In determining the question of priority between two competitors for a patent, there are two leading principles which should give direction to our inquiries. These were first propounded by the late Judge Story, in Reed v. Cutler, 1 Story 590; and they were so clearly defined by him that we cannot do better than to quote his language. He was speaking of that clause in the 15th section of the Act of 1836, which provides that it may be shown in the defense to an action for infringing a patent, that the patentee "had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same." Upon this he made these remarks: "In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive and practical form, would seem to be entitled to a priority of right to a patent therefor. The clause of the 15th section, now under consideration, seems to qualify that right, by providing that in such cases he who invents first shall have the prior right, if he is using reasonable diligence in adapting and perfecting the same, although the second inventor has, in fact, first perfected the same, and reduced the same to practice in a positive form." p. 599.

This language of the learned judge warrants us in laying down as a leading proposition what follows:

1. He who first conceives of an invention is entitled to the patent for it over all others, provided he uses reasonable diligence in adapting and perfecting it.
This is not the occasion for discussing the soundness of the interpretation which Judge Story put upon the statute. The doctrine which he announced, and which has been just stated, has been repeatedly recognized, and has never been impeached. This will be seen from the quotations hereafter given, especially those taken from Johnson v. Root, infra 605, and Ransom v. Mayer, infra 605. See also Phelps v. Brown, 1 Fish. 479; Cox v. Griggs, 2 Id. 74; White v. Allen, Id. 440, p. 445; Reeves v. Keystone Bridge Co., Off. Gazette for 1872, p. 466. It is useless to cite authorities further upon a point so often approved, and never called in question.

There are two or three matters under this head which should be now fully noticed.

1. One of these is the inquiry how far the inventor may go back in fixing the date of his invention? In other words, to what extent must his conceptions have become matured in order to give him a title to it over all who make the discovery afterward, and reduce it to practice, provided he has been duly assiduous in completing it? There are two or three expressions of judicial opinion, which may give us aid in answering these inquiries.

In Adams v. Edwards, 1 Fisher, Judge Woodbury announced his views as follows: "It must be the idea struck out, the brilliant thought obtained, the great improvement in embryo. He must have that; but if he has that he may be years improving it, maturing it. It may require half a life. But in that time he must have devoted himself to it as much as circumstances allow. But the period when he strikes out the plan which he afterward patents, that is the time of the invention; that is the time when the discovery occurs." p. 8. The same learned judge uttered his sentiments thus, in Colt v. Mass. Arms Co., 1 Fisher 108: "The date of the invention is the discovery of the principle involved, and the attempt to embody that in some machine." p. 120. Perhaps the clearest declaration of the true rule is that of Judge Lowell, in Woodman v. Stimpson, 3 Fish. 98: "Neither does it mean the first moment at which he conceived the idea that it would be a good thing to do that. It means not only when he conceived that such a thing would be a desirable thing to do, but when he had conceived the idea of how to do it, substantially as he has done it." p. 105.

From these quotations it would appear that the earliest date of an invention, the time when the originator can first safely call it his own, provided he follows it up with suitable earnestness, is when he distinctly apprehends the principle
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upon which it is to operate, and the means by which it is to be carried into effect.

2. Another thing to be considered is the length of time which a man may spend in maturing his device, and still maintain his right to it over others who meanwhile light upon it and reduce it to practice. There is evidently no absolute limit to be measured by days or years, as was in effect observed by Judge Woodbury. No such limit can be prescribed; there may be machines so complicated as to take the originator all his days to complete them. Babbage, with his unsurpassed ingenuity and industry, left his most important one unfinished for want of time. Inventors of this order will not often have rivals, however; and controversies will rarely arise in which it will be necessary to give any such latitude to the rule. The character of the improvement will usually furnish a sufficient criterion as to the time which may be allowed for elaborating it. The inventor should undoubtedly have all that is fairly requisite for removing whatever difficulties hinder the successful working of his device. It seems reasonable, also, that he should be allowed to complete such other inventions as are connected with it so closely that they are essential to its advantageous operation.

There is but one qualification; the diligence must be reasonable. This is generally considered to admit of the pursuit being suspended when sickness, destitution, or other hindrances beyond control, prevent its being prosecuted. It must not be understood that a man may lay it aside while engaged in other occupations, because they are more promising. The following remarks of Judge Merrick, made in Wickersham v. Singer, Sup. Court of Dist. of Columbia, will bear repeating here, since they are almost the only ones pertinent to the subjects which have appeared in print.

