

**JAPANESE BRONZE VASES.**

We engrave on this page a group of bronze vases, which illustrate in an excellent manner the beauties and oddities of the peculiar artistic methods of the Japanese. As metalworkers, these wonderful people surpass in certain respects their European brethren, and some of their processes are to this day inimitable.

The central piece of this group stands some four feet high. It is composed entirely of bronze, save the panels between the dragon handles, which are damascened with silver and gold. The panel on this side represents a knight doing penance by standing under a cataract, and on the obverse he is seen, his sins washed away, having a quiet cup of tea with a couple of friends. So far the European can trace a meaning in the design; but when it comes to explaining the half human monsters, the dragons, sea serpents, and other animals, it is only possible to suppose that they may be the representations of traditional creatures such as figure in the Arabian Nights, and the like of which learned scientists assure us once walked or crawled upon the face of the earth and swam across the seas. The decoration of the smaller vases, saving the winged beasts that serve as handles, is more easily understood. The panels in these have birds and butterflies copied with wonderful fidelity and spirit after nature, and are really beautiful; and in these pieces, as in all the articles of Japanese manufacture, we see a minuteness of workmanship and finish such as no Christian people can afford the time to emulate.

**The International Dairy Fair.**

The executive committee of the International Dairy Fair Association announce that the proposition to hold a second fair at the city of New York, during the year 1879, has been so well received by the trade at large that its ultimate success is already assured, and it only now remains for the dairying interests throughout the country and the different dairy organizations to co-operate with the International Dairy Fair Association, and through their united efforts secure an exhibition worthy of the interests involved, surpassing anything of the kind ever before presented. The experiences gained at the last fair enable the committee to more readily comprehend the necessities of this, and having this in view, the whole of the American Institute Building has been engaged this year, thereby enabling the management to devote a much larger space to the exhibition of goods, and at the same time give that attention to proper display of dairy implements and tests of cream raising which want of space prevented at the last exhibition. Machinery Hall, a part of the Institute not used last year, will be devoted exclusively to this branch of industry, where, having ample steam power and connections, every facility will be afforded for the manufacture of butter and cheese upon a much larger scale than heretofore, and opportunities for displaying dairy implements by hand or power greatly increased. A separate apartment will be arranged with every requirement for making the fullest tests of the different processes for raising cream, and the trial of inventions claiming superiority. Accommodations for a large number of cattle will be provided, and the exhibition of herds, as well as specimen animals, made a feature. From promises already received from owners and breeders, it is confidently believed that an unprecedented number of choice animals will be exhibited, comprising selections from the most celebrated herds in America and Europe. The display of foreign products will be far greater than last year, assurances having been received from the officers of the Association resident and traveling abroad, of extensive preparations being made to send specimens of every kind of dairy products manufactured, as well as some thoroughbred cattle.

**Torpedo Boats.**

The Admiralty have entered into a contract with Messrs. Yarrow & Co., of Poplar, for the construction of some of their second-class torpedo boats. These little vessels are fitted with Yarrow's patent tubular boiler, by means of which steam can be raised from cold water, and the craft got under way, in six minutes from the time of lighting fires. The system of steering adopted is that introduced by the manufacturers, and which is now recognized as the most suitable for steering this class of vessel. It consists of a drop rudder forward, which is worked in conjunction with the usual rudder aft. These torpedo boats will be completed early next year, and the trials of them on the Thames and at Portsmouth are looked forward to with considerable interest.—*London Times.*

**Tape Worms in Eggs.**

Various instances have been recorded of the discovery in hens' eggs of minute specimens of the *distoma oatum*. They appear like a small speck, the size of a millet seed or a pin's head. It is believed by helminthologists that these will develop into one of the varieties of tape worm, and it is wise, therefore, to take eggs hard boiled or otherwise well cooked. A writer in one of the late numbers of *Nature* cites several instances where these parasitic bodies have been found.

