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couraged; so that where the owner is present, no lien is acquired by the material man; nor is any, where the vessel is supplied or repaired in the home port. The lien attaches to foreign ships and vessels only in favor of the carpenter who repairs in a case of necessity and in the absence of the owner. It would be a strange doctrine to hold the ship bound in a case where the owner made the contract in writing, charging himself to pay by instalments for building the vessel at a time when she was neither registered nor licensed as a sea-going ship. So far from the contract being purely maritime, and touching rights and duties appertaining to navigation, (on the ocean or elsewhere,) it was a contract made on land, to be performed on land. The wages of the shipwrights had no reference to a voyage to be performed; they had no interest or concern whatever in the vessel after she was delivered to the party for whom she was built; they were bound to rely on their contract. It was thus held by the first Judge Hopkinson, in 1781, who then declared, as respects ship builders, that "the practice of former times doth not justify the admiralty's taking cognizance of their suits." (*Chilton v. The Brig Hannah*, Bee's Admiralty R., app., 419.) And we feel warranted in saying that at no time since this has been an independent nation, has such a practice been allowed. (*Turnbull v. Enterprise*, Bee's Adm. R., 345.)

It is proper, however, to notice the fact that District Courts have recognised the existence of admiralty jurisdiction *in rem* against a vessel to enforce a carpenter's bill for work and materials furnished in constructing it, in cases where a lien had been created by the local law of the State where the vessel was built; such as *Read v. The Hull of a New Brig*, 1 Story's R., 244; and *Davis & Lehman v. A New Brig*, Gilpin's R., 473; *ib.*, 536; *Ludington & King v. The Nucleus*, 2 Law Jour., 563. Thus far, however, in our judicial history, no case of the kind has been sanctioned by this court.

For the reasons above stated, it is ordered that the decree below be reversed, and the libel dismissed for want of jurisdiction.

CYRUS H. MCCORMICK, APPELLANT, *v.* WAITE TALCOTT, RALPH EMMERSON, JESSE BLINN, AND SYLVESTER TALCOTT, SURVIVORS OF JOHN H. MANNY.

The reaping machines made by Manny do not infringe McCormick's patent, either as to the divider, the manner in which the reel is supported, or the combination of the reel with a seat for the raker.

McCormick not being the original inventor of the machine called a divider, but the patentee of only an improvement for a combination of mechanical devices, could not hold as an infringer one who used only a part of the combination.

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The manner of supporting the reel in Manny's machine is not like that in McCormick's, and was used before McCormick's first patent.

With respect to the raker's seat, McCormick's patent was for a combination of the reel with a seat arranged and located according to his description. But Manny's arrangement differs from McCormick's in principle as well as in form and combination, and is therefore no infringement of McCormick's patent.

THIS was an appeal from the Circuit Court of the United States for the northern district of Illinois, sitting as a court of equity.

The bill which was filed by McCormick alleged that the defendants in error had infringed his patent for a reaping machine; called upon them for an account, and prayed for an injunction. The defendants denied the infringement, and claimed a right to construct their machines under letters patent granted to John H. Manny. The Circuit Court dismissed the bill, and McCormick appealed to this court.

McCormick's patents had been twice before this court, as will be seen by referring to 16 Howard, 480, and 19 Howard, 96. The same claims, viz: the fourth and fifth of the patent of 1845, were involved in the case in 19 Howard, and the remaining claim, viz: that relating to the seat of the raker, under the patent of 1847, was before the court in 16 Howard, only that it now comes up under a reissued patent in 1853.

The reporter despairs of giving any intelligible account of the argument in this case. The record was upwards of one thousand pages of printed matter, of which seven hundred and fifty pages were the depositions of witnesses; and the court room was filled with models and drawings, introduced upon either side, to which constant reference was made by the counsel.

The case was argued by *Mr. Reverdy Johnson* and *Mr. Dickerson* for the plaintiff in error, and *Mr. Stanton* and *Mr. Harding* for the defendants.

Mr. Justice GRIER delivered the opinion of the court.

The bill charges the defendants with infringing two several patents granted to complainant, for improvements in the machine known as McCormick's Reaper. One of these patents bears date the 31st of January, 1845; the other on the 24th of May, 1853, being the reissue of a previous one, dated 23d of October, 1847. The defendants are charged with infringing the fourth and fifth claims of the patent of 1845, and the second claim of the reissued patent of 1853.