"The measure of poverty, (property) "which one must possess before he is required to exercise any diligence to prosecute his rights is not to be found in the statute. It is an excuse very readily made, which yet should not be too readily listened to. If a man be utterly destitute of money, without friends, and incapable thereby of prosecuting an enterprise, much indulgence may be shown him; but where he has the means of carrying on enterprises of a kindred sort, equally demanding money and friends, and does carry them on, his election to pursue those other enterprises will not be regarded in the law as an excuse for the delay in the one where valuable rights of others, equally meritorious as himself, and in the outset of their successful struggle, equally poor, are to be prejudiced. An election thus made for his supposed advan-
tage or gratification at the time, according to the plainest principles of equity, must not be invoked to the detriment of another innocent party." This extract embodies in a very good degree the spirit which should govern in determining questions like those under consideration.

Nearly all the general principles which have been here advanced were recognized in Agawam Woolen Co. v. Jordan, 7 Wall. 583.

Where an invention is claimed by one party upon the ground that he had the idea of it at a certain period which is anterior to anything done by his antagonist, and that he exercised reasonable diligence afterward in perfecting it, his title cannot be prejudiced by showing that he had, in fact, conceived it at a still earlier date, but for a time neglected it. It will no doubt be sufficient in all such cases to show that a distinct apprehension of the principle of operation had been entertained before the other party had one, and that the reduction of it to practice had been sought for with proper industry. Where two rivals found their titles upon having been the first to conceive of the improvement, the contest will be determined in favor of the one who can show diligence without unreasonable interruption, extending back to the earliest period, provided he then had in view the germ of the device.

An impression prevails quite extensively that every one who has the idea of some new invention is entitled to take two years for completing it; that during that period no one else can forestall him of his right to a patent by reducing it to practice, though he has utterly neglected it meanwhile. This is evidently derived from the 24th section of the act of 1870, corresponding to the provision in the 7th section of the act of 1839. In this section, certain conditions are prescribed which must be complied with in order to obtain a patent, and among them is the following: That the invention shall not have been "in public use or on sale for more than two years prior to his application." That is, the office shall take no advantage of the applicant's having sold his invention, or used it openly, for that space of time, nor charge him on that account with having abandoned it. This does not afford the least ground for the impression which has been mentioned. It relieves an inventor to some extent from the presumption of having donated his discovery to the public, which would otherwise arise from his selling or using it. But it does not dispense with his using reasonable diligence in perfecting it, nor remit the penalty attached to his negligence. It waives the right of the public to insist upon the
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forfeiture he incurs by such sale or use, but it does not interfere between him and his rivals, nor undertake to impair the right they may acquire by their superior diligence. The first to invent is *prima facie* entitled to a patent. The law says, however, that one who conceived it previously shall be preferred to him, upon this condition, that he has used reasonable diligence in adapting and perfecting. Is this condition dispensed with, because the statute relieves one who has sold or used the invention for two years from the charge of having abandoned it? There is not the remotest connection between these several provisions of the statute; and there is no foundation for the notion that the inventor who wishes to maintain his title to a device which has occurred to him, need not enter upon the elaboration of it for two years.

II. The next in right among several claimants of an invention, is he who was the first to reduce it to practice. *Prima facie*; as it is sometimes expressed, the first to put in practice is the one entitled to a patent. He gives place to no one else except the one whose title has been already discussed. Even a patent in the hands of his rival cannot prejudice him. This was so well asserted by Judge Sprague, in *Johnson v. Root*, 1 Fish. 351, that his language should be repeated: "If gentlemen, the invention was perfected, as I have already said, or if not perfected, if Mr. Johnson used reasonable diligence to perfect it, then he had a right to have it incorporated into his patent, and to supersede those who had intervened between his first invention, or discovery, and his subsequent taking out of his patent. If he had not perfected it, and did not use due diligence to carry it into effect, and in the meantime, before he got his patent, somebody else had invented, and used, and incorporated into a useful, practical machine that mode of feeding, then he could not by a subsequent patent appropriate to himself what was embraced in the former machine, between his caveat and the obtaining of his patent," p. 369. Here we have recognized not only the superior right of the first to conceive who has been industrious in maturing, over one who was first to reduce to practice, but also the superior right of the latter over the first to conceive, if he has been remiss, as well as over the patentee. The same views were enunciated by Judge Hall, in *Ransom v. Mayor*, 1 Fish. 252, as this excerpt from his decision will show: "If the plaintiff did not use reasonable diligence to perfect the invention patented after the idea of it was first conceived, and in the meantime other persons not only conceived the idea, but perfected the invention, and practically applied it to public use, before the invention of the plaintiff
had been so far perfected that it could be applied to practical
use, the plaintiffs' patent is void, because they were not the
first and original inventors of the thing patented." p. 272. It
is unnecessary to make other citations to establish the doc-
trines set forth in the previous pages, or to explain them.

