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the defendant to violate any law or to do any wrongful act. This, we think, clearly takes the case out of the principle of those above cited, and the measure of damages must, therefore, be the value of the timber at the time and at the place where it was cut.

The judgment must be reversed, and the case remanded to the Circuit Court for the District of Idaho, Southern Division, with directions to enter judgment in favor of the United States for the amount of the timber as stated in the answer, and for its value at the rate of \$1.50 per thousand feet.

So ordered.

UNITED STATES *ex rel.* STEINMETZ *v.* ALLEN.

ERROR TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

No. 383. Argued January 12, 13, 1904.—Decided February 23, 1904.

A rule of practice in the Patent Office when established by the Commissioner of Patents under section 483, Rev. Stat., constitutes, in part, the powers of the primary examiner and the Commissioner, and becomes to those officers an authority under the United States, and this court has jurisdiction under section 8 of the act of February 9, 1893, to review a final judgment of the Court of Appeals of the District of Columbia where the plaintiff in error assails the validity of such a rule.

Section 4886, Rev. Stat., gives a right, which is a substantial one, to join inventions which are related to each other in one patent and this right cannot be denied by a hard and fixed rule which prevents such joinder in all cases. Such a rule is not the exercise of discretion but a determination not to hear.

Rule 41 of Practice in the Patent Office, in so far as it requires a division between claims for a process and claims for an apparatus if they are related and dependent inventions, is invalid.

Mandamus is the proper remedy where the Commissioner of Patents has refused to require the primary examiner to forward an appeal to the board of examiners in chief to review the ruling of the primary examiner requiring the petitioner to cancel certain of the claims in his application.

THIS is a petition in mandamus filed in the Supreme Court of the District of Columbia to compel the Commissioner of

Patents to require the primary examiner to forward an appeal, prayed by the petitioner, to the board of examiners-in-chief, to review the ruling of the primary examiner requiring petitioner to cancel certain of his claims in his application for motor meters.

The Supreme Court dismissed the petition, and its action was affirmed by the Court of Appeals. This writ of error was then sued out.

The decision of the primary examiner was based upon rule 41 of practice in the Patent Office, and the case involves the validity of the rule under the patent laws.

The petitioner filed an application in the Patent Office, November 21, 1896, for a patent for "certain new and useful improvements in motor meters." He expressed his invention in thirteen claims. They are inserted in the margin.¹

¹ 1. The herein-described method of measuring alternating electric currents, which consists in setting up or establishing a shifting field of magnetism from three intersecting lines or axes of magnetization and adapted to actuate a rotatable armature in a motor meter arranged within the energizing coils producing said lines of magnetization.

2. The herein-described method of actuating an alternating-current motor meter, which consists in setting up or establishing a shifting field of magnetism from three intersecting lines or axes of magnetization and adapted to actuate a rotatable armature arranged within the energizing coils producing said lines of magnetization.

3. The herein-described method of actuating a single-phase alternating-current motor meter, which consists in setting up or establishing a shifting field of magnetism from three intersecting lines or axes of magnetization and adapted to actuate a rotatable armature arranged within the energizing coils producing said lines of magnetization.

4. The herein-described method of actuating an alternating-current motor meter, which consists in setting up or establishing a shifting field of magnetism by means of magneto-motive forces acting along three intersecting lines and subjecting an armature to the inductive action of said field.

5. The herein-described method of actuating an alternating-current motor meter, which consists in setting up or establishing a shifting field of magnetism by means of magneto-motive forces being proportional to the current and the other two to the electro-motive force, and subjecting an armature to the inductive action of said field.

6. The herein-described method of actuating an alternating-current motor meter which consists in setting up or establishing a shifting field of mag-

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The first six were held by the primary examiner to be claims for a process; the balance of the claims to be for an apparatus; and on the fifteenth of May, 1900, ordered that the latter, that is, claims 7, 8, 9, 10, 11, 12 and 13, be cancelled from the application. In other words, he required a division between the process claims and the apparatus claims in accordance with rule 41. That rule is as follows:

netism by means of magneto-motive forces acting along three intersecting lines, one magneto-motive force being proportional to the current and the other two to the electro-motive force, the several magneto-motive forces being so proportioned and related to each other that the resultant of the last two is displaced in phase from the first by the complement of the angle of lag, and subjecting an armature to the inductive action of said field.

7. In a Watt meter for alternating electric currents, means for producing a magnetic flux proportional to the current and varying in phase therewith, means for producing a second magnetic flux proportional to the electro-motive force and lagging in phase behind the same, and means for producing an auxiliary flux along a line at an angle to said second flux and of such magnitude and phase that the resultant of the two last-mentioned fluxes will lag behind the first by the complement of the angle of lag.

8. The combination in an electro motor of a field-magnet system and means for inducing therein magnetic fluxes of three phases, one a flux due to a series coil and proportional to the current, a second flux due to a shunt potential coil and lagging behind the electro-motor force, and a third flux lagging behind said second flux and having a fixed angular relation thereto such that the resultant of the second and third fluxes is dephased by substantially the complement of the angle of lag from the flux due to the series coil.

