

has interest in the patent, imports, or causes to be imported, into Canada, the invention for which the patent is granted; and provided always, that in case disputes should arise as to whether a patent has or has not become null and void under the provisions of this section, such disputes shall be settled by the Minister of Agriculture or his Deputy, whose decision shall be final.

"2. Whenever a patentee has been unable to carry on the construction or manufacture of his invention within the two years hereinbefore mentioned, the Commissioner may, at any time not more than three months before the expiration of that period, grant to the patentee a further delay on his adducing proof to the satisfaction of the Commissioner that he was for reasons beyond his control prevented from complying with the above mentioned condition."—*Patent Act of 1872, as amended in 1875.*

We have received from the Minister of Agriculture, of Ottawa, Canada, a book of 24 pages, setting forth the facts, law, and decision in the above case. The case is one in which Benj. Barter (the disputant) alleges the forfeiture of the three patents granted to Geo. T. Smith (the respondent), on the grounds of non-manufacturing within two years of the date of each patent, and on the ground of importing after twelve months, in terms of the above Sec. of the Acts of 1872 and 1875. The case was deemed of such importance in itself and in its bearing on Canadian patents in general, that it was deemed of public interest by the Minister of Agriculture to report it at some length and in detail.

Messrs. Edgar, Fenton, and Ritchie, of Toronto, were counsel for Barter; Messrs. Grahame, Howland, and Byrnon, of Toronto, counsel for Smith. Before the Deputy of the Minister of Agriculture.

The petition addressed to the Honorable the Minister of Agriculture (bearing date the 18th of October, 1875) by the disputant, represented that patents No. 2,409, for a process of milling; No. 2,557, for a flour-dressing machine, and No. 2,255, also for a flour-dressing machine, granted to George Thomas Smith in 1873, are null and void, and should be so declared for non-compliance with the provisions of the 28th section of the Patent Act of 1872, requiring manufacturing within two years and forbidding importation after twelve months. The petition asked that the patentee should be required, in case he should state that his inventions have been manufactured, to furnish the particulars. The petition furthermore alleged that importations of the said inventions had taken place on the 25th day and on the 29th day of April, 1876.

The parties appeared at the office of the Minister of Agriculture, at Ottawa, Ont., with their witnesses and documentary evidence. After an exhaustive examination of the case, the Deputy Minister rendered his decision, which is final, in favor of Smith. The Deputy Minister, in giving his decision, reviews at length all the points at issue, carefully digests the Canada patent laws, and cites from patent decisions both in this and foreign countries. We have not space to publish the decision in full, but such extracts only as seem most interesting and instructive to our readers. In the decision, he states: "It is universally admitted in practice, and it is certainly undeniable in principle, that the granting of letters patent to inventors is not the creation of an unjust or undesirable monopoly, nor the concession of a privilege by mere gratuitous favor; but a contract between the State and discoverer. * * * Invention being recognized as a property, and a contract having intervened between society and the proprietor for a settlement of rights between them, it follows that unless very serious reasons, deduced from the liberal interpretation of the terms of the contract, have happened, the patentee's rights ought to be held as things which are not to be trifled with, as things sacred in fact, confided to the guardianship and to the honor of the State and of the Courts. As it is the duty of society not to destroy, on insufficient grounds, a contract thus entered upon, so it is the interest of the public to encourage and protect inventors in the enjoyment of rights legitimately and sometimes painfully and dearly acquired. The patentee is not to be looked upon as having interests in direct opposition to the public interest, an enemy of all, in fact: 'The gain made by the inventor when his invention is known will be,' says Agnew, 'proportionate to the amount of benefit which the public derive from the use of it.' 'It is almost self-evident,' says an able American author, 'for any rate readily susceptible of proof, that the magnificent material prosperity of the United States of America is directly traceable to wise patent laws, and their kindly construction by the courts.' 'The increasing development,' says Armengaux, 'which inventive genius undergoes, is principally due to the protection, very insufficient as yet, which is granted by most governments to those who are the real promoters of arts and industry.' * * * Therefore the real meaning of the law is that the patentee must be ready either to furnish the article himself or to license the right of using, on reasonable terms, to any person desiring to use it. But again that desire on the part of such a person is not intended by the law to mean a mere operation or motion of the mind, or of the tongue; but in effect a bona fide serious and substantial proposal, the offer of a fair bargain accompanied with payment. As long as the patentee has been in a position to hear and acquiesce to such demand, and has not refused such a fair bargain proposed to him, he has not forfeited his rights. * * * Therefore, George Thomas Smith's patents, No. 2,257, for a flour-dressing machine; No. 2,258, for a flour-dressing machine, and No. 2,409, for a process of milling, have not become null and void under the provisions of Section 28th of the Patent Act of 1872."

