

Bee Keeping in 1875.

A writer in the Journal of Horticulture, England, gives the following hints on bee keeping, adding his own experience on removing dead bees from the hive.

"I have often observed that our best honey seasons, and they are of rare occurrence here, have followed our coldest winters. Therefore I augur hopefully for the summer before us.

It is a good thing when the weather is open, as at present, to clear away as many dead bees as can be got at within the the hive without breaking away the hive from its board.

These hints are not untimely, as we shall doubtless, ere long, be visited by a sharp increase of cold, all the more severe for the present extraordinary warmth of temperature.

Since writing the above, I have been examining my hives, and found ten out of the eleven pollen gathering, some of them quite vigorously.

American Plumbago or Graphite.

Plumbago is found in almost inexhaustible quantities in Ceylon, and there are mines capable of producing vast quantities in several States on this continent.

The only plumbago mines in the United States successfully worked are located at Ticonderoga, and are the property of the American Graphite Company, 24 Cliff street, New York.

The American Graphite Company, under the management of Mr. Cyrus Butler, were the first in the world to attempt the purification of plumbago ore in a large way.

The company now produce every quality, adapted for all purposes for which black lead is used. For lubricating purposes, for which there is probably nothing superior, the plumbago must be perfectly pure; and the article produced by the Graphite Company possesses, in a remarkable degree, this qualification, superseding in lubricating qualities even the Ceylon plumbago, the latter being too soft and spongy.

Plumbago is infusible, insoluble, and practically indestructible. It is affected neither by extremes of heat or cold, nor by acids or gases.

A Cure for Lockjaw.

In the course of lectures, recently delivered before the British Society of Arts by Dr. Benjamin Richardson, the following important remarks were made upon nitrite of amyl: 'One of these specimens, I mean the nitrite of amyl, has within the last few years obtained a remarkable importance, owing to its extraordinary action upon the body.'

The results have more than realized my expectations. Under the influence of this agent, one of the most agonizing of known human maladies, called angina pectoris, has been brought under such control that the paroxysms have been regularly prevented, and, in one instance at least, altogether removed.

NEW BOOKS AND PUBLICATIONS.

CATECHISM OF THE LOCOMOTIVE. By M. N. Forney, Mechanical Engineer. Price \$2.50. New York city: Railroad Gazette Office, 73 Broadway.

This admirable handbook fills a place in our technical literature which has long been vacant. Although, with commendable candor, the author acknowledges that the plan and title of his work are adapted from Kosak's book on the locomotive, the substance of the articles is so exclusively founded on American practice that it is virtually an original treatise.

SCIENTIFIC LONDON. By Bernard H. Becker. New York city: D. Appleton & Co., Broadway.

The author has made a very interesting volume of historical and descriptive sketches of the Royal Society, the Royal Institution, the Society of Arts, the Institution of Civil Engineers, the British Association, the Royal Geographical Society, and several other learned bodies, more or less known to fame.

GRAPHICAL METHOD FOR THE ANALYSIS OF BRIDGE TRUSSES, extended to Continuous Girders and Draw Spans. By Charles E. Greene, A.M., Professor of Civil Engineering, University of Michigan. Illustrated by Three Folding Plates. Price \$2.00. New York city: D. Van Nostrand, 23 Murray and 27 Warren streets.

This treatise elaborates a method of investigating the stress on roofs and trusses, originated by Professor Clerk-Maxwell; and it shows once more the value of the graphical method of describing the physical characteristics of complex bodies, a method which seems destined to be adapted to every branch of mechanical and dynamical science.

CHEMICAL EXAMINATION OF ALCOHOLIC LIQUORS. By Albert B. Prescott, M.D., Professor of Organic and Applied Chemistry in the University of Michigan. New York city: D. Van Nostrand, 23 Murray and 27 Warren streets.

This volume is a useful and trustworthy aid to the analysis of all such alcoholic fluids as are used as food or stimulants. It discourses on the question of adulteration in a sensible and practical manner, and contains statements that go far to justify immediate government interference with the trade of the falsifier.

THE OVERLAND MONTHLY. Devoted to the Development of the Country. Terms \$4.00 per annum. San Francisco, Cal.: John H. Carmany & Co., 40 Washington street.