9. The combination in a recording electric meter of a field-magnet system acting on the armature and having a plurality of intersecting magnetic axes, means for inducing along one of said magnetic axes a flux proportional to the current and varying in phase therewith, and means for inducing along the other magnetic axes a plurality of other fluxes dependent upon the potential of the metered circuit, which lag behind the electro-motive force by different amounts and act upon the armature at different points, said fluxes being so proportioned in value and phase that their joint action upon the armature will enable the meter to register the true energy consumed in an alternating-current circuit without being substantially affected by changes of phase relation.

10. In a Watt meter for alternating currents, the combination of a field-magnet system having three intersecting magnetic axes, means for producing along one of said axes a magnetic flux proportional to the current and varying in phase therewith, means for producing along another of said axes an

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“41. Two or more independent inventions cannot be claimed in one application; but where several distinct inventions are dependent upon each other and mutually contribute to produce a single result, they may be claimed in one application.

“Claims for a machine and its product must be presented in separate applications.

“Claims for a machine and the process in the performance of

alternating flux proportional to the electro-motive force and lagging behind the same, and means for producing along the third axis an auxiliary magnetic flux also proportional to the electro-motive force, of such a magnitude and phase that the joint action of the several fluxes upon the armature will enable the meter to register the true energy consumed in an alternating-current circuit without being substantially affected by changes of phase relation.

11. In a meter for alternating currents, the combination of a field-magnet system having three intersecting magnetic axes, means for producing along one of said axes a magnetic flux proportional to the current and varying in phase therewith, means for producing along another of said axes an alternating flux proportional to the electro-motive force and lagging behind the same, and means for producing along the third axis an auxiliary magnetic flux also proportional to the electro-motive force and of such magnitude and phase that the joint action of the two potential fluxes upon the armature will produce a torque sufficient to overcome the static friction of the meter.

12. In a single-phase alternating current meter, the combination of a field-magnet system having three intersecting magnetic axes, a field coil in which the current phase varies as the conditions of the circuit change, producing a magnetization along one magnetic axis, a potential coil producing a magnetization along another magnetic axis, a reactance device in series with said potential coil for lagging the current behind the electro-motive force and a second potential coil depending for its current upon the first potential coil, producing a magnetization along the third magnetic axis; the two potential coils conveying currents which differ in phase from each other, and each generating a flux which acts upon the armature at a point removed from the point at which the flux due to the other potential coil acts upon the armature.

13. In an electric meter, the combination of a multipolar field-magnet structure having three magnetic axes, current coils mounted upon some of the field poles and producing a magnetization along one of said magnetic axes, potential coils mounted upon other field poles and producing a magnetization along another one of said magnetic axes, and other potential coils mounted upon a portion only of the last-named field poles, or some of them, and producing a magnetization along the third magnetic axis, and an armature acted upon by the flux induced by the field coils.

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which the machine is used must be presented in separate applications.

"Claims for a process and its product may be presented in the same application."

Petitioner persisted in his application as filed, and the primary examiner repeated his order for a division of the claims. Petitioner regarded such order as "a second final rejection" of his claims to the apparatus, and appealed therefrom to the board of examiners-in-chief. The primary examiner refused to answer the appeal and to forward the same with his answer thereto and the statements required by the rules of the Patent Office. Thereafter, on the twentieth of August, 1900, petitioner petitioned the Commissioner of Patents to direct the primary examiner to forward said appeal, which petition was denied. It was repeated to the present Commissioner, defendant in error, and by him denied on the seventh of February, 1902.

These facts constitute petitioner's claim to relief.

The answer of the respondent asserts the validity of rule 41, justifies the action of the Patent Office, alleges that petitioner is estopped from contesting the orders of the primary examiner, and also alleges that those orders "did not involve the rejection of any claim or an action upon the merits of any claim made by the relator," as provided in rule 13, and that "the statutes and rule 133 of the rules of practice do not provide for an appeal to the examiners-in-chief from an examiner's requirement for division, and the examiners-in-chief have no jurisdiction to pass upon the question whether or not division should be required."

The answer presents also the following facts: Prior to making the order of May 15, 1900, to wit, on October 9, 1899, the primary examiner wrote a letter to petitioner regarding the division of the process claims and the apparatus claims, in accordance with rule 41, before further action would be given upon the merits of the case.

Petitioner replied December 15, 1899, requesting "that the

requirement for division be waived for the present," in order that his process claims be placed in interference with the claims of a patent to one Duncan. To this request the examiner answered:

"Pending the determination of the interference applicant may retain the method and apparatus claims in this case, but the acceptance of an interference on one of the method claims will be held by the office to be an election of the prosecution of the method claims, and further prosecution of the apparatus claims in this application will not be permitted."

Petitioner replied January 19, 1900, urging that the interference be declared, and on February 7, 1900, it was declared and decided in favor of petitioner. After the decision the examiner wrote the letter of May 15, 1900. These proceedings, respondent contends, constitute an estoppel.