**International Patent Law.**

The following are the resolutions passed at the meeting of the Patent Law Committee of the International Law Association held recently in London. The committee, after having deliberated on the subject, recognize that it seems impossible at the present time to propose one common law upon patents for inventions, on account of the numerous points of contact which the subject presents with divergent civil, commercial, and criminal law in general. Nevertheless, it is advisable to select a certain number of general principles which may be accepted in the laws of all countries. Consequently the committee adopt and propose to the congress of the association the following resolutions:

**General Principles.**—(1) The right of inventors over their productions is a right of property; the law does not create, it only regulates it. (2) A temporary privilege of sufficient duration to insure the remuneration of their labors and outlay should be accorded to inventors, less in their own interest than in that of industry in general.

**Law and Treaties.**—(3) Patents for inventions should be the subject of a special and complete law in each country. (4) Foreigners ought, with respect to patents, to be treated in exactly the same way as citizens. (5) Stipulations for the reciprocal protection of patent rights between different coun-



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tries should be contained in special conventions, independent both of treaties of commerce and of conventions for the mutual recognition of literary and artistic copyright.

**Patent Office.**—(6) A special department for patents, trade marks, and registered designs should be established in each country. A central depot of patents, etc., should be attached to it for the use of the public. Independently of any other publication the Administration of Patents, etc., should publish a periodical official journal.

**Fees.**—(7) The fees levied on patents should not be larger than is necessary to cover the expenses of the patent office, and should be levied by periodical payments.

**What is Patentable, and by Whom.**—(8) All inventions, whether of procedures or of products, should be patentable, except financial combinations or inventions contrary to public order or to morality. In particular, chemical, alimentary, and pharmaceutical preparations should be patentable. (9) In the absence of fraud, the first applicant should be deemed the inventor. (9a) No person, except he be engaged in the patent office, should, by reason of his employment, be debarred from obtaining patents for his own inventions.

**Provisions as to International Exhibitions.**—(10) Provisional protection should be granted to patentable inventions exhibited at international exhibitions, or such as are officially recognized. (11) The term during which inventions are thus protected should not be deducted from the term of the patent. (12) Such provisional protection should extend to all the countries represented at the exhibitions. (13) The fact that an article is an exhibit at an international or officially recognized exhibition should not interfere with the right of seizing it as an infringement.

**Provisional Protection.**—(14) Provisional protection for twelve months should be granted on the applicant for a pat-

ent filing a provisional specification containing an outline description of the nature of his invention, in which no details should be required.

**Procedure on Application.**—(15) No description of the invention—except its name—should be published before the issue of the patent, except as mentioned in paragraph 19. (16) The deposit of provisional specifications should, if desired by the inventor, be allowed to be made at the authorized local office, and at the consulates of the various nations, and on such deposit at a consulate, and the payment of the patent fees, provisional protection should commence as if the deposit had taken place in the patent office of the country represented. (17) Prior to the expiration of the term of provisional protection, if the applicant desires to complete his patent, he should be required to file a full specification. (18) Where a patent has been applied for in one country, subsequent publication of the invention should not during a period of twelve months prejudice the original applicant's right to patent in other countries.

**Examination.**—(19) On the filing of the complete specification, or the expiry of the term of provisional protection, if no complete specification has been filed, the provisional specification should be published. After the filing of the complete specification, and previously to its publication, the patent office should examine it, having regard exclusively to the following points: (a) Whether the specification is clear. (b) Whether the invention is contrary to public morals. (c) Whether the invention is wanting in novelty, regard being had solely to prior publications in the patent office of the country. (20) For the purposes of examination, an invention should not be deemed to be wanting in novelty, unless a prior publication be found which comes strictly within one or other of the following conditions: (a) It should be not more than twenty-five years old, and be in the form of a full description, identical with the applicant's description. (b) If the prior description be more than twenty-five years old, it should be proved that the identical invention as claimed by the applicant has been openly used within twenty-one years last past. (21) Should some parts of the invention come within these objections the applicant should be allowed to amend his specification. (22) Subject to such amendment, the patent should be granted, except in cases of fraud, or when the invention is contrary to public morals. (23) Reports and opinions of examining authorities, as respects applications for patents, should not be open to the public.

