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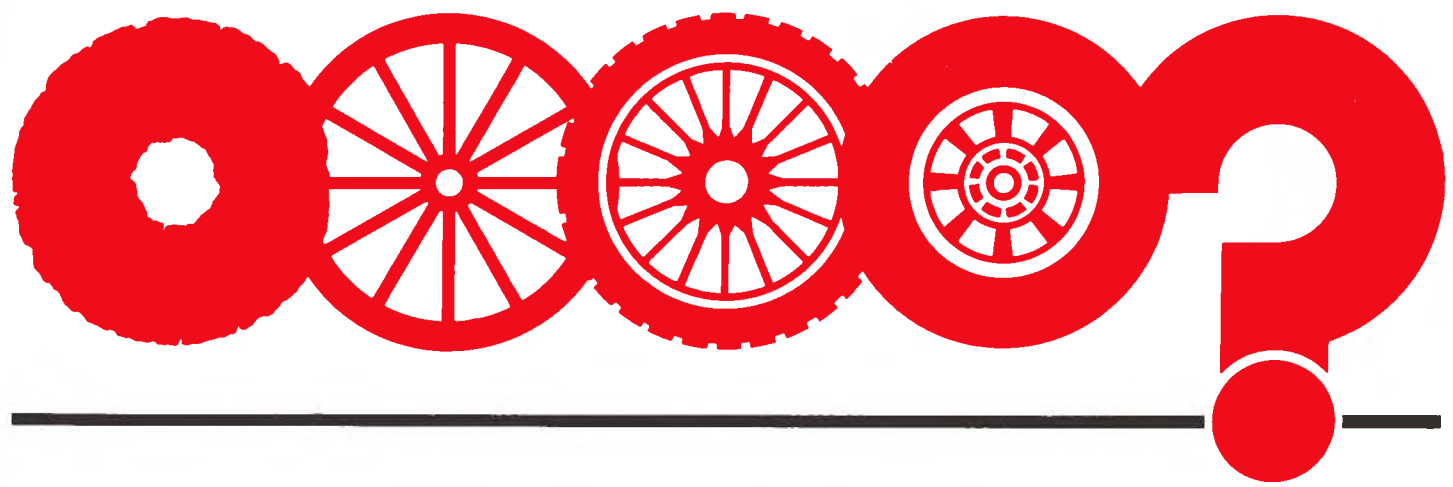