The first ruling of the Commissioner of Patents upon the petition to require the primary examiner to respond to petitioner's appeal was as follows:

"Where applicant does not care to comply with the examiner's requirements in a matter of division such as is here involved, it has been the practice for the past thirty years to treat the question, not as one of merits and appealable to the examiners-in-chief, but as a proper matter for petition to the Commissioner. I see no reason for overturning this practice. This petition is denied."

The second order of the Commissioner, respondent, after reciting certain of the facts, concluded as follows:

"The requirement for division is purely a matter of form, not involving the merits of the claims, since the claims may be, and in the present case are, regarded as allowable. The examiner has not refused to grant a patent to this applicant upon any of the claims presented, but has merely required that they be included in two patents instead of one. It is a question of procedure or of the manner of securing the protection which is in controversy and not the right of the applicant to a patent upon any of the claims presented."

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"The examiner was right in taking the position that the question involved is not appealable to the examiners-in-chief, and although it is a general rule of law that the appellate tribunal is the one to determine whether or not it has jurisdiction when an appeal is taken to it, it is not considered necessary in the office practice to follow that practice strictly, since the Commissioner is the head of the office and has the final decision upon all questions arising within it and may settle questions of this kind upon direct petition. The examiner's decision upon the question whether or not an appeal to the examiners-in-chief is regular and proper is not final, since it may be reviewed by the Commissioner upon petition, but he has authority to pass upon that question in the first instance.

"The petition is denied."

Mr. Frederic H. Betts and Mr. Melville Church for plaintiff in error:

The fundamental and underlying question is whether an applicant for a method or process patent has the right to demand protection, in that patent, of all patentable inventions he is *compelled* to disclose in setting forth his new method or process?

So strongly does this question appeal to our inherent sense of justice and fair play, that we are inclined, at once, to an affirmative answer to it, especially in view of the known favor with which the inventor has always been regarded by the laws and courts of our country.

As to the indivisibility of patents for process and product, see *Powder Company v. Powder Works*, 98 U. S. 126. There is nothing in the statutes compelling division of process and apparatus. § 4886, Rev. Stat. See *Merrill v. Yeomans*, 94 U. S. 568; *The Telephone Case*, 126 U. S. 1; *Hoyt v. Horne*, 145 U. S. 302; *The Fire Extinguisher Case*, 21 Fed. Rep. 40, and cases cited p. 440.

In the Patent Office, different Commissioners have ranged

themselves on opposite sides of this question of the necessity of division between process and apparatus.

Division according to the so-called statutory requirement has been insisted upon by Commissioners Butterworth, Hall and Duell, and the contrary view has been vigorously maintained by Commissioners Montgomery, Mitchell and Simonds. Commissioner Butterworth gave expression to his views in the *Blythe Case*, 1885, C. D. 82; Commissioner Hall in *Herr's Case*, 1887, C. D. 105; Commissioner Montgomery in *Young's Case*, 1885, C. D. 108; Commissioner Mitchell in *Lord's Case*, 1890, C. D. 16; Commissioner Simonds in *Curtis' Case*, 1891, C. D. 206, and in *Kerr's Case*, 1892, C. D. 61; and Commissioner Duell in *Boucher's Case*, 1899, C. D. 133.

As to *Boucher's* case, however, see *James v. Campbell*, 104 U. S. 356, where an apparatus patent was reissued into a process patent and the latter was declared invalid; *Powder Co. v. Powder Works*, 98 U. S. 136, where a process patent was reissued into a product patent and the latter was declared invalid; *Miller v. Brass Co.*, 104 U. S. 350; *Parker & Whipple Co. v. Yale Clock Co.*, 123 U. S. 87, *Hoskins v. Fisher*, 125 U. S. 217, *Yale Lock Co. v. James*, 125 U. S. 447, and many subsequent cases where machines or apparatus patents, with narrow claims, were reissued into machines or apparatus patents, with broad claims, and the latter were declared invalid. *Hogg v. Emerson*, 6 How. 483, distinguished, and see *Hogg v. Emerson*, 11 How. 587.

The tendency on the part of the Patent Office to require too much subdivision of invention is strongly condemned in *Johns Mfg. Co. v. Robertson*, 89 Fed. Rep. 506.

There are many evils that grow out of requiring an inventor to take two distinct patents, one for his process and the other for his machine for carrying that process into effect.

Amongst others it gives no opportunity to the inventor to claim, in a single patent, an invention, in both aspects, where doubt exists, whether the real invention is a process or a machine. That question arose in *Boyden v. Westinghouse*, 170

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U. S. 537. The cost is increased to the inventor too by the payment of double fees.

The protection of the inventor has always been a matter of special solicitude on the part of Congress, and Congress never intended that the cost of a patent should depend upon the whims of commissioners of patents.

When Congress fixes the cost of a patent the commissioner has, plainly, no authority to add a dollar thereto. No usage in regard to making an excess charge can legalize it, and the excess can be recovered by suit. *Ogden v. Maxwell*, 3 Blatch. 319; *S. C.*, Fed. Cas. No. 10,458; *Swift & Courtney Co. v. United States*, 111 U. S. 22.

The Commissioner's power to make mere regulations cannot be used as a cloak for requiring the division and separate patenting of the parts of a really unitary and indivisible invention, nor for exacting a double set of fees from an applicant.