J. C. TACHE,
Deputy of the Minister of Agriculture.

DEPARTMENT OF AGRICULTURE,
PATENT OFFICE,
OTTAWA, 15th February, 1877.

NEW BOOKS AND PUBLICATIONS.

NATURAL PHILOSOPHY FOR BEGINNERS. With Numerous Examples. Part I: The Properties of Solid and Fluid Bodies. By I. Todhunter, M.A., F.R.S., St. John's College, Cambridge, England. Price \$1.50. London and New York: Macmillan & Co.

Mr. Todhunter's renown as a teacher is well known in this country, where his numerous works on mathematics and mechanics are highly valued and extensively used. His latest work is the above-mentioned, and it is an admirable textbook, prepared and edited with the greatest care and accuracy. The writer evidently possesses in an unusual degree the skill to impart knowledge in clear and unmistakable language, and he presents the phenomena and the laws and applications governing them in a manner specially adapted to the capacities of young students. We commend this book to the notice of boards of education, in the belief that the time is coming when elementary science and scientific methods of thought will form part of the common school education of this country.

THE CHEMIST'S MANUAL. A Practical Treatise on Chemistry. By Henry A. Mott, Jr., E.M., Ph.D. Price \$6. New York city: D. Van Nostrand, 23 Murray street.

This is one of those books for which professional men generally keep a sharp watch, and which, when purchased, they do not lock up in a case, but place within easy reach of the hand on the working desk. Why they do this is because they have learned or may learn that the author, for some seven years past, has pursued that invaluable habit, the taking of notes. Beginning while a pupil of some of our most eminent chemists, he listened attentively and jotted down useful hints and suggestions, important references, etc., which he has now utilized for his own benefit. Continuing the habit in the practice of his profession, the memoranda soon assumed large proportions; those who knew of their existence, knew also their value; their publication, if only for their preservation in permanent form, was suggested, and hence the large and handsomely executed book before us. The work is by no means a mere compilation, but bears the marks of close and assiduous labor. Every scheme of analysis, for instance, has been proved to be thoroughly right; and as every formula for every reaction is given, this part of the book is of especial value to the student. Another very important portion of the volume, to druggists and physicians, is an elaborate table wherein all drugs in use are named, and their usual impurities denoted, and how the same may be detected. Dr. Mott deals in *extenso* with qualitative, quantitative, and blowpipe analyses, assaying, mineralogy, stoichiometry, and specific gravity determinations, and adds a miscellaneous department, replete with the species of information which, though constantly needed, is scarcely ever found collated. The author's style of writing throughout is plain and direct, the explanations are lucid, and altogether the work is one we can cordially commend.

DYNAMICS OR THEORETICAL MECHANICS. By J. T. Bottomley, M.A., etc. New York city: G. P. Putnam & Co., 182 Fifth avenue.

This is another volume of Putnam's "Elementary Science Series." It is a good simple treatise, as a rule clearly written; but it reveals obscurity in the writer's mind as to the proper definition of the term "force." This is the grand stumbling block for writers on mechanical subjects, and it is high time that a definite meaning should be attached to so fundamental a conception.

AN ANALYSIS OF RELIGIOUS BELIEF. By Viscount Amberley. New York city: D. M. Bennett.

We would take this opportunity to inform publishers and correspondents that the columns of this journal are not open to the discussion, review, or criticism of matters pertaining to religious faith; and that it is entirely useless to send us letters or books on such subjects. The volume above named is the work of a young English nobleman, now deceased. It created great comment in England at the time of its publication, and caused much pain to the friends and relatives of its author, who, being best conversant

with the circumstances of its production, made every effort to prevent its circulation. The present publisher, as a matter of charity and good taste, should have respected these desires. Hereafter, books of this class sent to us will remain unnoticed.

A TEXT BOOK OF MINERALOGY. By Edward S. Dana. Price \$5. New York city: John Wiley & Sons, 15 Astor place.