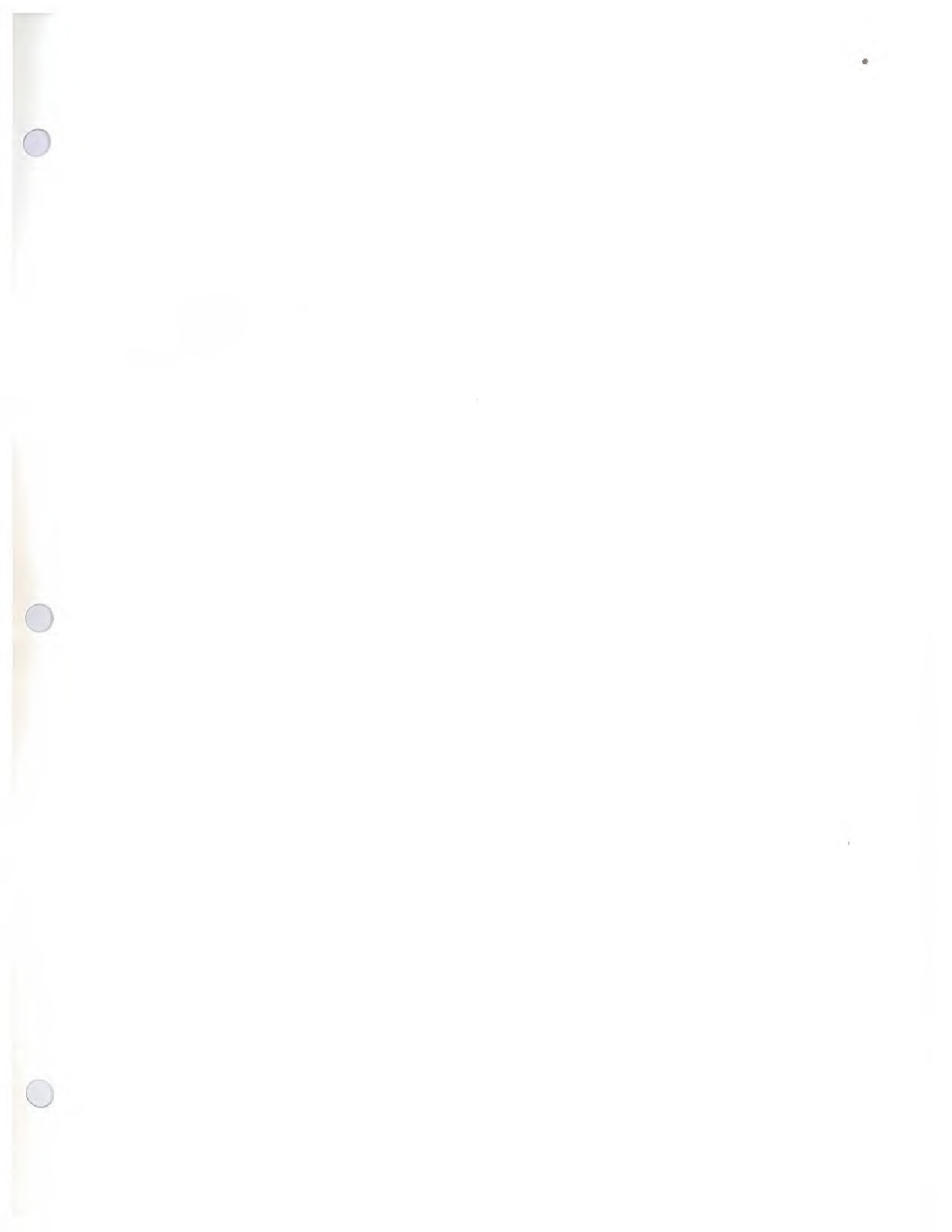
new products bulletin

Bulletin 325, February 1983

bulletin de produits nouveaux

Bulletin 325, Février 1983





new products bulletin

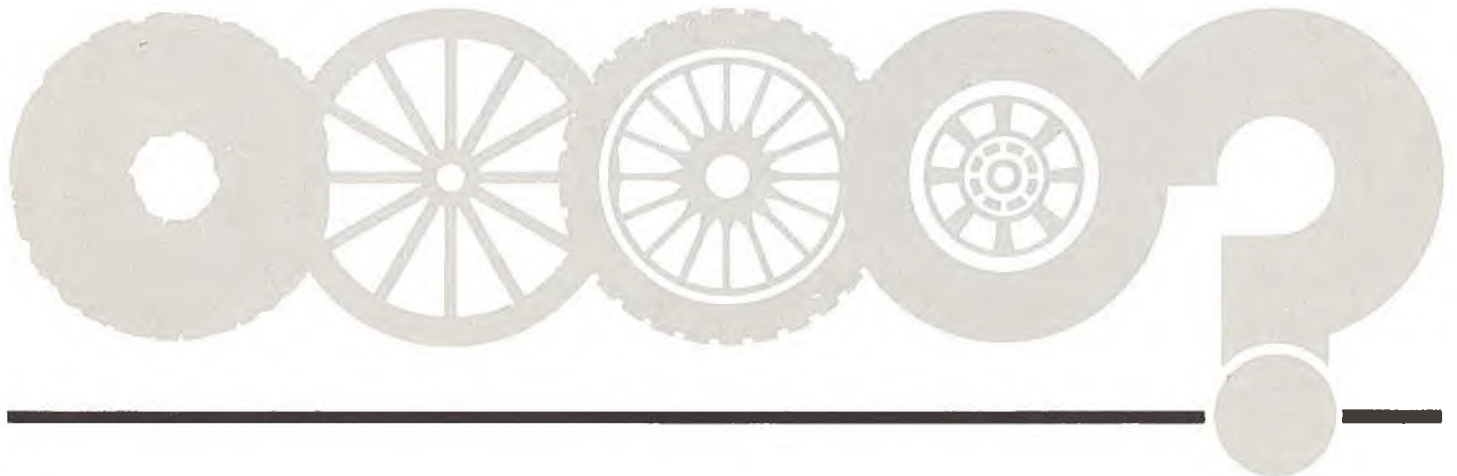
bulletin de produits nouveaux

This monthly bulletin is published to inform Canadian industry of licensing and joint venture opportunities that may be investigated for the purpose of forming manufacturing affiliations. The Department cannot assume any responsibility for claims made or for transactions which ensue from the publication of any items in this bulletin. If you are interested in any of the proposals you should contact the correspondent identified with the item and send a copy of your initial correspondence to the Canadian Government Trade Commissioner responsible for the area at the address indicated, in order that he can provide appropriate assistance or commercial information.