In no adjudicated case is the so-called discretionary power of the Commissioner, as to requiring division of applications for original patents, directly in judgment. The cases in respondent's brief below, *Bennett v. Fowler*, 8 Wall. 445, and *McKay v. Dibert*, 19 O. G. 131; 5 C. D. 1881, 238, do not reach to the point.

The rule is arbitrary, by requiring division without any determination whatever of the question of right to the claims. No discretion has been exercised in dealing with the application and determining whether it is of such a character that its process and apparatus are or are not dependent, or so disunited as to require division. The examiner has declined to look into the application. He held himself bound by a hard and fast rule.

The examiners, the examiners-in-chief, and the Commissioner, acting as an appellate tribunal, are all judicial officers, *Butterworth v. Hoe*, 112 U. S. 50; *United States v. Duell*, 172 U. S. 576, and the duty of determining whether an application contains claims for inventions which "are dependent upon each other and mutually contribute to produce a single result,"

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or even of deciding whether the claims, in a given case, are all for a process or all for a machine, or are some for a process and some for a machine, a question that bothered this court in *Boyden v. Westinghouse*, 170 U. S. 537, is clearly a judicial duty, involving, oftentimes, the nicest application of the rules for the interpretation of patents.

The inventor has an inherent right to a single patent covering all he is compelled to disclose as the condition of the grant to him of any protection. There being no statutory authority to require him to divide up his invention and take multiple patents for its parts, whenever an application for patent is a second time refused by the primary examiner because it contains claims to a process that can only be practiced by the use of a certain machine and also claims to the machine for practicing such process, the applicant is entitled to an appeal from the examiner's ruling, to all the statutory appellate tribunals, in turn, and upon a favorable decision of any of such tribunals, is entitled to have a patent issued to him.

The relator's right of appeal has accrued under the statute. § 482.

The decision of the primary examiner complained of was *adverse* enough. It certainly was not favorable. It barred, and still bars, the progress of the application.

It has been "rejected" in the sense in which that word is used in the section.

In the interpretation of statutes it is a general rule that common words are to be given their plain, ordinary, popular meaning. Tested by this rule we find the word "reject" (*rejectus*, to throw back) to be universally used as the equivalent of "refuse," especially when used to indicate a denial of a petition or request. As to effect of "refusal," see *Gaudy v. Marble*, 122 U. S. 432; *Butterworth v. Hoe*, 112 U. S. 50.

If rule 133, regulating appeals, adds any conditions of appeal not found in the statute it is null and void. §§ 482, 4909, Rev. Stat.

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Rejections for or without reason, and rejections upon the merits of the invention or otherwise, are equally within their purview, and the Commissioner, by rule, can add nothing to nor subtract anything from the statutory requirements, to the prejudice of an applicant. *Com'r of Patents v. Whately*, 4 Wall. 552; *Morrill v. Jones*, 106 U. S. 466; *Tracy v. Swartwout*, 10 Pet. 80; *Kurtz v. Moffit*, 115 U. S. 487; *Teal v. Fulton*, 12 How. 285; *Anchor v. How*, 50 Fed. Rep. 367; 6 Op. Atty. Gen. 38.

The refusal or rejection of an application, or of any of the claims thereof, under a rule of practice, is not different, in kind, from a refusal or a rejection under the statute itself, and is appealable.

The rules of the office made pursuant to statutory authority, and not inconsistent with law, have all the force and authority of the statute itself, and are, so long as they remain unrepealed, as binding upon the office as they are upon applicants. *United States v. Eliason*, 16 Pet. 291; *Gratiot v. United States*, 4 How. 80; *In re Hirsch*, 74 Fed. Rep. 931; *Wilkins v. United States* (C. C. A.), 96 Fed. Rep. 837; *James v. Germania Iron Co.*, 107 Fed. Rep. 597, 609; *Dist. of Col. v. Roth*, 18 App. D. C. 547; *Rio Grande Irrigation Co. v. Gildersleeve*, 174 U. S. 603.

Mandamus is the proper remedy.

Any interference with a right of appeal is never tolerated and mandamus is the proper remedy to remove any obstruction to the exercise of the right. *United States v. Gomez*, 3 Wall. 752; *Ex parte Zellner*, 9 Wall. 244; *Vigo's Case*, 21 Wall. 648; *Ex parte Jordan*, 94 U. S. 248; *Ex parte Cutting*, 94 U. S. 14; *Ex parte South, etc., R. R. Co.*, 95 U. S. 221; *Com. of Patents v. Whately*, 4 Wall. 522.

Mr. Assistant Attorney General McReynolds, with whom *Mr. John M. Coit* was on the brief, for defendant in error:

The validity of an authority exercised under the United States is not here drawn in question and this court has no

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jurisdiction. *Balt. & Pot. R. R. Co. v. Hopkins*, 130 U. S. 211, 226; *United States v. Lynch*, 137 U. S. 280, 285; *South Carolina v. Seymour*, 153 U. S. 353, 360; *Linford v. Ellison*, 155 U. S. 503.

The action of the Court of Appeals was right on the merits.

