the alleged reasons of appeal are not sufficient to sustain it, and that the decision of the Commissioner of Patents as to all points involved in the reasons of appeal must be affirmed.

J. J. Greenough, for the appellant.

JOHN COCHRANE, APPELLANT,

vs.

HENRY WATERMAN, APPELLEE. INTERFERENCE.

REASONS OF APPEAL.—By the eleventh section of the act of 1839 the revision of the decision of the Commissioner is to be "confined to the grounds of his decision, fully set forth in writing, touching the points involved by the reasons of appeal."

INVENTION—DOUBLE USE.—The application of an ordinary power to an ordinary purpose is not an invention within the meaning of the patent law.

SM—SM—APPLICATION OF ENDLESS SCREW AND WHEEL TO CAPSTAN NOT PATENTABLE.—The endless screw and wheel is a common mechanical power applicable to an indefinite number of machines, and the mere application of it to the segmental-rack or quadrant on the rudder-head for the first time is not an invention, although it enables the helmsman to hold and stay the rudder with more ease.

EVIDENCE—DECLARATIONS OF PARTY.—The declaration of a party to an interference that at some former time he made the invention for which he seeks a patent, is not competent evidence.

"SURREPTITIOUSLY AND UNJUSTLY OBTAINED"—CAVEAT OVERLOOKED.—The fact that a caveat filed by another inventor was pending and in force when an interfering patent was granted, does not of itself show that the patent was surreptitiously obtained and void, nor does it authorize the Commissioner to grant a patent to the caveator until he shall establish his priority of invention in a regular proceeding for that purpose.

INTERFERENCE—MUST BE DECIDED UPON THE EVIDENCE.—The decision of the Commissioner and the judge upon appeal can only proceed upon the evidence properly in the case.

(Before CRANCH, Ch. J., District of Columbia, November, 1844.)

The Commissioner.

STATEMENT OF THE CASE.

A leading feature of the applicant's alleged invention was the employment of an endless screw engaging with the teeth of a segmental cog-wheel on the rudder-head for readily controlling the movements of the rudder. It appeared that the quadrant or segmental cog-wheel was old, and that it had previously been actuated by band-wheels or engaging-pinions. The applicant contended that the endless screw had special advantages in this connection over the cog-wheels and band-wheels in use, and that his machine was, therefore, an improvement at least upon the old machines, if not a new invention.

Another feature of the applicant's invention consisted in forming a spring connection between the rudder-head and the tiller; and with reference to this subject-matter the application was placed in interference with the patent to Waterman. It transpired that Waterman's patent had inadvertently issued during the pendency of a caveat previously filed by Cochrane, and without notice to him. It was contended for the applicant that the patent was granted in violation of his rights as a caveator, and was of no effect, and that a patent should be granted to himself forthwith. It was further charged that the patent was surreptitiously obtained by collusion with the officers of the Department. The applicant endeavored to excuse himself from not having produced any evidence to show the time of making drawings, models, &c., on the ground that the office rules regulating the taking and transmitting of evidence only specified the time of making the invention as the date to be established by the testimony.

The Commissioner.

1. There is no distinction between an "invention" and an "improvement," except in degree. If the alleged improvement be an improvement within the meaning of the law, it is indubitably the subject of a patent; but if it be an improvement simply because the screw works better than a pinion or a band, then it is not necessarily the subject of a patent. An improvement on an original invention is itself an invention, and must be such to authorize the grant of a patent; and the term "improvement," in the connection in which it is introduced in the law, has the same signifi-

cation as if the law authorized the grant of a patent for an invention on an invention instead of for an improvement on an invention. (Whittemore *v.* Cutter, 1 Gallison, 478; Odivine *v.* Winpley, 2 Gallison, 51.) All writers on the patent law admit the patentability of an improvement on an original invention, but limit this to such improvements as are inventions. No decisions on the patent law can be found that will sustain the position that the substitution of a mechanical equivalent is an invention.

2. The use of the endless screw as a means of communicating motion to a cog-wheel instead of a pinion is taught in all elementary works on mechanics. (Borgnis' Trauté de Mechanique Appliquee aux Arts, vol. 1; Gregory's Mechanics, article "screw," and others.) It is only used in machinery generally, when a great multiplication of power is required, with little complexity, and when the loss of power by friction is not deemed very important; for it is admitted that the friction between the threads of the screw and the cogs of the wheel is much greater to produce a given result than by a combination of cog-wheels; but every constructor of a machine has the option to obtain a certain increase of power or velocity by the employment of either of the three equivalents—cog-wheels and pinions, band-wheels and bands, or cog-wheels and endless screw. They all have their advantages and disadvantages under different circumstances, and the machinist best shows his knowledge and skill who selects the one best adapted to the purpose in view in this selection; however, he does not invent, and is not therefore entitled to a patent.