I. The first infringement charged is that of the divider, or that part of the reaping machine which is defined "as an ar-

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rangement, or apparatus, for separating the grain to be cut from that which is to be left standing."

The claim is as follows: "4th. I claim the combination of the bow L and the dividing-iron M, for separating the wheat in the way described."

The description referred to is as follows:

"The *divider* K is an extension of the frame on the left side of the platform, say three feet before the blade, for the purpose and so constructed as to effect a separation of the wheat to be cut from that to be left standing, and that whether tangled or not. E is a piece of scantling, say three feet long and three inches square, made fast to a projection of the platform by two screw-bolts. To the point of this piece, at K, is made fast by a screw or bolt a bow L of tough wood, the other end of which is made fast in the hinder part of the platform at R, and it is so bent as to be about two and a half feet high at the (left) reel-post, and about nine inches out from it, with a regular curve. The *dividing-iron* M is an iron rod of a peculiar shape, made fast to the point of the same piece E, and by the same screw-bolt that holds the bow L. From this bolt this iron rises towards the reel S, at an angle of say 30°, until it reaches it, then it is bent so as to pass under the reel as far back as the blade, and to fit the curve of it (the reel.) From the bolt in the point aforesaid, the other end of this iron extends, say nine inches, along the inside of the piece E, where it is held by another screw-bolt M, and where it has a groove (or slot) in it to admit the other ends being raised or lowered (turning on the point screw K as a pivot) to suit the height of the reel. By means of the bow to bear off the standing wheat, and the iron to throw the wheat to be cut within the powers of the reel, the required separation is made complete."

The answer denies that the arrangement of the divider used by defendants for separating the grain to be cut from that to be left standing is the same in construction or mode of operation as that claimed by complainant, or a colorable evasion of said claim, and avers that it is a different and distinct arrangement, invented by J. H. Manny, after several years' experiments.

It would be a difficult task to make intelligible to the uninitiated the construction of a very complex machine, without the aid of models or diagrams. But, for the purposes of the case, the divider, although a component part of the great complex machine called the reaper, may be considered by itself as a machine, or combination of devices, attached to the reaper to perform certain functions necessary to complete the whole operation. In order to ascertain whether the divider used by defend-

ants infringes that of the complainant, we must first inquire whether McCormick was the first to invent the machine called a divider, performing the functions required, or has merely improved a known machine by some peculiar combination of mechanical devices which perform the same functions in a better manner.

If he be the original inventor of the device or machine called the divider, he will have a right to treat as infringers all who make dividers operating on the same principle, and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such. But if the invention claimed be itself but an improvement on a known machine by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.

That portion of a reaping machine called the divider or separator may be described as a pointed, wedge-formed instrument, which is attached by its butt at that extremity of the cutting apparatus which runs in the grain, in such manner that its point projects in advance of the cutting apparatus, and enters the standing grain. Its functions, where the grain stands erect, are to divide it into two portions, one of which is borne inwards by the inner side of the wedge-formed implement within the range of the cutting apparatus and of the reel, in case the machine is fitted with a reel; the other portion of the grain is borne outwards by the outer side of the divider, so as to be passed by that portion of the machine which lies behind the cutting apparatus. When grain is inclined outwards, the function of the divider is not only merely to divide the grain into portions, but also to raise up the inclined stalks of the grain, below which the divider passes. When the grain inclines inwards, the function of the divider is not only to divide the mass, but also to raise up the inclined stalks of grain beneath which the divider passes, and to bear them outwards without the range of the reel, if the machine has a reel, and of the cutting apparatus. When grain, in addition to being inclined, is also entangled, the divider not only separates and raises the stalks, but also tends to disentangle them. The lower face of a divider also performs the function of a shoe or runner, to prevent the cutting apparatus from digging into the earth, when, by any accidental movement of the machine, it would

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otherwise do so. The divider also performs the function of limiting or regulating the width of the swath, by raising up and turning inwards those stalks of grain which, from their inclination outwards, would otherwise escape the action of the cutter; and by raising up and turning outwards those stalks of grain which, from their inclination inwards, would otherwise be within the range of the cutter. All dividers perform these functions in a greater or less degree. The English patent of Dobbs, in 1814, had dividers of wood or metal. The outer diverging-rod rose as it extended back, and diverged laterally from the point, to raise the stalks of grain inclining inwards, and to turn them off from the other parts of the machine. The patent of Charles Phillips of 1841 had a divider, shaped like a wedge, performing the same function, turning the grain aside on both sides of the machine, and raising it up. Ambler's machine had a triangular divider performing the same functions, as also the machines of Hussey, Schnebly, and that of McCormick, patented in 1834, which is now public property. The present claim is for the combination of this bow with a dividing iron of a certain form, and for nothing more. This dividing iron is but a new form or substitute for that side of the triangle or wedge which in other machines performed the function of separating the inside grain, and raising it to the cutters.