The Commissioner decided, upon petition to him, the matter which had been ruled upon by the primary examiner. Mandamus will not lie to compel him now to refer it to a lower tribunal in his own office.

It is fundamental that mandamus will not issue against a public officer except to compel the performance of some plain, clear, ministerial duty, and will not issue to control his discretion. *Decatur v. Paulding*, 14 Pet. 515; *Mississippi v. Johnson*, 4 Wall. 475; *Redfield v. Windom*, 137 U. S. 636; *Dunlap v. Black*, 138 U. S. 636.

Where it is the duty of the officer to pass upon a question, mandamus may be used to compel him to decide, but not to compel him to decide in any particular way, nor to set aside a ruling already made.

The Commissioner of Patents is not simply an appellate tribunal, he has power to refuse a patent. *Whitely Case*, 4 Wall. 522; *Butterworth v. Hoe*, 112 U. S. 50.

No appeal from the ruling of the primary examiner to the examiners-in-chief was permissible in any view of the case. *Bostwick v. Brinkerhoff*, 106 U. S. 3; *Butterworth v. Hoe*, 112 U. S. 50.

The decision of the examiner did not reach the merits.

Division is not required upon the ground that the patent covering two inventions, if granted, would be declared invalid. No question as to validity is involved, since the courts have never declared a patent invalid because of the joinder of distinct inventions. Division, therefore, involves no question of merits. *Ex parte Yale*, C. D. 1869, 110; *Bennett v. Fowler*, 8 Wall. 445; *Ex parte Medford*, C. D. 1883, 95; O. G. 881.

These cases announce the construction of the law which

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has always been followed. *Ex parte Fejel*, 57 O. G. 409; *Ex parte Everson*, 68 O. G. 1381; *Ex parte Burgess*, 64 O. G. 1759; *Ex parte Demeny*, 64 O. G. 1649.

Substantial rights are not affected and to have a right of appeal the examiner's action must affect inventor's interests adversely and not merely embarrass a stranger.

Process and apparatus are independent. *Cochrane v. Deemer*, 94 U. S. 780, 788; *Corning v. Burden*, 15 How. 252, 268; *James v. Campbell*, 104 U. S. 356, 376; *Heald v. Rice*, 104 U. S. 736, 753; *Tilghman v. Proctor*, 102 U. S. 702, 728; *Rubber Co. v. Goodyear*, 9 Wall. 788, 796; *Ex parte Lord*, 50 O. G. 987; C. D. 1890, 16.

This has been the long established practice of the Patent Office and as such is entitled to great weight. *Bate Refrigerating Co. v. Sulzberger*, 157 U. S. 1, 34. There have been differences of opinion as to when division should be required, some holding that division should always be required between process and apparatus, *Ex parte Blythe*, 30 O. G. 1321; C. D. 1885, 82; *Ex parte Herr*, 41 O. G. 463; C. D. 1887, 105; *Ex parte Boucher*, 88 O. G. 545; and *Ex parte Frasch*, 91 O. G. 459, and others holding the question depended upon the circumstances of each case. There has never been a difference of opinion, however, upon the question whether division affects the merits and is an appealable matter. *Ex parte Chambers*, 51 O. G. 1943; C. D. 1890, 101; *Ex parte Billingrodt*, 54 MSS. Dec. 474, distinguished by *Ex parte Everson*, *Ex parte Demery*, *supra*.

MR. JUSTICE MCKENNA, after stating the case as above, delivered the opinion of the court.

1. The jurisdiction of this court to review the judgment of the Court of Appeals is questioned. There is no money in dispute nor anything to which a pecuniary value has been given. Jurisdiction is claimed under the clause of section 8 of the act of February 9, 1893, which gives an appeal to this court from the final judgment or decree of the Court of Appeals in cases in

which there is drawn in question the validity of "an authority exercised under the United States."

By section 483 of the Revised Statutes, the Commissioner of Patents, subject to the approval of the Secretary of the Interior, is empowered to establish from time to time regulations not inconsistent with law, for the conduct of proceedings in the Patent Office. The Commissioner of Patents, exercising the power conferred, established, among other rules of practice, rule 41. It thereby became a rule of procedure and constituted, in part, the powers of the primary examiner and Commissioner. In other words, it became an authority to those officers, and, necessarily, an authority "under the United States." Its validity was and is assailed by the plaintiff in error. We think, therefore, we have jurisdiction, and the motion to dismiss is denied.

2. The issue is well defined between the parties, both as to the right and remedy, in the Patent Office. As to right, petitioner contends that a union by an inventor of process and apparatus claims, which are essentially the same invention, is given by the patent laws, and that rule 41, so far as it takes that right away, is repugnant to those laws and invalid. As to remedy, that the decision of the primary examiner constituted a final decision upon the case, and petitioner was entitled to an appeal under the patent laws to the board of examiners-in-chief. The latter proposition depends upon the first. Assuming the right in an inventor as expressed in the first proposition, the primary examiner denied the right. True, a distinction can be made between his ruling and one on the merits, if we regard the merits to mean invention, novelty or the like. But in what situation would an applicant for a patent be? If he yield to the rule he gives up his right of joinder. If he does not yield he will not be heard at all, and may subsequently be regarded as having abandoned his application. Section 4894, Rev. Stat. A ruling having such effect must be considered as final and appealable. Whether, however, to the examiners-in-chief or to the Commissioner, and

from the latter to the courts, we may postpone answering until we have considered the right of an inventor to join process and apparatus claims in one application.