3. As to the caveat, the only protection which the law guarantees to a person filing a caveat is a notice of an interfering application for a patent and for a withholding of all further action on the same application for the space of three months, to enable the caveator to complete an application for a patent; and then, in case of an actual interference, the two applications are to be referred for a hearing. This hearing has been granted in this case; and the only difference between the circumstances as they have occurred and what they would have been had the officer noticed the caveat, is that he is called upon to contest against a patent instead of an application; and had he proved priority of invention and obtained a patent, he would have been obliged to apply to

the courts for a repeal of Waterman's patent. Cochrane is in fact in a better position with reference to the controversy, as the practice of the office has always been, in contest between applicants and patentees, to give the applicant the benefit of every reasonable doubt; so that this oversight has been beneficial to him so far as this office could exercise a discretion.

4. There is no evidence to show that the patent was surreptitiously granted.

5. With reference to the applicant's claim to have a patent, on his statement that he made the invention at a certain time, unsupported by any evidence to show when he made the drawings, models, &c., and reduced the invention to practical form, it is evident that the rules furnish no warrant for such a proceeding. The Commissioner is not bound to instruct parties as to what they shall submit in evidence; and any suggestion of the kind in the rules must be regarded as a suggestion merely, and not as a requirement upon a compliance with which a party can rely.

CRANCH, J.

John Cochrane appeals from the decision of the Commissioner of Patents refusing to grant him a patent for a machine for steering vessels, styled "The Spring-Tiller Self-Compensating Steering Machine."

By the eleventh section of the act of March 3d, 1839, chapter 88, the revision of the decision of the Commissioner of Patents is to be "confined to the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal."

Mr. Cochrane, in his specification, says that the nature of his invention consists in applying the endless screw or worm, working in cogs on the periphery of a quadrant, to the moving or holding of the rudder; and also in the application of springs to compensate for the action of the sea on the rudder.

The Commissioner refused to grant the patent, because, as to the first supposed improvement, viz., the application of the endless screw to the cogs on the periphery of a quadrant, it was not the invention of an improvement; and as to the second improvement, viz., the springs on the tiller, it would interfere with a patent already granted to Henry Waterman.

The reasons of appeal from the decision are, in substance, first,

that the application of the endless screw, &c., is an invention of an improvement on the machinery of steering vessels, within the meaning of the sixth section of the act of the 4th of July, 1836, chapter 575; and second, that he was the first inventor of the spring-tiller, and therefore the patent ought not to have been granted to Waterman, and ought now to be granted to him (Cochrane).

The Commissioner, in stating his reasons for his decision, contends that the substitution of a known mechanical equivalent is not an invention within the patent laws; and I think he is right. In some machines the moving power is communicated by a band. If I were to substitute a pinion for the band, I do not think it could be considered as an invention for which I could obtain a patent.

The enless screw and wheel is a common mechanical power applicable to an indefinite number of machines; and the mere application of it to a machine to which it had never before been applied would not be an invention, although it might make the machine better than it would have been without it. There may be innumerable cases in which that mechanical power may be used with good effect, but it does not follow that the person using it is thereby entitled to a patent. The fact that it enables the helmsman to hold and stay the rudder with more ease, results from the nature of the power, and it is a property belonging to it wherever used, for the power of the helmsman is applied slowly at the long end of the lever against the power of the rudder, which works at the short end. This property is not now for the first time discovered. The application of it to the steering of a vessel seems to be no more entitled to a patent than if it had been applied to a kitchen jack for washing. It seems to be an ordinary power applied to an ordinary purpose, and that the application of it is not invention within the meaning of the patent law. Upon the first point, therefore, the decision of the Commissioner is affirmed.

The second question is whether Mr. Cochrane was the first inventor of the spring-tiller, according to the evidence before the Commissioner. Upon this point it is necessary to ascertain what that evidence was.

1st. James Cochrane testifies, in his deposition taken on the 13th of March, 1844, at Baltimore, "that he knows that the compensating principle in the steering machine was invented by John

Cochrane, the claimant, by the application of that spring to the rudder, prior to the 19th day of October, 1835." He heard him describe its position on the rudder and explain its use, which was to ease the action of the sea on the rudder, previous to the said 19th of October, 1835.

2d. Richard Cochrane, in his deposition taken at Newark, N. J., March 16th, 1844, says "that the invention was made in the year 1835, but cannot now recollect any fact by which to ascertain in his own mind the exact date." That part of his deposition in which he says that he distinctly remembers that the inventor (John Cochrane) said, years ago, that it was on the 7th of February, at 10 o'clock at night, is not competent evidence in this cause. The deponent further testifies "that he was present when the invention was made, and recollects that it was at night." He further testifies "that in the month of October, 1835, he had a conversation with Captain Scott, of the brig 'Planter,' at Baltimore, Maryland, on the principle on which steering machines should act, for the purpose of ascertaining whether the springs were as important in steering as the said John Cochrane supposed; but that he (deponent) is certain that this invention was in existence before said conversation with Captain Scott." He further testifies that "the model deposited at Washington is the same in substance or principle as when first invented by John Cochrane."