This work originated with Professor J. D. Dana, who undertook its preparation several years ago, but was compelled to relinquish the task because of ill health. The present editor has now carried out the plan, and has produced a very excellent book. It is brought fully up to the latest discoveries and investigations; the modern system of chemical formulae is used throughout; and the general arrangement of the volume could hardly be improved. The work is especially valuable as a book of reference for the library, as its various subjects are concisely yet fully treated, while they are rendered conveniently accessible through a copious and valuable index. For schools and colleges, probably no better text book relating to this important subject could be found than this.

ROSE CULTURE.—The Dinger and Conard Company, of West Grove, Chester county, Pa., the great rose vine culturists, have just issued their annual catalogue for 1877. The pamphlet is illustrated, giving names and cuts of new varieties, with instructions as to soil and how to grow and propagate roses in the best manner. We have purchased of Messrs. Dinger & Conard's Company a variety of plants at different times, with invariable satisfaction as to the result. To persons interested in roses, we would recommend the inclosure of 10 cents to the above firm for a copy (by mail) of their new manual.

DREAMS OF A FREE TRADE PARADISE.—This is a gathering of humorous sketches and dialogue, with 12 illustrations on free trade. A very amusing pamphlet. Price 30 cents. Henry C. Baird & Co., Philadelphia, Pa.

Inventions Patented in England by Americans.

From February 20 to March 8, 1877, inclusive.

ALLOY.—F. Raymond, Greenville, S. C.
BALE TIE.—J. H. Elsworth, Galveston, Texas.
BATH, ETC.—C. A. Blessing, Philadelphia, Pa.
BOOT SOLE.—S. J. Gordon, New York city.
BRAKE AND RUDDER.—J. Hutton, New York city.
BRECH-LOADING GUN.—F. L. Bailey (of Indianapolis, Ind.), London, Eng.
CAMPAIGNE BISCUIT.—C. Moritt (of Baltimore, Md.), London, Eng.
CLEANSING WOOL, ETC.—O. Low, Chelsea, Mass.
CRUTCH FERRULE, ETC.—T. C. Allen, New York city.
DISPLAY CARD, ETC.—H. H. Snow, New Haven, Conn.
HARROW, ETC.—G. W. Martin, Port Hudson, La.
HORSE COLLAR.—E. Payne, Chicago, Ill.
KNIFE-CLEANING MACHINE.—L. Guex, Springfield, Ill.
KNITTING MACHINERY, ETC.—C. H. Landenberger, Philadelphia, Pa.
LIGHTING GAS.—C. K. Trull, New York city.
LOCOMOTIVE ENGINE.—H. C. Wells, Brooklyn, N. Y.
PRESERVING MEAT, ETC.—J. P. McLean, New York city.
SCREW MACHINERY.—J. A. Kernochan, Pittsfield, Mass.
SKATE FASTENING.—E. H. Barney, Springfield, Mass.
SPINNING MACHINERY.—E. Harris, Providence, R. I.
TAG, ETC.—T. P. Marston, New York city.
WASH STAND.—H. A. Richardson, New York city.

Recent American and Foreign Patents.

NEW MISCELLANEOUS INVENTIONS.

IMPROVED CARD RACK.

Francis Hayek, New York city.—In this card rack any desired number of cards may be arranged in alphabetical and regular manner, so as to be instantly found, the rack being of compact shape and admitting the arrangement of twice the number of cards on the same space as the card racks in common use. The card rack has a number of pivoted clamp pieces that are connected to a slide rod, to be thrown to one side or the other for putting in or taking off cards from the clamps. The cards whose names begin with one letter form the face, those with the next letter of the alphabet the back, on each clamp piece, the cards of either letter being readily exposed by throwing the clamping pieces by the slide piece to one side or the other.

IMPROVED IMPLEMENT FOR LOADING FIREARMS.

Charles W. Hovis, Parker City, Pa., assignor to himself and W. J. Hovis, of same place.—This invention is a revolving case containing chambers suitable for holding a charge in each one for the gun to be loaded, working between two plates which close the chambers at the ends, except at one place, where there is a chamber to receive the muzzle of the gun to be loaded, and hole through each plate coinciding with it, so that the load can be pushed out of the loader into the gun when the muzzle of the latter is in said chamber, and under each chamber is a valve to retain the load till ready for discharge.