It is described in the patent as having these peculiarities to distinguish it from those that preceded it.

1. It rises at an angle of about thirty degrees till it reaches the reel.

2. It is curved under the reel.

3. It is made adjustable by means of a slot, so as to suit the different heights of the reel.

Its function is to raise and support the grain along the inner edge of the divider, at the maximum elevation consistent with the employment of the reel. As a form or combination of devices it is new, and no doubt an improvement, and therefore the proper subject of a patent. But as a claim for a combination of mechanical devices or parts, it is not infringed by one who uses a part of the combination. Nor can it challenge other improvements of the same machine, different in form or combination, as infringements, because they perform the same functions as well or better by calling them equivalents. The machine constructed under defendants' patent has a wooden projection, somewhat in the form of a wedge, extended beyond the cutting-sickles some three feet, and which, from the point in front, rises as it approaches the cutting apparatus, with a small curve (not approaching to an angle of thirty degrees) so

as to raise the leaning grain. It has no dividing-iron, nor substitute or equivalent possessing the peculiar qualities of that instrument. It more resembles the wedges in use before McCormick's patent of 1845. As an improvement on former machines, it has some peculiarities of form and construction, but it does not adopt the combination of complainant's patent. It is a distinct improvement, probably inferior to McCormick's, but certainly no infringement of his claim.

II. The fifth claim of complainant's patent of 1845, which the bill charges the defendants with infringing, is as follows:

"5. I claim setting the lower end of the reel-post R behind the blade, curving it at R², and leaning it forward at top, thereby favoring the cutting, and enabling me to brace it at top by the front brace S, as described, which I claim in combination with the post."

In the reaping machine of McCormick's original patent of 1834, he had placed the reel-post in front of the cutters. This position of the post interfered with the action of the reel in drawing the grain to the cutters, especially in gathering tangled grain. In order to remedy this defect of his own machine, he set the post farther back, and braced it as described.

Defendant does not support his reel by posts, as was done by McCormick. He uses the horizontal reel-bearer connected by a frame with the hinder part of the machine. This device for supporting the reel was invented and used many years before McCormick's first patent of 1834. It had no reel-post situated as in his patent, and encountered none of the evils remedied by the change in its position. This attempt to treat the earlier and better device used by defendant as an infringement of a later device to obviate a difficulty unknown to the first, is an application of the doctrine of equivalents which needs no further comment.

III. The bill charges defendants with infringing the second claim of the reissued patent of 1853. This claim is as follows:

"2. And I also claim the combination of the reel for gathering the grain to the cutting apparatus, and depositing it on the platform, with the seat or position for the raker *arranged and located as described*, or the equivalent thereof, to enable the raker to rake the grain from the platform, and deliver and lay it on the ground at the side of the machine as described."

If this claim be construed to include all machines which have a reel and a raker's seat, it is void, for want of novelty. Hite, Woodward, Randall, and Schnebly, had invented and publicly used reaping machines which had reels, and a place for the raker on the machine. But the true construction of this claim, and the only one which will support its validity, is to treat it

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as a claim for a combination of the reel with a seat "arranged and located as described." And such was the construction given to it by the defendant himself, when the Commissioner had refused to grant him a patent claiming the mere combination of a reel and a raker's seat, "because such a combination was not patentable, the functions of each device having no necessary connection with the other."

This arrangement for the location of a raker's seat was made "by placing the gearing and crank forward of the driving-wheel, and thus carrying the driving-wheel further back than heretofore, and sufficiently so to balance the rear part of the frame and the raker thereon."

By this device he obtained a place for the raker over the finger-bar, just back of the driving-wheel, and at the end of the reel, where he could have free access to the grain, and rake it off the machine at right angles to the swath. It was by limiting his claim to this arrangement, location, and combination, that the complainant obtained his patent; and without this construction of it, the claim is neither patentable nor original.

The arrangement, combination, and location of the raker's seat, by defendants, has been patented to Manny, as an independent contrivance, and distinct invention. The place for the raker is obtained by a change in the shape of the platform, different from any before employed. It differs from the complainant's device in principle as well as in form and combination. The raker's seat is on a different part of the machine, where he may stand without destroying the balance of the machine, or tilting it up. It requires no modification of the reel. It requires no such combination or modification of parts of the machine in order to find a place for the raker, which is an essential part of complainant's claim.