This excellent magazine maintains a well earned reputation. The number now before us (February, 1875) commences with an interesting account of the naval duel between the Kearsarge and the Alabama.

A PRACTICAL TREATISE ON THE GASES MET WITH IN COAL MINES. By the late J. J. Atkinson, Government Inspector of Mines, England. Price 50 cents. New York city: D. Van Nostrand, 23 Murray and 27 Warren streets.

A useful and readable essay, published in Mr. Van Nostrand's Science Series.

THE AMERICAN EDUCATIONAL CYCLOPEDIA, a Reference Book for All Matters Pertaining to Education. Published Annually Volume I, 1875. Price \$2.00 in cloth, \$1.50 in paper. New York city: J. W. Schermerhorn & Co., 14 Bond street.

This volume is a complete manual of the statistics of the educational condition of all the States and Territories, with a synopsis of the occurrences affecting the question during the years 1873-1874. Some biographical sketches of prominent educators recently deceased, and articles on the educational systems of other countries, add much interest to this useful work, an advertisement of which appears on page 157.

DECISIONS OF THE PATENT OFFICE.

BEFORE THE BOARD OF EXAMINERS-IN-CHIEF. PRESENT: MARCUS S. HOPKINS, R. L. B. CLARKE, CONCURRING.—APPLICATION OF MILLER T. GREENLEAF AND GEORGE E. ADAMS FOR A PATENT FOR A CAR COUPLING.

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Our position is a peculiar one with respect to the Commissioner. We are a tribunal created by statute with certain jurisdiction and powers, but it has never been judicially determined under the present patent act that our favorable decisions, made in the proper exercise of statutory jurisdiction upon *ex parte* applications, are binding upon the Commissioner. We are no more than a quasi-judicial tribunal. The Commissioner's office is both executive and quasi-judicial. The whole Patent Office and all its officers are a portion of the executive branch of the government, and not of the judicial.

Mr. Jenckes: I think I can show the gentleman from Massachusetts that his amendment is not needed. This power to make the rules and regulations is to apply to the proceedings in the Patent Office, and not at all to the persons employed there; and the rules and regulations to which the gentleman refers, and of which he complains, are made by the Commissioner under the power in the existing law, which is reprinted in this bill at the end of section 10 in the following words: 'They shall be governed in their action by rules prescribed by him.' (Act of 1861.)

The committee on patents has put on record will obviate the necessity of the amendment I had proposed. I therefore withdraw my amendment. But I desire to make another, in the fifth line of the tenth section. The section, as reported from the committee, reads thus:

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 applicant, to review and determine the validity of the adverse decisions of the Examiners upon application for patents, and for resissue 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 duties as he may assign them.

I want to strike out the words 'he may assign them' and insert in their place the words 'that may be assigned them by law.' The chairman of the committee will see that under the words 'and perform' such duties as he may assign them, the Commissioner might, though that would not be very likely, yet be might—put them to sweeping but the Office. The duties should be assigned them by law and not by the will of the Commissioner. That is the point I desire to make.

Mr. Jenckes: The language which the gentleman objects to is the language of the existing law. As there is no hardship under it, we did not take the responsibility of recommending its alteration.

Mr. Butler of Massachusetts: But the difficulty is that under the old law the Commissioner has shown a disposition to interfere, which the committee by this bill seek very properly to regulate.

Mr. Jenckes: We thought we met that objection sufficiently by taking away the power to assign duties in the Office. But there are many things in which the Commissioner might wish the services of the Examiners-in-Chief, which it would be very difficult to prescribe by law.

Mr. Butler of Massachusetts: Then I will compromise by moving to substitute the word 'like' for the word 'other,' so that it may read 'such like duties as he may assign them.'

Mr. Jenckes: I have no objection to that. * * * * * The amendment was agreed to. (Cong. Globe, Part 4, 2d. session, 41st. Congress—1869 and 1870, p. 2,385.)

The record history of the passage of section 10, defining the duties of the Board, like the language of the section itself, plainly shows the intent of the law-making power. The section must be read in connection with section 7 defining the duties of the Commissioner, and both sections must be construed together so that each shall stand—the rule being 'ut res magis valeat quam pereat.'