IMPROVED BALE TIE.

James M. Pollard, New Orleans, La.—This invention is an improvement upon the so-called "B" tie, for which letters patent were granted to same party on November 28, 1876. In the present invention, the lug or projection, which in the former invention engages the slotted band, is dispensed with, also the slots in the free end of the band, and a roller or movable cam is employed for engaging the band and effecting the "lock."

IMPROVED FLUID MEAT.

John L. Johnston, Sherbrooke, P. Q., Canada.—This is a compound consisting of lean flesh and albumen, in the form of a dry powder, and the well known gela-tined meat essence.

IMPROVED TYPE MOULD.

Thomas Mason, New York city, assignor to David Wolfe Bruce, of same place.—This is a type mould provided with one or more oppositely disposed angular projections or shoulders within its breaks for covering the jet from the type. Its object is to dispense with that process of type-founding known as "breaking off."

IMPROVED NECK YOKE RING.

Charles Shuman, Red Oak, Iowa.—This ring is so constructed as to allow the neck yoke to be turned nearly parallel with the tongue.

IMPROVED LASTING JACK.

Charles H. Collins, Lynn, Mass., assignor to himself and Francis Deshon, of same place.—The advantages claimed for this invention are that a whole boot or shoe can be lasted complete without the aid of knees or other devices for pulling the upper over. The toe of the boot or shoe may be thrown over, bringing it into a convenient position to last the toe, after which the jack can be readily readjusted to a vertical position. It can be conveniently used at a high or low bench, and the operator may stand or sit at pleasure.

IMPROVED TRAVELER FOR JIB-SHEETS.

Joseph D. Drinker, Montrose, Pa.—This is an improved bar for holding the jib-sheet in a fore and aft vessel, when beating to windward, so as to dispense with a man to attend to said jib. It shifts over the sheet automatically on going about.

IMPROVED CURRYCOMB.

James N. Rundle, San Francisco, Cal., assignor to himself and David L. Fonseca, of same place.—This currycomb is so constructed that it will clean itself of dust and hair while being used, rendering it unnecessary to knock it against the timbers of the stall or stable. The frame and the tooth plates play upon a hinge. The movement is limited by a keeper, so that the jar caused by checking the said movement may knock off any dust and hair that may be adhering to the tooth plates.

IMPROVED FOLDING SEAT.

Arthur B. Cogswell, Burlington, Vt.—This seat is so constructed that it may be folded so compactly that it will occupy no more space than the breadth of the side frames or standards. When the seat is extended for use, the rear edge is raised and drawn forward, bringing the pins into the long arm of the slot in the standard. The seat then drops, by its own weight, into position.

IMPROVED INDICATOR.

Charles C. Curtiss and James Curtiss, Chicago, Ill.—This is an improved dial, on which a business man, upon leaving his office, may indicate with great facility whether he is in or out, or that he is out and back at a certain time. It consists of a base dial, with the hours and the words "In," "Out," "Back at" marked thereon, on which, within the outer circumference, a second partly recessed plate or disk is guided, and above the same one or two index hands for indicating the time, the recessed plate and hands being returned by a face plate or disk.

IMPROVED VAPOR BURNER.

Frederick A. Sawyer, Houston, Tex., assignor to himself, Addison H. Baldwin, and Artemas N. Carter, of same place.—This is an improved construction of a vapor burner, by which the same may be readily lighted or adjusted to a larger or smaller flame. An outer sleeve or jacket with disk-shaped flange slides below the outer burner tube for protecting the burner against a draft of cold air from below.

IMPROVED BAGGAGE CHECK GUARD.

David Untermeyer, New York city.—With this device no one, not even the baggage-master, can see the check or know what it is after the duplicate check and the key have been delivered to the passenger, until such passenger presents his check and key. In the outer side of a door is formed a slide to receive a ticket, upon which is marked the place to which, and the place from which, the baggage is sent. With this device it would be useless for a thief to change the direction ticket, and thus change the destination of the trunk, as even then he could not get the trunk without the check and key, which the owner of the trunk carries.

NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

IMPROVED METHOD OF VENTILATING ROOMS.