**Procedure on Grant of Patent.**—(24) The complete specification should be published immediately on the granting of the patent. (25) The provisional protection should continue until the final grant or refusal of the patent.

**Amendment.**—(26) Should it appear, after a patent has been granted, that the claims are too extensive, or that the specification is otherwise open to objection, it should be competent to the patentee to disclaim or amend his specification.

**Term.**—(27) All patents should be granted for a term of twenty-one years. There should be no prolongation. (28) A patent, whenever granted, should bear date from the deposit of the provisional specification.

**Effect of Patent.**—(29) All patents should, throughout their whole term, insure to the inventors or their legal representatives or assignees the exclusive right to the patented invention, and not a mere right of receiving royalties from third

persons. (30) No one should be permitted, without the leave of the patentee, to produce, use, or sell the article which forms the subject of the invention, the patented machinery, process, or combination, or the article produced by such patented machinery, process, or combination. (31) A patent should have no effect on vehicles or ships, or appliances to vehicles or ships, which come but temporarily within the boundaries of the country, and the owners of which do not carry on business within the country. (32) The patentee should not be prevented from introducing from abroad articles manufactured under his patent. (33) A patent should be held to confer an indefeasible title to the invention described in the complete specification, unless it be proved that there exists a prior patent covering an identical invention, or that the identical invention has been publicly used within twenty-one years prior to the date of the patent, or fully described in a publication bearing date or printed within twenty-five years prior to that date. (34) Where it is proved that the public interest requires that a patent should be worked, and that the holder of the patent is not attempting to meet the demand, and refuses licenses, the legislature should step in to prevent the public injury by a special law in each case. (35) The principle of expropriation for public utility is applicable to patents, but this should only be by virtue of a special law in each case, containing proper provisions for compensation. (36) Patents granted in different countries should be perfectly independent of each other in all respects.

An esteemed correspondent writes us from the province of São Paulo, Brazil, stating that severe frosts occurred there in August last during several nights, which had so seriously injured the coffee trees that the crop for 1880 will be reduced one half.

**To Make Cloth, Paper, etc., Fireproof.**

Several preparations for rendering textile and other inflammable fabrics incombustible and practically fireproof have been brought out by MM. Martin and Tessier, of Paris. The compositions are said to be of an inexpensive nature, and capable of rendering incombustible all kinds of readily inflammable substances, such as woven and other fabrics of cotton and other fibrous materials, paper, printed or otherwise, including bills of exchange and other securities, woodwork, theatrical scenery, straw, etc. The first composition, which may be applied to all kinds of fabrics without deteriorating them in any way, consists of:

	Kilos.
Sulphate of ammonia (pure).....	8
Carbonate of ammonia.....	2.5
Boric acid.....	3
Borax (pure).....	1.7
Starch.....	2
Water.....	100

It is simply necessary to steep the fabrics in a hot solution composed as above until they have become thoroughly impregnated, after which they are drained and dried sufficiently to enable them to be ironed or pressed like ordinary starched goods.

A second composition to be used for theatrical scenery (or the mounted but unpainted canvas to be used for this purpose), and also for woodwork, furniture, door and window frames, etc., is to be applied hot with a brush like ordinary paint. It is composed of:

	Kilos.
Boric acid.....	5
Hydrochlorate of ammonia or sal ammoniac.....	15
Potassic feldspar.....	5
Gelatin.....	1.5
Size.....	50
Water.....	100

To which is added a sufficient quantity of a suitable calcareous substance to give the composition sufficient body or consistency.