Section 10, following after section 7, and conferring special powers on the Board, must be held to modify the meaning of section 7, giving general powers to the Commissioner, if it can be so held that the two sections are in apparent conflict. But it is plain to us that they are not. That section 7 relates wholly to executive and ministerial duties, over which it provides the Secretary shall have "direction," and not at all to judicial duties. Sections 46 and 47, providing for appeals, confer upon the Commissioner his judicial powers, in the exercise of which he is independent. These sections, in connection with section 10 (with none of which do any other sections of the act in the least conflict), make a complete and coherent code.

It is clear we must in our judicial capacity, in a certain measure, independent of the Commissioner, and our decisions, favorable to appellants, be binding upon him and all others, so far as the duty of granting patents is concerned (except fraud should appear), or else we must be wholly subordinate to his judgment, and our favorable, as well as adverse decisions, be liable to be overruled by him at all times. We are not a judicial tribunal in this Office with appellate jurisdiction to relieve the Commissioner of all judicial responsibility, except in cases regularly appealed to him from our adverse decisions, or else we are mere clerical reviewers of a portion of the work of Examiners, to aid the Commissioner, subject to his dictation in forming our opinions, and wholly depending in all cases upon his approval of the judgments we pronounce. There is no middle ground. But the former be the case, we are to exercise our powers and responsibilities under the law. It is undoubtedly competent for the Commissioner, in order to prevent the erroneous issue of a patent, in any case where in his judgment there is reason why it ought not to issue, to refuse to issue it, and to refer it to the Board for their consideration and review of the alleged matter of error. And if the Board, for any cause, should fail to agree with him as to the judgment, then he might still refuse to execute and grant the patent, and the existence of the alleged error, so warrant them in the alteration of their sufficiency of his reason for refusing could be tried before the Supreme Court of the District on application for writ of *mandamus*, and then on appeal before the Supreme Court of the United States. This would seem to be ample provision against the erroneous issue of a patent or a dangerous exercise of a power of independent judicial action by the Board. But the presumption is that officers of intelligence and dignity of Commissioners and members of this Board would endeavor to do their duty, and to avoid conflicts; and we apprehend cases of irreconcilable difference of opinion, of such importance as to involve litigation, would seldom occur. Were each tribunal (the Commissioner and the Board) purely judicial, instead of administrative and quasi-judicial, each would have a distinct jurisdiction and be as independent of the other in the Office within that jurisdiction as supreme and subordinate courts; and the duty of each would be to define its own jurisdiction, and act accordingly. In that state of things, a Commissioner would ever have questioned our judicial independence, and it would be admitted to be our duty to pass upon this case independently of the Commissioner: coming to us as it does, without any very recent action of his upon the question at issue, and with the recent decisions of the courts, as we think, clearly controlling that issue. The case does not appear to be very different than if a statute had in the meantime been enacted, declaring a rejected and abandoned application insufficient. It is only the mixed nature of the official duties in this Office that has raised a doubt of the distinct distribution of them by law. But from the language of the statute, and the necessities of the case, we can have no doubt that we are required to *adjudicate*, and not merely to report upon cases duly appealed to us, and, in doing so, to exercise ordinary judicial freedom of judgment. We are to review and determine upon the adverse decisions of Examiners. Appellants who pay their fees and employ counsel to argue cases before us are entitled to such adjudications, and to have them enforced so far as they are legally effective. Otherwise they do not obtain their *quid pro quo*, and appeals to us and adjudications by us would be farcical. Nothing can be plainer than that in all executive matters relating to the proper transaction of our business—matters of procedure, or mode of proceeding, or mode of conducting our office, subject, under the law, to the control of the Commissioner. Nor can anything be clearer than that, upon points that have come judicially before him, upon regular appeal from our adverse decisions upon them, and been decided by him, we are bound to follow his decisions to the extent of their legitimate intent and effect, until they are unmistakably overruled by higher authority. Beyond that, it is our opinion, upon the most careful consideration, we are not to yield to him by law, in our judicial capacity. Nor do we perceive any anomaly, or any change to the public, from such a fact. The Secretary of the Interior has full supervision of the Commissioner and all other officers in the Patent Office, in all executive and ministerial matters. But the Commissioner is vested, by section 47 of the statute, with certain judicial functions, in the exercise of which he is entirely independent of the Secretary; and we know of no instance of the Secretary attempting to interfere with them. Following the necessity of the case, in order to enable the public business to be done, the law has made the Commissioner thus independent. Following the same necessity, growing out of the magnitude of the judicial work of this Office, the whole of which it is impossible for the Commissioner to perform and be held judicially responsible for, the law, we think, has made the Board, within the limits above named, independent of the Commissioner. This being so, our duty, from which they cannot escape, is to pronounce our judgment upon the issue in this case. We could not be justified in letting it go to the Commissioner with a *pro forma* affirmation of the rejection by the Examiner, thus compelling the party to pay his appeal fee of \$20 and the other expenses incident to such an appeal. There are many considerations, which we duly appreciate, in favor of the greatest courtesy and deference, and of a harmonious co-existence of the functions of the different tribunals within this Office. But official ethics cannot require, or warrant the deprivation of a legal right of a suitor, by the withholding of its own proper judgment, under circumstances like the present, by a lawful and responsible tribunal. We should greatly have preferred that so important a matter be first enlightened by a decision of the Commissioner; and in order to get this case before him for decision, we have proposed to certify it up to him, in analogy to the practice sometimes adopted by the Supreme Court of this District, so as to approve of the appellants their appeal fee. The Commissioner, however, not approving of that course, we must reverse the decision of the Examiner, and his decision is hereby overruled. We recommend, however, that he call the Commissioner's personal attention to this case, on account of its peculiarity and importance.