The Licensing Opportunities Section (ABLO), Market Development Branch, Department of Industry, Trade and Commerce and Regional Economic Expansion, Ottawa, Ontario K1A 0H5 (telephone: (613) 995-5771), should be advised of any agreements concluded as a result of this publicity.

Publié tous les mois, le présent bulletin a pour objet d'informer l'industrie canadienne des occasions de fabrication sous licence et d'entreprises en participation qu'il est possible d'étudier aux fins de constituer des affiliations manufacturières. Le Ministère ne peut assumer aucune responsabilité à l'égard des réclamations ou transactions découlant de la publication d'articles dans le présent bulletin. Si l'une ou l'autre des propositions vous intéresse, auriez-vous l'obligeance de communiquer avec le correspondant et transmettre copie de votre premier échange de correspondance au délégué commercial du Gouvernement du Canada qui s'occupe de la région en cause, à l'adresse indiquée, afin qu'il puisse vous fournir l'aide ou les renseignements commerciaux pertinents.

Prière d'informer la Section des possibilités de licences (ABLO), Direction du développement des marchés, ministère de l'Industrie et du Commerce et de l'Expansion économique régionale, Ottawa (Ontario) K1A 0H5 (tél. (613) 995-5771), de toute entente intervenue à la suite de la présente publicité.





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Dérivés de pipéridylidène analgésiques
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Thermocouvercles pour récipients métallurgiques
pH-mètre
Machine à ensacher
Presse pour la préparation des pièces de travail

Liste des brevets canadiens disponibles pour octroi de licence ou vente au Canada délivrés en décembre 1982

Demandes de brevet adressées au gouvernement des États-Unis, pour l'obtention de licences américaines et étrangères éventuellement disponibles

Licences de la Hongrie

Séparateur à faisceau de tubes pour le traitement des eaux et des effluents
Filtre à chasse continue pour eaux industrielles
Support de tournage de polygones universel
Dispositif transportable servant à éliminer le pétrole flottant à la surface des cours d'eau
Carburateur économique pour moteurs Otto
Dérivés de l'isoquinolinone ayant des propriétés anticonvulsivantes

Possibilités de licence par l'intermédiaire du Georgia Tech Research Institute, Atlanta (Georgie) É.-U.

Système de mesure, à auto-étalonnage, du rapport d'onde stationnaire
Appareil automatique de dictée musicale destiné aux débutants en musique
Déchargeur
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Mesure de paramètres temporels à l'aide d'un haut-parleur électrodynamique
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Selected Licensing or Joint Venture Manufacturing Opportunities

Analgesic Piperidylidene Derivatives/325

These compounds exhibit powerful analgesic activity when compared with standard reference compounds such as a.s.a. and morphine. They may exhibit analgesic agonist, agonist antagonist or antagonist activity depending upon the nature of the nitrogen substituent. Write: **Case 7435**, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Portable Pressurized Air Purification System/325

A small compact system to provide a personal pressurized clean air supply. Wearer mobility and low system weight are the main advantages. The system can be adapted to different face masks. Write: **Case 7605**, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Thermo Cover for Metal Vessels/325

Swiss manufacturer offers licensing rights to a method for manufacturing the Vallak® thermo cover under Patent Number 1,036,791 issued in 1978 covering a method for manufacturing steel ingots or castings by which a reusable insulated cover is used to prevent radiation and convection when placed near the level of metal but not in contact with it. According to another embodiment of the invention, the reusable insulating material can be used on a ladle. The Vallak® thermo cover is made from a light-weight metal shell structure lined with selected ceramic fibres which weighs 70 percent less than insulating refractories and up to 95 percent less than dense refractories with one half less heat conductivity than insulating brick and offers: substantial reduction in cost; a possibility to reduce the temperature in the furnace since the efficiency of the covers decreases the temperature fall in the ladle; no, or less preheating of the ladles prior to use, if the covers are kept on the ladles between heats; a hot ladle lining even above the molten metal surface, thus increasing lining life; a simple, reliable and efficient insulation for long holding times in the ladle; a clean and reusable covering agent, giving no fume or residue as from consumable conventional covering agents; a reduction of the oxidation of the metal in the ladle or tundish; less segregation and inclusions in the ingots when used on top of ingot moulds; extremely low heat storage