It is not proposed to inquire at this time wherein consists
that perfecting an invention, or putting it in use, or reducing
it to practice, which is spoken of in the extracts which have
been given. The examination of that subject is relegated
to another occasion. It is enough for the present pur-
pose to say, that it undoubtedly requires that the inven-
tion should be embodied in a practical working machine, ca-
pable of being operated for actual business, if the invention
admits of it. The weight of authorities is decidedly in favor
of requiring, further, that the machine should also have been
employed in actual work. They do not seem, however, to
require that this use should have been in public, as they
should, in order to be consistent with themselves, as well as
in accordance with the system of patent laws.

It has probably been observed that only two stages of ma-
turity to which an invention may be brought are recognized
in these pages, thus far, as having any bearing upon the rights
of the inventor; one in which he has distinctly conceived
of the principle of operation upon which he ultimately attains
his object. His right to do it at this time is contingent, and
depends upon his diligence in bringing it to perfection. The
other is when he has made a practical working machine, em-
bodying his idea, and has employed it in actual operation.
His title to it is then absolute, and can never be impugned by
any subsequent discoverer. This is undoubtedly the doctrine
to be gathered from the decisions of the courts. Nothing
short of what is technically called a reduction to practice,
previously achieved, will enable one to sustain a patent
against a prior patent. And whenever a patent is assailed
on the ground that others had made the invention before the
patentee, the defense has always been held to strict proof that
the previous invention was in like manner reduced to prac-
tice. In support of this, it is enough on this occasion to quote
the language of Judge SPRAGUE, in Howe v. Underwood, 1
Fish. 160: "This is important to be understood, because the
idea has been carried all along, that if a prior inventor has
gone to a certain extent, although he fall short of making a
complete machine, practically useful, those who come after
have no right to secure to themselves the advantage of the
invention. This is not law." p. 166. If, indeed, either party
relies upon having conceived the idea before the other, and
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upon having used diligence in perfecting it, that removes the controversy to another field. It then becomes the question which of them can show a continual exercise of such diligence from the earliest date. The stage of perfection at which the improvement had then arrived is of no consequence, provided that the idea upon which it depends was distinctly apprehended. This is one of the periods to which the law attaches significance. The only other one recognized in our judicial tribunals is when it has been carried into practice.

III. The rights of patentees are next to be considered.

These require no support from decisions. They are embodied in the grant, and are established and defined under the authority of the national legislature. They need only to be discussed in order to determine under what circumstances they must yield before those of a competitor. It is not the design of this paper to treat of all the defenses which may be set up against an action for an infringement. But we have seen that a patentee must give way before one who has reduced the invention to practice, and that both must yield to the one who has conceived before either of them, and has been industrious in bringing it to perfection.

Although an inventor has no remedy against those who use his discovery until he obtains a patent, without which he has, indeed, no rights in it which the law will recognize, it is by no means essential that he should have one in order to defeat a suit brought by another patentee, who made the invention after him. It is enough to show in defense that he reduced the invention to practice before the plaintiff. As was said by Judge WOODBURY, in Colt v. Mass. Arms Co., 1 Fish. 108: "The foundation is struck from under the feet of the plaintiff if the defendant is able to show that there were prior machines used containing the principle involved in the plaintiff's. It is no matter whether those prior inventions were patented or not, if they existed, if they were discovered, if they were used." p. 115. Judge STORY gave utterance to a similar opinion in Bedford v. Hunt, 1 Mason 302: "And to the present defendant it is perfectly indifferent whether the first inventor has taken out a patent, or has dedicated the invention to the public, or not; for he may stand upon the defense that the plaintiff is not the first inventor who put the invention to use." p. 304.