A third composition, to be used for coarse canvas or sail cloth, cordage, straw, and wood, is applied by immersing the articles therein or by imbibition, and consists of:

	Kilos.
Boric acid.....	6
Hydrochlorate of ammonia or sal ammoniac.....	15
Borax (pure).....	3
Water.....	100

A fourth composition, applicable to all kinds of paper, whether printed or not, including securities, books, etc., is formed of:

	Kilos.
Sulphate of ammonia (pure).....	8
Boric acid.....	3
Borax.....	1.7
Water.....	100

The solution is to be placed in a vat heated to 50° C. (122° Fah.) at the end of the paper-making machine, and the paper as it leaves the machine is passed through the solution in this vat, so as to be completely impregnated therewith, after which it is dried upon a warm cylinder and then wound on a reel. If the paper be in sheets or printed it is simply immersed in the above solution, heated to 50° C., spread out to dry, and afterward pressed to restore the glaze destroyed by the moisture.

The above compositions are said to insure a degree of incombustibility without precedent as regards the preservation of the materials to which they are applied. The proportions of the several ingredients are given as examples only, and may be varied as found necessary in practice.

**The Social Science Association.**

The last day's session began with a paper by Frederick Douglass on the exodus of negroes from the South. Mr. Douglass strongly opposed the movement, holding that the South was not only the best place for the negro as a field of labor, but best on the grounds of his political powers and possibilities. The position taken by Mr. Douglass was opposed by Professor T. R. Greener, of Howard University, and President Anderson, of Rochester.

William A. Hovey, of the Boston *Transcript*, read a striking paper on co-operative stores in England and America. Mr. James Samuelson, of Liverpool, England, presented certain schemes for the material advancement of the working classes, and Mr. Joseph D. Weeks, of the *Iron Age*, gave an address on industrial arbitration and conciliation. Debt making and debt paying in American cities was discussed by Mr. William F. Ford, of Philadelphia. In the department of social economy, Mr. F. B. Sanborn, secretary, presented his annual report; and there was read a paper sent by Charles L. Brace, of the Children's Aid Society, discussing the methods of dealing with poor and vicious children. Institution life for children was treated in a paper by Rev. T. K. Fessenden, of Connecticut, and debated by several members. The closing paper was by Mr. Robert P. Porter, of the Chicago *Inter-Ocean*, on the industrial, agricultural, and financial outlook of the West. It presented an array of facts and figures that astonished even those who had a general idea of the rapid industrial progress of the West during recent years.

**A Remarkable Pompano.**

Mr. C. A. Lewis, at the Washington Fish Market of this city, has recently had on exhibition the largest pompano ever known. It was taken with Spanish mackerel off Norfolk, Va., and weighed twenty-three pounds. Usually these fish range between one and three pounds in weight. A four pounder is rare. Above that weight but one specimen has ever before been brought to this market, and that weighed nineteen pounds. Mr. Lewis' fish was perfect in every particular, though a monster in size. It was sent to the Smithsonian Institution at Washington.

**RECENT DECISIONS RELATING TO PATENTS, TRADE MARKS, ETC.**

By Judge Clifford.—U. S. Circuit Court—District of Massachusetts.

BOOT AND SHOE SEWING MACHINES.—THOMAS *et al.* v. THE SHOE MACHINERY MANUFACTURING COMPANY *et al.*

1. Reissued patents are presumed to be for the same invention as the original, and will only be adjudged to be void because for a different invention where it clearly appears that the reissue contains some new feature of a material character not described, suggested, nor substantially indicated in the specification, drawings, or Patent Office model.

2. The fact that a reissue patent has been granted *prima facie* evidence that satisfactory proofs have been given to the Commissioner of such a state of facts as warrant the reissue, even though the patent may contain no recitals that the prerequisites to the grant have been fulfilled.

3. After reissue the Commissioner's decision in the premises *in a suit for infringement* is final and decisive, and is not re-examinable in such a suit in the circuit court, unless it is apparent on the face of the patent that he has exceeded his authority, and that there is such a repugnancy between the old and the new patent that it must be held as matter of legal construction that the new patent is not for the same invention as that embraced and secured in the original.

4. The applicant for reissue cannot interpolate new features not described, suggested, or substantially indicated in his original specification, drawings, or model. Such interpolations in a reissue patent, if material, show that the Commissioner exceeded his jurisdiction; and where that is done it clearly becomes the duty of the court to declare the patent void.