Section 4886 of the Revised Statutes of the United States provides as follows:

"Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceedings had, obtain a patent therefor."

There is nothing in the language of the section which necessarily precludes the joinder of two or more inventions in the same application. But the section does distinguish inventions into arts (processes), machines, manufactures and compositions of matter, and the earliest construction of the law denied the right of joinder. An exception, however, came to be made in cases of dependent and related inventions.

In *Hogg v. Emerson*, 6 How. 437, it was said:

"The next objection is, that this description in the letters thus considered covers more than one patent and is therefore void.

"There seems to have been no good reason at first, unless it be a fiscal one on the part of the government when issuing patents, why more than one in favor of the same inventor should not be embraced in one instrument, like more than one tract of land in one deed or patent for land. *Phill. Pat.* 217.

"Each could be set out in separate articles or paragraphs, as different counts for different matters in libels in admiralty or declarations at common law, and the specifications could be made distinct for each and equally clear.

"But to obtain more revenue, the public officers have gen-

erally declined to issue letters for more than one patent described in them. *Renouard*, 293; *Phill. Pat.* 218. The courts have been disposed to acquiesce in the practice, as conducive to clearness and certainty. And if letters issue otherwise inadvertently to hold them, as a general rule, null. But it is a well established exception that patents may be united, if two or more, included in one set of letters, relate to a like subject, or are in their nature or operation connected together. *Phil. Pat.* 218, 219; *Barret v. Hall*, 1 *Mason*, 447; *Moody v. Fiske*, 2 *Mason*, 112; *Wyeth et al. v. Stone et al.*, 1 *Story*, 273."

This language would seem to imply that not the statute but the practice of the Patent Office required separate applications for inventions, but the cases cited were explicit of the meaning of the statute. Mr. Justice Story, in *Wyeth v. Stone*, said:

"For, if different inventions might be joined in the same patent for entirely different purposes and objects, the patentee would be at liberty to join as many as he might choose, at his own mere pleasure, in one patent, which seems to be inconsistent with the language of the patent acts, which speak of the thing patented, and not of the things patented, and of a patent for invention, and not of a patent for inventions; and they direct a specific sum to be paid for each patent."

But he confined the requirement to independent inventions, and his illustrations indicated that he meant by independent inventions not those which, though distinct, were "for the same common purpose and auxiliary to the same common end."

Hogg v. Emerson came to this court again, and is reported in 11 *How.* 587. Of one of the objections to the patent the court said:

"It is that the improvement thus described is for more than one invention, and that one set of letters patent for more than one invention is not tolerated by law.

"But grant that such is the result when two or more inventions are entirely separate and independent, though this is doubtful on principle, yet it is well settled in the cases formerly cited, that a patent for more than one invention is not void if

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they are connected in their design and operation. This last is clearly the case here."

Many other cases are to the same effect.

Can it be said that a process and an apparatus are inevitably so independent as never to be "connected in their design and operation?" They may be completely independent. *Cochrane v. Deener*, 94 U. S. 780. But they may be related. They may approach each other so nearly that it will be difficult to distinguish the process from the function of the apparatus. In such case the apparatus would be the dominant thing. But the dominance may be reversed and the process carry an exclusive right, no matter what apparatus may be devised to perform it. There is an illustration in the *Telephone Cases*, 126 U. S. 1. The claim passed upon in those cases was as follows:

"The method of, and apparatus for, transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth."

The claim was held to refer to the art described, and the means of making it useful. The court observed:

"Other inventors may compete with him for the ways of giving effect to the discovery, but the new art he has found will belong to him and those claiming under him during the life of his patent."

A distinction between the process and the means employed for using it was recognized. It was said:

"The patent for the art does not necessarily involve a patent for the particular means employed for using it. Indeed, the mention of any means, in the specification or descriptive portion of the patent, is only necessary to show that the art can be used; for it is only useful arts—arts which may be used to advantage—that can be made the subject of a patent."

The patent was sustained. It was not attacked because it embraced independent inventions. The fact is not without

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force. Considering the ability of counsel engaged and the division of the court in opinion, it is a proper inference that no tenable objection to the patent was overlooked.

It is said by Robinson, in his work on patents, that "special rules which govern the joinder of arts or processes with each other or with related inventions of a different class, are more stringent in the Patent Office than in the courts." (Section 473, vol. 11, Robinson on Patents.) And the author deduces the conclusion that under the rules of the Patent Office a process cannot be "joined with the apparatus that performs it, nor either of these with the product in which they result, unless they are to such an extent inseparable that the existence of some one of them is dependent upon that of the others." But rule 41 precludes even this.

