrown out horizontally between the flanges. It was presented to the patent office August 16, 1855, and on the 14th of September following was rejected, because it was for the same invention as those of Rice and Moody. Divers experimental models were made by Hogle, conforming to the description in his application; and, according to his testimony, one of them was used by him to sow to some small extent, during the season of 1855. The respondent also introduced the rejected application of William N. Tebbets, which was filed April 12, 1856, and rejected on the 16th of the same month, because the alleged invention was the same as that of Glendy Moody. According to the application, it was for an improvement consisting of a hollow tube and radial arms turning on a vertical shaft. Certain letters-patent were also introduced by the respondent, which should be noticed in this connection. Of these one was the patent to Enos Stinson, which is dated May 6, 1856, and was for a machine consisting of a horizontal rotating arm or tube provided with valves at the ends so as to cut off the flow of the seed while the end of the tube is passing forward through one half of its revolution, and to let the seed flow as the tube passes toward the rear through the other half of the same revolution. Another of the patents introduced is the one granted to C. O. Luce, on the 10th of June, 1856, which was for a machine consisting of two horizontal distributing wheels, which throw out the seed by centrifugal force, and the claim is for the wheels in combination with certain slides or valves for cutting off the flow of the seed, although it is admitted that the wheels are old. Evidence was also introduced by the respondent tending to show that the same C. O. Luce also made another experimental model or machine consisting of a small tin distributing wheel, which he operated upon a horizontal shaft in connection with a small tin hopper; but the weight of the evidence shows that it was a mere experiment, and that the experiment in that form was abandoned. Respondent also introduced the patent of E. K. Haynes, which

was granted the 23d of December, 1856. It was for an improved machine consisting, as described, of a scattering-wheel, the central part of which is conical, and the other part is a flat horizontal circular plane. As described, the conical part of the wheel is armed with wings, which, when put in motion, create currents of air, showing that the invention, if any, consists of a species of fan-blower combined with a horizontal centrifugal distributor. Comment upon the patent of H. Bonham for the corn-planter is quite unnecessary, as it is scarcely contended by the respondent that it can have any material

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bearing in the case. Included in this list are some seven or eight alleged prior inventions, but it is obvious, even without much investigation, that with the exception of the abandoned experiment of C. O. Luce, they are all constructed and designed to revolve on vertical shafts, and to discharge seed or grain in a horizontal plane of discharge. They all have vertical shafts, and in all of them the seed is poured down upon all sides of the shaft, and falls upon the surface of a turning-table or some other device performing substantially the same functions, and runs out from the centre to the circumference, by the centrifugal force generated by the revolution, aided, in some of the machines, by cleats, and in others by enclosed arms, passages, or tubes, or some equivalent devices. But such is not the principle or mode of operation exhibited in the machine of the complainants. Their machine has a conical chamber receiving the seed on one side of the shaft, at or near the smaller diameter of the chamber, which being placed on a horizontal shaft and rapidly revolved, causes the seed or grain to travel centrifugally around and away from the axis of revolution towards the larger and outer diameter of the chamber, where it is thrown out broadcast in a vertical plane of discharge. Attempt was also made by the respondent to show that the improvement of the complainants was old, well known, and in public use prior to the alleged invention by the original patentee, but the evidence wholly fails to establish the allegation; and, having stated our views very fully on this point in overruling the motion for new trial, we do not think it necessary to repeat them on the present occasion. At the final hearing the original patent of Cahoon, together with the application and the correspondence with the patent office, were offered in evidence by the respondent. When the offer was made the court inquired of the counsel making the offer, on what grounds, and for what purpose, the offer was made; but no explanations were given. Under the circumstances, we reject the evidence, as we are not able to perceive that in any point of view it would be material. Fraud in obtaining the reissued letters-patent is not implied, and no question arises as to the date of the original invention. *Philadelphia & T. R. Co. v. Stimpson*, 14 Pet. [39 U. S.] 448; *Stimpson v. West Chester R.*, 4 How. [45 U. S.] 380; *Bat-tin v. Taggart*, 17 How. [58 U. S.] 74. Suffice it to say, without entering more into detail on the point of novelty of the invention, that we are of the opinion that Charles W. Cahoon is the original and first inventor of the several improvements described in the specification of the reissued letters-patent.

Considering the answer in connection with the bill of complaint, the effect is, that the respondent has conclusively admitted that he did make a few machines within the period specified in the bill of complaint. He does not admit that the machines he so made infringe

the patent of the complainants, but he does admit that he made the machines described in the answer; and the only remaining question is, whether in point of fact the machines so made constitute an infringement? of the complainants' patent, as alleged in the bill of complaint. That question was submitted to the jury, under carefully prepared instructions, on the trial of the issues of fact, and they found that the machines so made by the respondent do infringe the first claim embraced in the specification annexed to the reissued letters-patent. No new evidence has been introduced on that point, and we do not think it necessary to review that finding of the jury. But the jury also found that the machines so made by the respondent did not infringe the second and third claims of the patent; and in that finding we do not concur. On the contrary, we reject that part of the finding of the jury, and hold that the machines so made by the respondent infringe the second and third claims of the patent as well as the first; but we do not deem it necessary again to analyze the testimony upon the point, because, in our judgment, the conclusion formed is the proper and necessary result of the finding of the jury in relation to the first claim of the patent. It follows, therefore, that the complainants are entitled to an injunction, and to an account, as prayed in the bill of complaint. Unless the parties agree as to the amount of the damages, the cause must be referred to a master to ascertain the amount, or if both parties desire it, the amount may be ascertained by the court. Let the decree be prepared accordingly.

[NOTE. Patent No. 18,083 was granted to C. W. Cahoon. September 1, 1857; reissued May 17, 1858 (No. 554).]

¹ [Reported by William Henry Clifford, Esq., and here reprinted by permission.]

² [From Merw. Pat. Inv. 88.]

³ [From Merw. Pat. Inv. 662.]

⁴ [From 1 Fish. Pat. Cas. 397.]

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