Sélection d'occasions de fabrication sous licence ou d'entreprises en coparticipation

Dérivés de pipéridylidène analgésiques/325

Ces composés ont un pouvoir analgésique élevé par comparaison aux produits témoins standards tels que l'a.s.a. et la morphine. Ils peuvent avoir une activité synergique, à la fois synergique et antagoniste ou seulement antagoniste, selon la nature du substituant de l'azote. Écrire: **Cas 7435**, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, ministère de l'Industrie et du Commerce, Ottawa (Ontario) K1A 0H5.

Purificateur d'air pressurisé portatif/325

Petit système compact assurant un approvisionnement personnel en air pressurisé. Sa légèreté et la mobilité qu'il laisse à l'utilisateur en sont les principaux avantages. S'adapte à différents modèles de masques. Écrire: **Cas 7605**, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, ministère de l'Industrie et du Commerce, Ottawa (Ontario) K1A 0H5.

Thermocouvercles pour récipients métallurgiques/325

Un fabricant suisse offre les droits d'exploitation sous licence d'une méthode de fabrication de thermocouvercles Vallak^(M.D.) conformément au brevet 1 036 791 émis en 1978 protégeant une méthode de fabrication de lingots ou pièces coulées en acier. Cette méthode comporte l'emploi d'un couvercle isolé réutilisable à proximité de la surface d'un métal mais non en contact avec celle-ci, pour diminuer les pertes de chaleur par rayonnement et par convection. Selon une autre application de l'invention, le couvercle peut être utilisé sur une poche de coulée. Le thermocouvercle Vallak^(M.D.) est fait d'une coque métallique légère recouverte de fibres céramiques possédant une masse de 70 pour cent inférieure à celle des matériaux réfractaires isolants et jusqu'à 95 pour cent inférieure à celle des matériaux réfractaires denses, et présentant une conductivité thermique égale à la moitié de celle des briques isolantes. Ainsi, on peut diminuer considérablement les coûts et réduire la température du four, car l'efficacité du couvercle diminue la baisse de température dans la poche; on élimine ou on diminue le besoin de préchauffer les poches avant de s'en servir lorsque les couvercles sont maintenus en place entre les coulées; le couvercle protège plus longtemps le revêtement thermique, au-dessus de la surface du métal en fusion; il constitue un isolant simple, fiable et efficace pour de grandes durées de rétention en poche; il sert aussi de cou-

and heat flow, thus high efficiency; high thermal shock resistance to damage from rapid and great changes in temperature; no need for special proceedings prior to use such as preheating; a design to fit local conditions in the melting shop; simple and easy installation by regular plant personnel; complete protection against damage caused by heat radiation; and, a super light-weight cover. (See illustration page 31.) Write: Mr. Hannes Vallak, Managing Director, Ferrox S.A., rue de la Croix-d'Or 19, 1204 Geneva, Switzerland and send a copy of your initial correspondence to the Canadian Embassy, Kirchenfeldstrasse 88, 3005 Berne, Switzerland.

pH Sensor/325

American manufacturer offers non-exclusive licensing rights for its spin-off pH sensor technology under U.S. Patent 4,264,424 and any corresponding foreign patent applications and patents in Canada, Germany, Italy, Japan, South Korea, Mexico, Spain, Sweden and Taiwan. Invented by Dr. L.W. Niedrach, the sensor is for measuring the pH of aqueous solutions at temperatures as high as 285°C and at pressures at least as high as 8268 kPa. An overview of the technical aspects and licensing proposal for this sensor set forth in a Summary Report which is available on request. A prospective licensee must have the necessary resources to conduct an engineering development program as a system will have to be engineered for introducing this sensor commercially. Marketing will be similar to that conducted by those in the pH sensor business. Write: Mr. Phillip L. Valyou, General Electric Company, Technology Marketing Operation, 120 Erie Blvd., Schenectady, N.Y. 12305 and send a copy of your initial correspondence to the Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.A.