The subject of priority of invention has been discussed thus far only as it has been adjudicated upon in the courts; and to this extent the law seems to be free from any serious doubt. The only uncertainty which rests upon it is to be found in determining what constitutes a reduction to
practice, and that matter is to be examined hereafter, in an-
other article. When we come to inquire how controversies
between rival inventors are settled in the Patent Office, we
shall find more room for doubt.

I do not propose at present to examine at length into the
decisions of the Patent Office, and of the Appellate Tribunal,
the District Court, now the Supreme Court of the District
of Columbia. It would not be easy to reconcile them, nor is
it all-important for our purpose. It is sufficient to deduce
from them two rules which may be considered as well estab-
lished in former times, although not so extensively applied
now as they have been.

One of these is that the earliest one to apply for a patent
is presumed to be the first inventor, until the contrary is
shown in evidence. There is this sound reason for the rule;
the very filing of an application containing a full description
of the invention is conclusive proof that the invention has
been perfected. Unless a practical, effective apparatus is set
forth, it should not be entertained; its deficiency in this re-
spect is sufficient cause for its rejection. This is in strict
accordance with the ruling of the courts, that unless the
specification describes a complete and practical apparatus, the
patent is void. Reed v. Cutter, 1 Story 590; Washburn v.
Gould, 3 Id. 33; Woodcock v. Parker, 1 Gall. 121; Sickler v.
Borden; 3 Blatchf. 535; White v. Allen, 2 Fish. 445; Seymoure.
Gall. 121; Sickler v. Borden, 3 Blatchf. 535; White v. Allen, 2 Fish. 445; Seymour
v. Osborne, 11 Wall. 515, 552. The same principle has lately
been recognized by the Commissioner of Patents; Duchemin
v. Richardson, Commr. Dec. 1870, p. 31. The filing of an
application is, furthermore, the most effectual step toward
communicating the benefits of the discovery to the world.
It has, in fact, all the merits that a reduction to practice was
previously intended to secure. Accordingly, it is sometimes
spoken of as a reduction to practice, and regarded as vesting
the same rights and privileges in the applicant.

The other rule to be eliminated from the proceedings of
the Patent Office, is that in order to establish priority of in-
vention it is necessary to show a reduction of the device to
form, consisting in the embodiment of it in some such shape
that an artisan in that branch could construct the apparatus
from it, or practice the process contemplated. In this respect
it is in accordance with several decisions which require that
a specification, or published description, which is relied upon
to defeat a patent, should be equally full and explicit. It is
natural to speak of such an embodiment as a reducing of an
invention to form, and hence to infer that this is all that is
intended when the phrase is used in the reports. It signifies
something more in them, however, and is employed as synonymous with reducing to practice. Judge Story, for instance, says in Reed v. Cutter, 1 Story 590: "In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive and practical form, would seem to be entitled to a priority of right to a patent therefor." p. 599. On the other hand, he says in the same case: "Under our patent laws, no person, who is not at once the first as well as original inventor, by whom the invention has been put in actual use, is entitled to a patent." p. 596. So that to entitle himself to a patent by reducing his idea to form, the inventor must also have put it in actual use.

However just and well founded these rules may be, when properly applied, there can be no doubt but that they have been carried too far on some occasions. When the title of a patentee has been set aside, and the rights of one who has been the first to put an invention in actual use have been disregarded in favor of him who had merely made a drawing, or a model showing the device, it is evident that the decisions of the courts have been entirely overlooked, and the office has proceeded in granting patents upon principles altogether different from those which prevail in the judicial tribunals of the country.

When a judge is considering the validity of a patent which has been assailed for want of novelty in the invention, and when the Patent Office is called upon to determine whether it will issue a patent for an invention for which it has already granted one, or which of two competitors shall have one, the decision of both tribunals should be governed by the rights of the parties. No one will suppose that those rights are modified in consequence of their being tried by one rather than the other. They depend on the law, which is the same wherever it is expounded. A different rule would not be tolerated in any civilized community; a rule which should give a man a title when considered in one place, which would be denied him if considered in another, making his title depend not on any uniform principle of universal prevalence, but on the scene where the investigation of it was conducted.