It is substantially different, both in form and in combination, from that claimed by the complainant, and is consequently no infringement of his patent.

Concurring, as we do, in the opinion and decision of the court below on these several points, the decree is affirmed with costs.

Mr. Justice DANIEL dissenting:

In the opinion of this court just delivered I do not concur. Protracted as the discussion by counsel in the case has been, the real grounds for controversy between the parties are obvious, and comprised within quite a limited compass. The unusual display of mechanical ingenuity, and the comment upon its progress exhibited in the conduct of this cause, whilst they evince great zeal and industry, and may afford entertainment to the

curious on such subjects, are in a great degree irrelevant to and beside any legitimate inquiry which an adjustment of the claims of the parties either imposes or warrants. In the decree of the court below, as well as in the arguments in this court, it has been conceded, that the patent of the appellant is strictly legal. This *concession* necessarily excludes, and in legal acceptation *concludes*, all inquiry as to the right of the appellant to the full benefit of his invention, either as an original or a combination, and renders unnecessary, and irregular, and improper, any and every comparison between that invention and previous claims to discovery and improvement, having in view the same results, and the same or merely equivalent modes of producing them. This *concession*, therefore, narrows down and confines the proper investigation before this court, as it should have restricted that before the Circuit Court, to the single question, whether the machine complained of as an infringement, either in theory, in construction, or in operation, was the same with the improvement invented by the appellant, for the benefit or the reward for which the law had given its guarantee? This was the proper inquiry before the court below, is the only regular inquiry here. All others connected with previous inventions were and must be irregular, and are excluded and forbidden by the concession that the patent of the appellant is legal and valid. To guide them in this, the only legitimate inquiry, this court has had before them a species of evidence of all others best calculated to conduct them to the truth—evidence superior to, and unaffected by, the interests or prejudices of partisans, or by the opinions (the reveries, they may often be called) of a class of men styled experts; men as often skilful and effective in producing obscurity and error, as in the elucidation of truth. No witnesses can testify so clearly and so impartially as do the subjects (though mute) concerning which a controversy about identity or dissimilarity is pending. These witnesses have been produced, and their testimony eagerly and keenly scrutinized; and that testimony establishes, in my judgment, with a force and certainty which no ingenuity can either withstand or evade, that the machine put in operation by the appellees is a palpable infringement of the rights of the appellant; that in theory or principle, in structure, in the modes of operation, and in the results proposed, it is essentially, and, with some insignificant and merely apparent diversity, *formally identical*, at least in one important particular, with the invention secured by the Government to the appellant, and admitted by the appellees, and by the court, to have been rightfully and legally guaranteed to him.

That portion of the machines put in operation by each of

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the parties to this controversy, and which constitutes the most material subject of contention in this cause, consists of what in the description and specification of the respective patents is called a divider. The function and the value of this divider are experienced in separating the stalks of wheat designed to be immediately severed by the cutters, from those which do not come within their immediate and regular operation, but which it is desired should be left to the future or succeeding action of the machine. It frequently happens, in fields of luxuriant growth, that from high winds, heavy rains, and even from its own weight, wheat is pressed down, and becomes in rustic phrase *lodged*. In this condition, the stalks and heads of the wheat, on both sides of a line described by the track of a machine, will become entangled, and inclined in various and opposite directions, accordingly as the momentum which displaces the natural position of the growing crops has been applied. In such a condition of the wheat, any process by which a portion of the crop should be torn apart from portions with which it was intertwined, would prove highly detrimental, inasmuch as it would necessarily increase the irregularity in the position of the wheat not cut, and standing outside of the regular track of the machine; and, by violently and rapidly rending apart the tangled straw, would shatter and waste the grain in each division, creating thereby a serious diminution in the yield or product. In order to prevent these mischiefs by disentangling the wheat, by separating that designed to be immediately severed from that reserved for the succeeding action of the machine, and by raising up the former, and bringing it within the scope and operation of the reel and the cutters, was devised an addition or appendage to the reaper, called the *divider*. The importance of this appendage, both to the success of the reaper and on account of its real utility in practice, cannot be with reason called in question. Its essential importance is sufficiently evinced by the zeal and industry displayed, and the extraordinary expense which must have been incurred in this controversy. The divider of McCormick may be thus substantially described: A pointed instrument or structure, called by the patentee a *bow*, formed of strong hard wood, confined in front, and projecting so far in advance of the cutters as to enter the wheat in time to effect its preparation for the approach of the cutters. This bow is extended in a curvilinear form on the outer side of the machine, next the grain to be separated from the cutters, and is gradually elevated from the point in front to a degree increasing towards the rear of the machine, sufficient to disentangle the straw, and place it in a position proper for the sweep or action of the returning machine. On the interior side of