Silo Bag Filling Machine/325

American inventor offers the manufacturing and marketing rights to a Canadian company and export rights to Australia for a silo bag filling machine. Patents are pending in Canada and Australia. The invention relates to a machine for loading material into a large bag. The machine includes a housing, a forcing mechanism and a traverse mechanism for moveably supporting the housing. The housing includes a hopper, mechanism for projecting the material into the bag, and mechanism for connecting the hopper and the projecting mechanism. The forcing mechanism moves material in the hopper through the connecting mechanism to deposit it substantially centrally in the projecting mechanism. The forcing mechanism is operated by a drive mechanism. A large bag formed of impervious material can best

vercle propre et réutilisable n'émettant aucune fumée et ne laissant aucun résidu contrairement aux produits classiques qui se consomment; il permet de diminuer l'oxydation dans la poche de coulée ou dans l'entonnoir de coulée et de réduire la séparation et les inclusions dans les lingots lorsqu'on le place sur les moules; il diminue de beaucoup le stockage et les échanges de chaleur, d'où sa grande efficacité; il résiste au chocs thermiques causés par des variations brusques et énormes de température; il ne nécessite aucun traitement spécial comme le préchauffage; il est conçu pour s'adapter aux conditions dans la fonderie; son installation simple et facile peut être réalisée par le personnel régulier de l'usine; il résiste à tous les dommages causés par le rayonnement calorifique; enfin, ce couvercle est extrêmement léger. (Voir l'illustration page 31.) Écrire à: M. Hannes Vallak, Directeur administratif, Ferrox S.A., 19, rue de la Croix-d'Or, Genève 1204 (Suisse) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Kirchenfeldstrasse 88, 3005 Berne (Suisse).

pH-mètre/325

Un fabricant américain offre les droits non exclusifs d'exploitation sous licence de la technologie concernant son nouveau pH-mètre conformément au brevet É.-U. 4 264 424 et à tout autre brevet (ou demande de brevet) étranger au Canada, en Allemagne, en Italie, au Japon, en Corée du Sud, au Mexique, en Espagne, en Suède et à Taiwan. Ce pH-mètre, inventé par Dr. L.W. Niedrach, sert à mesurer le pH de solutions aqueuses à des températures aussi élevées que 285°C et à des pressions pouvant dépasser 8 268 kPa. On peut obtenir sur demande un rapport sommaire contenant un aperçu des aspects techniques de ce pH-mètre ainsi que des propositions de licence s'y rapportant. Le preneur de licence éventuel doit avoir les ressources nécessaires pour mener un programme de développement technique permettant de mettre le pH-mètre sur le marché. La commercialisation sera semblable à celle dans le domaine des pH-mètres. Écrire à: M. Phillip L. Valyou, General Electric Company, Technology Marketing Operation, 120 Erie Blvd., Schenectady (N.Y.) 12305 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 1251 Avenue of the Americas, New York City (N.Y.) 10020-1175 (É.-U.).

Machine à ensacher/325

Un inventeur américain offre les droits de fabrication et de mise en marché à une société canadienne et les droits d'exportation à l'Australie pour une machine à ensacher. Des brevets sont en instance au Canada et en Australie. L'invention est une machine destinée à charger des matières dans un grand sac. La machine comprend une caisse, un mécanisme d'alimentation forcée et un support mobile pour la caisse. La caisse comprend une trémie, un mécanisme pour projeter les matières dans le sac et un dispositif reliant la trémie et le mécanisme de projection. Le mécanisme d'alimentation forcée déplace les matières dans la trémie grâce au dispositif de liaison pour les déposer pratiquement au centre du mécanisme de projection. Le mécanisme d'alimentation forcée est commandé par un entraînement. La

be used stretched out on the ground. The device forces the ensilage or other material into the bag and leaves the bag in place on the ground so it does not have to be moved once filled. A moving filler mechanism with a single auger which may have two different diameters and pitches and which forces material substantially centrally to a projecting device at the input of the bag, is provided. Applications include bagging of silage, corn, grains and other materials and could be used, for instance, for storing offal by factories, etc. (See illustration page 31.) Write: TePaske and Evans, 203-3rd Street N.E., Sioux Center, Iowa 51250 (Telephone: (712) 722-2731) and send a copy of your initial correspondence to Canadian Consulate General, 15 South Fifth Street, Minneapolis, Minnesota 55402-1078, U.S.A.