MARCUS S. HOPKINS, Examiner-in-Chief. I concur with the views in regard to the insufficiency of the references, and unhesitatingly unite in a decision reversing the examiner's rejection. A plain question of law based on admitted facts as presented for our adjudication is in fact the only point relied upon by the appellant. We find that the examiner erred in holding the invention anticipated by a rejected and abandoned application. We have the highest authority known to our judiciary to sustain the point made by the appellant. We have the repeated decisions of the circuit courts—as cited—to the same effect. We have the principles and reasons underlying the law to sanction it to our good sense and judgment. All we have to do, in the discharge of our duties under the statute giving us power and jurisdiction, is to find and record our judgment. If done honestly and intelligently, the Commissioner can have no occasion to except to our action. His power is ample to guard against any evil effect from our finding. If he thinks a patent should not issue for any cause, he has only to refuse, and it will not issue. If called to give his reasons upon *mandamus*, his action would be undoubtedly sustained if his reasons should prove good and legal. I do not believe in forcing parties to fees and go to the Commissioner on questions which the law contemplates as within our peculiar province and jurisdiction, and which we should decide on our own consciences and according to our best judgment. R. L. B. CLARKE, Examiner-in-Chief.

Inventions Patented in England by Americans. (Compiled from the Commissioners of Patents' Journal.) From January 15 to February 1, 1875, inclusive.

- BURNING LIQUID FUEL, ETC.—C. E. Robinson, New York city. COATING METALS, ETC.—D. R. Brownlow et al., Middletown, Conn. CUTTING FABRICS.—A. H. Cramp (of New York city), London, England. DYEING AND FINISHING.—P. Magnier et al., New Orleans, La. FUR-COATED FABRIC.—H. Kellogg, Milford, Mass. HEAD COVERING, ETC.—H. Kellogg, Milford, Mass. MAKING ICE, ETC.—C. P. N. Weatherby (of New York city), London, Eng. PRESERVING ANIMAL SUBSTANCES, ETC.—J. R. McClintock, New Orleans, La. PREVENTING FRAUDS BY CONDUCTORS.—C. G. Imlay, Philadelphia, Pa. ROLLERS FOR TEXTILE FABRICS.—E. Edwards, Boston, Mass. ROLLING NUT BLANK BARS.—G. Johnson, Haverstraw, N. Y. SACK SEWING MACHINE.—H. P. Garland, San Francisco, Cal. SEWING MACHINE.—E. Moreau, San Francisco, Cal. SPIKE MACHINE.—A. Whittemore, Cambridgeport, Mass.