Admit such a practice, and the result would follow that on same occasions the Patent Office would grant monopolies which the courts would not only refuse to enforce, but would declare void. In others it would refuse a patent to the only person who would be considered in the courts to be entitled to it. Upon an interference, for instance, it would decide in favor of an applicant who had made a drawing before his adversary, although the latter held a patent, and had perfect-
ed it and engaged in the manufacture before the other had taken another step. Yet upon a suit for infringing the patent obtained by such an applicant, it would be condemned as invalid without hesitation. If in a similar controversy the applicant should show that he reduced the invention to practice before the patentee opposed to him, he would be defeated, if the latter was the first to make a sketch of it, or even describe it intelligibly. Yet in an action by the latter, he would be told on the same state of facts, that he had no title to the invention; that it belonged in fact to his adversary. It is only because such views as these are widely entertained, and insisted on, that they are noticed at such length. Yet it was long ago said by a judge of the Appellate Court, Merrick, in Wickersham v. Singer, that "it would be strange indeed to construe the law as requiring the commissioner to issue a patent upon a state of the case, which, when next day made apparent to a court of law or equity, would require that court to pronounce the patent utterly void." In conformity with this is the language of Toucey, Atty. Gen.: "It is impossible that an executive officer should regard that as an objection to the grant of a patent which the courts of law are bound to overrule as unavailable." 5 Op. of Atty. Gen. 18.

It can hardly be necessary to add, that the decisions of the courts, the constituted expositors of the law, ought to be binding upon the office, and to over-ride its conclusions. Beside all this, they are, in fact, vested with direct authority to reverse its action where they have refused a patent.

This has come to be recognized of late in the office, and several decisions of the commissioner, within two or three years, have followed the decisions of the courts in those particulars in which they were once disregarded. Among them may be cited the cases of Duchewin v. Richardson, Comm. Dec., for 1870, p. 31; and Gray v. Hale, Id. for 1871, p. 129. Resting upon them as authority, it may be considered safe to lay down the following as rules which will govern the practice in cases of interferences, since they are in conformity with the rulings of the courts.

1. Where one of the parties to an interference appears to have conceived the idea of the invention before the others, and to have exercised reasonable diligence in adapting and perfecting it until he had reduced it to practice, he must be held entitled to a patent above all competitors. Even though any one has reduced it to practice before him, or has obtained a patent, or first applied for one, it will not avail him against such a claim.

2. Where no one can maintain such a claim, the party
who first reduced the invention to actual practice must be pronounced the prior inventor, although his competitor has a patent.

3. No one can be adjudged to have anticipated a patentee who did not either reduce the invention to practice before him, or conceive it before him, and reduce it to practice with reasonable diligence.

Thus far we are in strict accordance with the law of the land, as expounded by its authorized tribunals. In what follows we have no such authority to guide us, but must be governed by principles drawn from the adjudicated cases and the practice of the office.

4. Where there has been no reduction of the invention to actual practice, and neither party has a patent, it would seem as if judgment ought to be given in favor of the one who first conceived the idea, and labored diligently upon it until he had so far matured it as to make a satisfactory application for a patent, provided this antedates the rival application. It would be more accurate perhaps to say that the one who carries back his diligent improvement of the invention to the earliest period should prevail. The filing of an application ought to be considered a constructive reduction to practice, and entitled to so much weight as this.

5. For the same reason it would seem that the title of the first applicant should yield only to those who had either reduced the invention to practice first, or conceived it first, and been industrious in elaborating it.

Both of these rules depend for their force entirely on their being in accordance with the principles of the system of patent law. They derive no support from the rulings of the courts, or the practice of the office. A patent granted in contravention of them would not be condemned probably by the courts on that account. They are suggested for the consideration of the office, and it depends entirely upon the commissioner whether they shall be adopted.

6. Where neither of the parties can show any such ground for a decision in his favor as has been pointed out, he must prevail who first produced such a delineation of the invention as would enable an expert in the art to embody it in a working machine, or an operative process. It is sufficient if he has done this in a machine capable of work for business purposes, in a working model, in drawings, or even, as it has been held, in an oral description.

7. In the absence of all other grounds upon which to determine such a controversy, it must be decided upon the presumption that the earliest applicant is the first inventor.

S. H. Hodges.