Gregory C. Quezada, Troy, N. Y.—The object of this invention is to provide fresh air continually for theaters, churches, rooms, etc., and also at the same time to lower the temperature of the same and supply a certain degree of moisture. The invention consists of an outer pipe column or tubular body of suitable non-porous material and of an inner pipe of porous material, between which a space is formed that is filled with water or other liquid. The air is drawn through or forced through the tube by a fan or otherwise, and supplied to the room at reduced temperature. The apparatus is based on the principle of lowering the temperature by the evaporation of water or other liquid percolating through a porous pipe. The air in its passage through the porous pipe is thus cooled and furnished to the rooms.

IMPROVED SASH BALANCE.

Jules Houriet, Terré Haute, Ind.—This invention consists of the combination, with the upper and lower sashes, of a cord that is connected to the upper sash, clamped to the lower sash, and passed over a pulley at the top of the window casing. For raising the lower sash the upper cord is taken hold of and pulled till the sash arrives at the required height, where it is fastened by a suitable sash lock, it being lowered again by its own weight on the release of the lock.

IMPROVED BOX-NAILING MACHINE.

Amos P. Goodhue, Fond Du Lac, Wis.—This is an improved machine for nailing together the parts of round boxes, enabling the boxes to be nailed quickly and accurately. In using the machine, the bottom of the box is placed upon the center of a plate, and the hoop of the box is placed upon the flanges around the edge of the said bottom. A crank is then turned to bring all the slide blocks inward to rest against the hoop of the box, and press it against the edge of the said bottom. A shaft is then turned until punch holders have reached the limit of their forward movement, and the punches are then adjusted so that their forward ends may strike the hoop of the box. The punches are then drawn back, nails are inserted into the dies, the die holders are turned down into a horizontal position, and the punch-driving mechanism is thrown into gear, which carries the punches forward and forces the nails into the box. As the punches are withdrawn their driving mechanism is thrown out of gear, and the die holders rise into a vertical position, so that another set of nails can be readily placed in their dies.

IMPROVED METHOD OF OPERATING SAWMILL CARRIAGES.

Martin Lally, Eau Claire, Wis.—The wheel on the driving shaft, being rotated, causes a chain to draw the carriage in one direction or the other with a positive motion. The tightening pulleys take up the slack in the chain, so that the carriage answers to every motion of the driving wheel.

NEW TEXTILE INVENTION.

IMPROVED SPOOLER.

Samuel F. Cobb, Alberton, Md.—This invention relates particularly to the form or construction of a slotted cam cylinder and the combination of the same with traversing bars carrying the thread guides and working horizontally in slots formed in the sides of the arches, or frames, in which the spool spindles are journaled. The machine can be so changed as to increase or decrease the traverse simply by removing the gear, thereby enabling the operator to make as even and regular layers when spooling number four yarn as when spooling number fifteen, presenting all the while the spool is being filled a smooth even surface to the thread, consequently the spool must be finished as commenced. In other spooling machines, the traverse is generally worked without this provision, and changing them from fine to coarse numbers produces an uneven ridgy surface, which grows worse as the spool increases in size.

NEW AGRICULTURAL INVENTIONS.

IMPROVED SULKY ATTACHMENT FOR PLOWS.

Samuel P. Langsford and Wiley N. Stroud, Waxahachie, Tex.—By this invention a farmer is enabled to apply any kind of plow to the sulky frame, and thereby do all his work with the same without having to walk in plowing. The invention consists of a sulky frame, to which the plow beam is rigidly applied, the connecting pieces and tongue being capable of adjustment to the position of the plow beam on a vertically sliding crosspiece, which is raised or lowered, so as to elevate or depress the plow, by lever connection with the seat of the sulky.

IMPROVED RECIPROCATING CHURN.

Bernhard Janson, Effingham, Ill.—This invention consists in a churn body having a handle and cover attached thereto, and provided with a socket on its lower side, which is adapted to receive a stud or pin on a stationary base piece or platform. The churn barrel turns on a fixed axis, and receives a rocking or tilting movement to the right and left, by making the recess in the projection of the churn larger than the axis pin.

IMPROVED HARVESTER.

Andrew Campbell, Nebraska City, Neb.—This invention consists in two special combinations—one for the fingers and bars, the latter with sharp edged front tooth, and another combination of the reciprocating heads, having depending teeth, cutters, and cutter guards, with endless apron carrying the grain directly back therefrom.