The letter of Captain Bunker of the 13th of February, 1843, a copy of which was inclosed in Mr. John Cochrane's letter of the 22d of March, 1844, to the Commissioner of Patents, is not evidence in this cause; and if it were, it does not give any information as to the priority of invention of the spring-tiller.

All the evidence in favor of the appellant upon that point is contained in the depositions of James and Richard Cochrane; and they do not carry back the date of the invention to any certain time prior to the 19th of October, 1835. The only evidence of Henry Waterman's priority of invention of spring-tillers is contained in the deposition of Stephen Waterman, who testified that in April or May, 1835, he had a conversation with his brother Henry in relation to the application of springs to the head of the rudder, and again in July, 1837; "that at both of said interviews said Henry Waterman described to said deponent his said inven-

tion, the same as the one patented to him in Washington;" that in February, 1843, the deponent being about to go to Washington, Henry Waterman furnished him with a model of his invention; that being in New York, they called to see Mr. Cochrane's model, and Henry Waterman showed his own model; that the deponent asked Mr. Halstead, who had charge of Mr. Cochrane's model, how long it had been invented, and the deponent thinks he stated in reply, seven or eight years. The deponent annexes to his deposition an original letter from himself to his brother Henry, but it is of no importance.

This deposition appears to have been taken in the presence of Mr. Cochrane, and carries back the date of Waterman's invention of the spring-tiller to April or May, 1835, whereas the date of Mr. Cochrane's invention is not carried back with any degree of certainty beyond the 19th of October, 1835. The Commissioner of Patents, therefore, was bound, as the case appeared in evidence before him, to refuse to grant a patent to Mr. Cochrane.

Mr. Cochrane, in stating the reasons of his appeal, has alleged that Mr. Waterman obtained his patent surreptitiously. There is no evidence to support this charge. The reasons of appeal are extended at great length, and for the most part are founded upon the assumption of facts of which there was no competent evidence before the Commissioner:

1st. There is no evidence that either of the applicants for the patent had reduced the invention of the spring-tiller to practice. The letter of Captain Bunker is not admissible evidence.

2d. There is no evidence of the protest of W. W. Kingsley mentioned in the reasons of appeal.

3d. There is no evidence that in the interview between the Watermans and Halstead in New York in 1843 Henry Waterman said that he invented the spring-tiller "*four or five years ago;*" nor that he had never tried it; nor that Mr. Halstead informed them "that this machine was then on board of two ships, viz., the "Alabama" and the "Vicksburg," and was in operation about six months, and so far appeared to answer well;" nor "that Mr. Cochrane had been at great expense in maturing the invention and reducing it to practice, and had it in actual operation;" nor "that Mr. Waterman had bestowed no labor and gone to no expense upon the invention."

4th. There is no evidence that Mr. Waterman claimed to have invented this application of springs in 1838 or 1839.

5th. There is no evidence that Stephen Waterman protested that if Ellsworth should take back the patent they would enter a suit for damages against him.

6th. There is no evidence that Richard Cochrane had the books of the brig "Planter" examined to ascertain the date of the conversation with Captain Scott.

7th. What Mr. John Cochrane says, in his reasons of appeal, he told his brother Richard is not evidence.

8th. There is no evidence that James Cochrane stated as a reason for fixing the date of the invention before the 19th of October, 1835, that on that day he left Baltimore to reside in Richmond.

9th. There is no evidence that Stephen Waterman stated in evidence that Cochrane's "machines were in operation."

10th. There is no evidence that Richard Waterman was intentionally assisted by the Patent Office in disregarding the caveat, as insinuated in the reasons of appeal; nor is there any evidence that the evidence of one of Mr. Cochrane's witnesses was mutilated; nor that any important evidence was suppressed; nor that a portion of the evidence was passed over without notice, as charged in the reasons of appeal.

All those reasons of appeal, therefore, which were founded on supposed facts, of which there was no evidence, must be disregarded.

The fact that the patent to Mr. Waterman was granted while Mr. Cochrane's caveat was pending and in force does not of itself vacate that patent, nor authorize the Commissioner to grant to Mr. Cochrane a patent, unless he should establish his priority of invention.

The Commissioner could act only upon the evidence before him, and I can act only upon the same evidence. If Mr. Cochrane had other evidence, and did not produce it, it was his own fault or misfortune; but perhaps he may yet file a bill in equity under the sixteenth section of the act of Congress of the 4th of July, 1836, and establish his priority and obtain a patent.

Upon consideration of the reasons of appeal, and the reasons of the Commissioner of Patents for his decision, I am of opinion that the decision is correct, and ought to be affirmed.

Oba Meeker, for Cochrane.