If there is a divergence of views between the courts and the Patent Office and the divergence proceeds from a different interpretation of the statute, the views of the courts ought to prevail. If the courts, however, have only recognized and enforced the exercise of a discretion of the Patent Office, the question occurs, what is the extent of such discretion and can it be expressed and fixed in an inflexible rule such as rule 41? In *Bennet v. Fowler*, 8 Wall. 445, a discretion in the Patent Office was recognized. The question arose upon the validity of two reissued patents for improvements, which "had been embraced in one, in the original patent." The court said:

"It may be, that if the improvements set forth in both specifications had been incorporated into one patent, the patentee taking care to protect himself as to all his improvements by proper and several claims, it would have been sufficient. It is difficult, perhaps impossible, to lay down any general rule by which to determine when a given invention or improvements shall be embraced in one, two, or more patents. Some discretion must necessarily be left on this subject to the head of the Patent Office. It is often a nice and perplexing question."

Some discretion is not an unlimited discretion, and if the

discretion be not unlimited it is reviewable. In other words, the statute gives the right to join inventions in one application in cases where the inventions are related, and it cannot be denied by a hard and fixed rule which prevents such joinder in all cases. Such a rule is not the exercise of discretion; it is a determination not to hear. No inventor can reach the point of invoking the discretion of the Patent Office. He is notified in advance that he will not be heard, no matter what he might be able to show. His right is denied, therefore, not regulated. Such is the necessary effect of rule 41, as amended.

Without that rule the action of the Patent Office can be accommodated to the character of inventions, and discretion can be exercised, and when exercised, we may say in passing, except in cases of clear abuse, the courts will not review it. But the rule as amended, as we have said, precludes the exercise of any judgment and compels the separation of claims for a process and claims for its apparatus, however related or connected they may be. And the right denied is substantial. Counsel for petitioner have explained that right by the embarrassments caused by its denial, one of which is that, by disclosing the apparatus in his application for the process, he might lose the right to and a patent for the apparatus, and to sustain that view *James v. Campbell*, 104 U. S. 356, is cited. We are not prepared to admit such consequences nor that *James v. Campbell* so decides. If the classification of the statute makes a distinction between the different kinds of inventions—between a process and an apparatus—and requires or permits a separate application for each, it would seem to follow irresistibly that an application and patent for one would not preclude an application and patent for the other, and the order of the application could not affect the right which the law confers. *James v. Campbell* was a case of reissued patent, and by express provision of the statute as to reissued patents no new matter can be introduced in them. In other words, the reissue is to perfect, not to enlarge, the prior patent. Whether the principle of the case applies to

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related as well as to independent inventions is not clear from its language. The court said:

“Where a new process produces a new substance, the invention of the process is the same as the invention of the substance, and a patent for the one may be reissued so as to include both, as was done in the case of Goodyear’s vulcanized rubber patent. But a process, and a machine for applying the process, are not necessarily one and the same invention.”

The facts of the case did not call for a more definite ruling. The original patent was for a device for postmarking and cancelling postage stamps by a single blow. The reissued patent claimed the act of marking and cancellation, and it was observed by the court:

“The process or act of making a postmark and cancelling a postage stamp by a single blow or operation, as a subject of invention, is a totally different thing in the patent law from a stamp constructed for performing that process.”

But without attempting to enlarge the case and extend it to more intimately related inventions, it is enough now to say that there is nothing in the case which decides that if the process had been claimed in an independent application it (the process) would have been adjudged to have been dedicated to the public by the other patent. There is language indicating the contrary. It was said:

“If he (the patentee) was the author of any other invention than that which he specifically describes and claims, though he might have asked to have it patented at the same time, and in the same patent, yet if he has not done so, and afterwards desires to secure it, he is bound to make a new and distinct application for that purpose, and make it the subject of a new and different patent.”

The case, however, indicates what embarrassment and peril of rights may be caused by a hard and fixed rule regarding the separation of related inventions. See also *Mosler Safe Co. v. Mosler*, 127 U. S. 354, and *Miller v. Eagle Manufacturing Co.*, 151 U. S. 186.

The Patent Office has not been consistent in its views in regard to the division of inventions. At times convenience of administration has seemed to be of greatest concern; at other times more anxiety has been shown for the rights of inventors. The policy of the office has been denominated that of "battledore and shuttlecock," and rule 41 as it now exists was enacted to give simplicity and uniformity to the practice of the office. Its enactment was attempted to be justified by the assumption that the patent laws gave to the office a discretion to permit or deny a joinder of inventions. But, as we have already said, to establish a rule applicable to all cases is not to exercise discretion. Such a rule ignores the differences which invoke discretion, and which can alone justify its exercise, and we are of opinion therefore that rule 41 is an invalid regulation.

3. Having settled the right of appellant, we may now return to the consideration of his remedy. Respondent contends:

"It is fundamental that mandamus will not issue against a public officer, except to compel the performance of some plain, clear, ministerial duty, and will not issue to control his discretion."

And it is further contended that respondent has acted, and, having acted, cannot be required to refer the case to a lower tribunal in his office. To sustain the contention *Commissioner of Patents v. Whiteley*, 4 Wall. 522, is cited.