the machine, or that on which the grain is to be severed, the divider of McCormick is constructed of a bar of iron, confined at the same point with the wooden bow above mentioned as operating externally; and this iron bar is capable of being so adjusted as to disentangle and raise the wheat separated from that standing on the exterior of the machine; and by a lateral and angular direction given this adjustable bar, as well as by its vertical extension, it embraces and secures the wheat on the interior side of the machine, and presses it to the action of the reel and the cutters.

Such as has been just described, I hold to be McCormick's divider, and such, too, its operation and effects. Let us now compare them with the structure and operation of the structure complained of as an infringement, in order to ascertain how far the rival claims of the parties are identical or diverse. And this comparison will be most fairly and satisfactorily accomplished, and the results most clearly established, by a recurrence to that silent but irresistible testimony already referred to, the testimony of the machines themselves.

On Manny's machine, the divider on the exterior side, or the side of the standing grain, is formed of a piece of timber which, according as fancy shall dictate, may be denominated a *bow*, or by any other appellation which may be preferred. This piece of timber, like the divider of McCormick's machine, is confined in front, and penetrates the standing grain in advance of the cutters. Like McCormick's divider, it rises obliquely from the stationary point in front, towards the rear of the machine, to a degree intended to be sufficient to separate and support the straw, and in the same manner diverges in an angle supposed to be great enough to secure that separation, and to prevent the breaking down of any portion of the straw by being pressed to the earth, or by being torn away by the machine in its progress. On the interior side or section of Manny's divider, there is no adjustable iron bar or rod, as a part of the divider; but for this is substituted a piece of timber or a board, connected and confined in the front of the machine with the wooden fixture extended on the outside next the standing grain; and from that point of connection this substituted board is protracted in a diverging angle, and to a length corresponding exactly with those of McCormick's adjustable iron bar, and, like the latter, it is gradually curved to a vertical elevation intended to be great enough to separate and raise up the wheat designed to be immediately severed by the cutters from that reserved for farther action of the machine. The only differences between this fixture and the adjustable bar of McCormick (and they are merely pretended and de-

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ceptive) are these: that the former, instead of being of *iron*, is made of wood; that instead of being movable or adjustable, it is stationary; that it is broader on its lateral surface than is that of the iron portion of McCormick's divider, and on that lateral surface is somewhat curved. But these differences, correctly apprehended, are mere disguises, and were indispensable to shelter the possession of property evidently pirated from the rightful owner. Had the appellees openly taken McCormick's iron instrument, adjusted it so that it could be graduated in practice to the quality or height of the grain in which the machine was to operate, and placed it at an angle suited to the conducting of the grain within the action of the reel and cutters, there would in so bold a piracy have been left no ground, no pretext even, for contest or cavil. Hence the effort at distinctions or differences attempted in the case. To my mind, it seems impossible not to perceive that they are entirely unfounded, and cannot for one instant conceal these truths, viz: that the instrument or structure called a divider, introduced and practiced by the appellees, is in *theory* or principle, in *manner* of its operation, in its *effects* or *results*, and it may almost be said in its *minute constituent portions and formation*, identical with the instrument invented by and patented to the appellant, and therefore an infringement of the rights guaranteed to him by the Government.

Entertaining this opinion, I must dissent from the decision of the court in this cause, and declare it as my opinion that the decree of the Circuit Court should be reversed, and this cause remanded with instructions to reinstate the injunction formerly awarded by the Circuit Court, and to direct an account between the parties. The only legitimate inquiry for the court is this: whether the improvement of McCormick called a divider, and the instrument claimed and put in operation by Manny, are essentially the same, or are essentially or substantially different. All that has been said (and a great deal has been said) about the comparative superiority or inferiority of inventions or improvements previous to those patented to McCormick, is wholly irrelevant, and out of this cause; and is calculated only to confound and to divert the attention from the only proper subject of investigation here, which is the rightfulness of the claims advanced by the appellant and appellees in this cause, relatively to themselves, and to no others.