5. The courts will in no case declare a reissue patent void if, by the true construction of the two instruments, the invention secured by the reissue is not substantially different from that embodied in the original patent. Inquiries in such a case are restricted to a comparison of the terms and import of the two patents in view of the drawings and models. If from these it results that the invention claimed in the reissue is not substantially different from that described, suggested, or indicated in the original specification, drawings, or model, the reissued patent must be held valid, as all other alterations and amendments plainly fall within the intent and purpose of the statute which allows a surrender and reissue.

6. Inventions secured by letters patent are presumed to be new and useful until the contrary is shown; and, in the absence of countervailing proof, that *prima facie* presumption is sufficient to entitle the complainant to a decree in a suit for infringement.

**By the Commissioner of Patents.**

ANVIL.—EX PARTE DUSCH.

The combination of a drill, adjustable standard, and vise with an anvil, as such, is not a legitimate mechanical combination, for the anvil, as such, can make no contribution to any distinct operation of the entire machine. But the combination of a drill, adjustable standard, and vise, by means of a base to which the standard and vise are attached, is a legitimate combination, embracing no supernumerary elements, and, if novel, is patentable.

TIME LOCK.—EX PARTE KOOK & HALL.

When the different forms referable to one genus are such that the substitution of one for another involves invention, the differences are patentable, and the several forms constitute different species of the genus, all subject to one generic patent, but each legally patentable in a distinct and specific patent. When, however, the substitution of one for the other involves no invention, but only mechanical skill, the differences are not patentable, and the forms do not constitute several species of the genus, but are all modifications of the same species.

VEGETABLE LIFE-DESTROYER AND SPROUT-KILLER.—EX PARTE RODGERS.

A decision of the Examiners-in-Chief, lawfully made in any case, constitutes a rule for the Primary Examiner in that case until the decision is overruled by the Commissioner.

METALLIC LINES OR CORDS FOR SUSPENDING PICTURES, ETC.—EX PARTE HOOKHAM.

A claim for an improvement in metallic cords for suspending pictures and other articles may be united in one patent with a claim for an improvement in fastenings for connecting pictures and other articles to cords; but these claims cannot be united with a claim for a reel for holding such cords in stock.

SCYTHES.—EX PARTE ROBY.

The substitution of edge steel enveloped in soft steel, in lieu of edge steel enveloped in iron or other material, in the manufacture of scythes, is a patentable improvement if the scythes in which the soft steel is used have more elasticity, less weight, and take a better polish than those constructed in any other form.

TRADE MARK.—EX PARTE COATS.

1. Minor non-essential elements of a composite symbol of trade, when used in connection with other parts which constitute its main features, cannot be registered as a trade mark; but those parts, when so used as obviously to constitute the main features of the aggregate symbol, are registrable as a trade mark.

2. Two parallel scales of inches and fractional parts thereof, when so used as to be the main features of the entire symbol or device in which they are shown, will constitute a

lawful trade mark; but when used as a mere border to inclose ornamental designs or other trade marks of the applicant cannot constitute a lawful trade mark.

**By the Acting Commissioner of Patents.**

VENT PLUGS.—EX PARTE HICKS.

1. A claim for an article of manufacture cannot be changed by reissue into a claim for a process when the process was but a legitimate function of the particular article, and the article described was indispensable to the conduct of the process.

2. Where an application or a patent is restricted to a description and claim of a particular apparatus, neither the one nor the other can be subsequently enlarged to embrace a claim for a method that would include the same and all other means for producing the same result performed by that apparatus.

**Part of One Day's Shipments of Food.**

On Saturday, September 13, seven large steamers sailed from this port for Europe laden with American produce.

The Helvetia, of the National Steamship Line, for Liverpool, had on board 1,200 bales of cotton, 84,000 bushels of grain, 800 boxes of bacon, 900 boxes of cheese, 150 packages of butter, 700 sacks of flour, 200 cases of canned meats, 200 packages of sundries, and 45 tons weight of fresh meat.