The unity of the inventions claimed by petitioner in the case at bar we may assume. It is not denied by respondent. Petitioner had, therefore, the right to join them in one application. The denial of this right by the primary examiner was a rejection of the application and entitled petitioner to an appeal to the examiners-in-chief, under section 4909 of the Revised Statutes. That section provides:

"Every applicant for a patent, . . . any of the claims of which have been twice rejected, . . . may appeal from the decision of the primary examiner . . . to the board of examiners-in-chief; . . ."

Section 482 provides:

"The examiners-in-chief shall be persons of competent legal knowledge and scientific ability, whose duty it shall be, on the written petition of the appellant to revise and determine upon the validity of the adverse decisions of examiners upon applications for patents, and for reissues of patents, and in interference cases; and, when required by the Commissioner, they shall hear and report upon claims for extensions, and perform such other like duties as he may assign them."

The procedure on appeal is provided for by the rules of the Patent Office. It is taken by filing a petition praying an appeal with the primary examiner setting forth the reasons upon which the appeal is based, and it is made the duty of the examiner five days before the date of hearing to furnish the appellate tribunal and the appellant with a statement of the grounds of his decision. A petition praying an appeal was filed but the primary examiner refused to answer the appeal, and the defendant in error also refused to direct him to answer it. It is manifest that if an appeal cannot be compelled from the decision of the primary examiner, an applicant is entirely without remedy. And respondent has asserted that extreme. In *Ex parte Frasch* the Court of Appeals of the District of Columbia was persuaded that an appeal was not the proper remedy. In the case at bar it is contended that mandamus is not the proper one. One or the other must be. A suggestion made is that the inventor must await a decision on the merits, meaning by merits "lack of invention, novelty or utility," as expressed in rule 133. But after waiting he would encounter the arbitrary requirement of rule 41. Besides what would there be to review if the order of the primary examiner were complied with and the claims put into separate applications? There are some observations in *Commissioner of Patents v. Whiteley*, which may be quoted. Whiteley claimed to be the assignee of a patent, and filed an application for a reissue. The Commissioner declined to entertain it on the ground that Whiteley was only assignee of an interest and not of the entire patent. He also

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declined to allow an appeal to be taken from his decision. The Supreme Court of the District of Columbia awarded a peremptory writ of mandamus commanding the Commissioner to refer the application to the proper examiner, or otherwise examine or cause it to be examined according to law. Error was prosecuted to this court. Under the act of 1836 it was provided that if the Commissioner decided adversely to an applicant for a patent an appeal could be taken to the board of examiners, and by the act of 1837 that remedy was given to an applicant for a reissue of a patent, and the question in the case was whether that remedy should have been pursued. In other words, whether the remedy was by appeal or mandamus. It was decided that appeal was the remedy. Singularly enough, the Commissioner in answer to the rule took the position that the application was not before him because it had not been filed. The court said if that were so "mandamus would clearly lie to compel the Commissioner to receive it. It was his first duty to receive the application. Whatever he might do subsequently, without this initial step there could be no examination, and, indeed, no rightful knowledge of the subject on his part. Examination and the exercise of judgment, with their proper fruit, were to follow, and they did follow."

And so the exercise of judgment might follow a hearing of the application under review. It was the duty of the primary examiner to accord a hearing or, refusing to do so, to grant an appeal. It was the duty of the Commissioner to compel the appeal. The Commissioner of Patents is primarily charged with granting and issuing patents. Applications for patents are made to him (section 4888, Revised Statutes), and his superintendence should be exercised to secure the rights which the statutes confer on inventors. The first of those rights is a hearing. If that be denied other rights cannot accrue.

The Commissioner justifies his decision by the rules of the Patent Office and a long practice under them. If there is inconsistency between the rules and statute, the latter must pre-

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vail. But the primary examiner did not follow the rules. The rules provide that if appeal be regular *in form* (italics ours) he shall within five days of the filing thereof furnish the examiners-in-chief with a written statement of the grounds of his decision on all of the points involved in the appeal, with copies of the rejected claims and with the references applicable thereto. If he decide that the appeal is not regular in form, a petition from such decision may be made directly to the Commissioner. The regularity of the appeal in form is not questioned in the case at bar, and it was the duty of the examiner to answer the appeal by furnishing the examiners-in-chief the statement provided for in rule 135. A petition to the Commissioner was not necessary except to make the examiner perform his duty.

4. We do not think that petitioner was estopped from insisting upon his application by proceeding with the interference with Duncan after the examiner's letter of December 15, 1899. It would be pressing mere order of procedure and the convenience of the Patent Office too far to give them such result under the circumstances.

The judgment of the Court of Appeals is therefore reversed with directions to reverse that of the Supreme Court, and direct the Supreme Court to grant the writ of mandamus as prayed for.

Ex Parte FRASCH.

PETITION FOR WRIT OF MANDAMUS TO THE COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA.

No. 13. Original. Argued December 18, 21, 1903.—Decided February 23, 1904.

Mandamus to the Commissioner, and not to the Court of Appeals of the District of Columbia, is the proper remedy to compel the forwarding of an appeal to the board of examiners-in-chief from the primary examiner.

THE facts are stated in the opinion.

Mr. Charles J. Hedrick for petitioner.