The Germanic, of the White Star Line, for Liverpool, took out 1,600 boxes of bacon, 31 tierces of pork, 100 barrels of pork, 700 barrels of sugar, 210 barrels of sirup, 2,800 sacks of flour, 1,300 bales of cotton, 48 hogsheads of tobacco, 18,000 bushels of corn, 500 barrels of flour, 450 bales of hops, 11,000 boxes of cheese, 3,000 boxes of butter, and 60 tons of fresh meat.

Among other articles of merchandise the Olympus, of the Cunard Line, for Liverpool, had on board 2,200 bales of cotton, 13,000 bushels of wheat, 12,000 bushels of corn, 100 sacks of flour, 60 casks of skins, 30 tons of leather, 500 boxes of bacon, 400 cases of canned meats, and 500 dried hides.

The cargo of the steamship Oder, of the Imperial German Mail Line, for Bremen, was composed of 8,032 bushels of corn, 5,370 bushels of wheat, 340 hogsheads of tobacco, 550 cases of tobacco, 190 bales of tobacco, 2,200 packages of butter, 1,500 sides of leather, 350 tierces of lard, 50 tierces of grease, 200 barrels of flour, 100 barrels of peas, 75 boxes of bacon, 300 boxes of corned beef, 180 boxes of sausages, and 50 barrels of corned beef.

The Ethiopia, of the Anchor Line, for Glasgow, carried 40,000 bushels of corn, 1,700 barrels of flour, 6,000 sacks of flour, 4,000 boxes of cheese, 20 hogsheads of tallow, 150 tierces of beef, 900 boxes of bacon, 7,000 packages of butter, 900 quarters of fresh beef, and 200 carcasses of sheep.

The Australia, of the Anchor Line, for London, had on board 5,800 sacks of flour, 550 sacks of oatmeal, 4,035 packages of canned goods, 230 boxes of bacon, 125 boxes of hams, 50 tierces of beef, 470 barrels of tongues, 7,800 boxes of cheese, 450 barrels of lard oil, 450 barrels of flour, 8,000 bushels of wheat, 790 quarters of beef, 300 carcasses of sheep, and 125 live bullocks.

The Assyria, of the Anchor Line, for Bristol, took out 32,000 bushels of wheat, 2,000 barrels of flour, 3,000 boxes of cheese, 400 boxes of bacon, 100 tons of tallow, 400 barrels of lard oil, 900 packages of lard, 140 tons of oil cake, and 1,400 bags of flour.

This, it must be borne in mind, includes only the more important shipments by steamers. A vast amount of produce, particularly grain, is exported in sailing vessels.

Ship owners report a rapidly increasing demand for American products in Europe—a demand so urgent that the carrying rates for grain have been raised from thirty to forty per cent above those that obtained three months ago.

**A Lady Patent Lawyer.**

For the first time in the federal courts of this district a lady practitioner appeared the other day in this city before Judge Blatchford, in the United States Circuit Court, and argued in person a motion for an injunction in a patent suit for the alleged infringement of a patent of her own. The lady is Miss Helen Marie MacDonald, of Boston.

It will be remembered that for the last ten or fifteen years a considerable number of ladies have been employed in the Patent Office at Washington, some of whom have occupied the positions of examiners. In general they have shown activity and ability in the discharge of their official duties, and the experience gained ought to qualify them to serve acceptably as attorneys.

**Our Trade with England.**

The British Bureau of Statistics report that America is exporting to Great Britain three times as much as Great Britain sends to this country, and that with the rapid increase in American exports there is a correspondingly rapid decrease in British exports. In round numbers, the exports from the United States to Great Britain for the last fiscal year amounted to \$333,000,000, while the exports from Great Britain to this country in the same period amounted to about \$111,000,000.

**American Gynecological Society.**

The fourth annual convention of the American Gynecological Society met at Johns Hopkins University, Baltimore, Md., Sept. 17, for a three days' session. Dr. T. G. Thomas, of New York, presided. There was a good attendance, embracing many of the most eminent physicians in the United States.