meilleure façon de se servir du grand sac étanche est de l'étendre sur le sol. La machine force le fourrage ou d'autres matières dans le sac et laisse ce dernier en place sur le sol, de sorte qu'il n'est pas nécessaire de le déplacer une fois qu'il est rempli. Le mécanisme de remplissage comprend une vis sans fin simple qui peut être fournie en deux diamètres et pas différents. Cette vis, fournie avec la machine, force les matières pratiquement au centre du mécanisme de projection placé devant le sac. Les applications de cette machine comprennent notamment l'ensilage du fourrage, du maïs, des céréales et d'autres matières, et cette dernière pourrait, par exemple, servir à recueillir les déchets des usines. (Voir l'illustration page 31.) Écrire à: TePaske and Evans, 203-3rd Street N.E., Sioux Center (Iowa) 51250 (Téléphone: (712) 722-2731) et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 15 South Fifth Street, Minneapolis (Minnesota) 55402-1078 (É.-U.).

Pressing Tool for Preparing Work Pieces/325

Austrian inventor offers licensing rights to a Canadian company under his 1975 U.S. Patent 3,910,097 and improvement pending patents, for a tool which is adapted to a preferably plane end surface and a countersunk bore of the work pieces for receiving the turning pin of a lathe. It comprises a press ram operated by hydraulic pressure at a specific distance determined by the desired length of the work piece. As the tool advances a set distance against the work piece it effects a plastic deformation of the work piece end until it abuts stop means defining the set operating distance and it is thereafter returned to its starting position. The tool is patented in Austria and Switzerland and improvement patents are pending in Austria, Germany and Czechoslovakia. Write: Mr. Miroslav Kubalek, Deublergasse 37/7, A-1210 Vienna, Austria and send a copy of your initial correspondence to Canadian Embassy, Luegerring 10, A-1010 Vienna, Austria.

Presse pour la préparation des pièces de travail/325

Un inventeur autrichien offre les droits de licence à une société canadienne sous son brevet américain n° 3 910 097 (1975) et les brevets d'amélioration en instance, pour un outil adapté de préférence à l'extrémité à surface plane et à alésage fraisé d'une pièce de travail pour recevoir la poupée d'un tour. L'outil comprend un vérin hydraulique fonctionnant à la distance précise déterminée par la longueur désirée de la pièce de travail. A mesure que l'outil avance contre la pièce de travail, il en déforme l'extrémité jusqu'à sa butée à la distance prescrite et il revient à sa position de départ. L'outil est breveté en Autriche et en Suisse et des brevets d'amélioration sont en instance en Autriche, en Allemagne et en Tchécoslovaquie. Écrire à: M. Miroslav Kubalek, Deublergasse 37/7, A-1210 Vienne (Autriche) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Luegerring 10, A-1010 Vienne (Autriche).

Canadian Patents Available for Licensing or Sale in Canada Issued December 1982

Liste des brevets canadiens disponibles pour octroi de licences ou vente au Canada délivrés en décembre 1982

Note:

Résumés of the following Canadian Patents are published in the language of application, English or French.

Note:

Des résumés des brevets canadiens ci-joints sont publiés dans la langue de la demande de brevet, en anglais ou en français.

Building for Detonating Explosives/325

Bâtiment pour l'essai d'explosifs/325

A building structure for recurrent detonation of explosive charges of up to several hundreds of kilos with the aim to obtain effective sound dampening and economical use of materials. The building comprises a tube shaped steel structure with two gable walls inside the tube and which defines an explosion chamber in the centre portion thereof. One or preferably both of said two gable walls are apertured by a plurality of through-going openings. A webbed wall or the like is situated at least in one end portion of the tube which together with respective adjacent gable wall defines one, respectively two, gable-chambers which are filled with a mass of stones or the like. The tube shaped steel structure is positioned horizontally and freely resting on a sand bed or the like and is covered along its entire length with sand. The building is effective to obtain a sound dampened gas discharge and a pressure relief. Write: **PATENT 1,136,824**, Dyno Industrier A.S., Nedre Slottsgt, 2, Oslo 1, Norway and send a copy of your initial correspondence to Canadian Embassy, Postuttak, Oslo 1, Norway.

Support Spacer Apparatus/325

Support de fixation/325

A support spacer apparatus relating to a paneling system for providing improved insulating qualities to pre-engineered buildings and the like in which stresses imparted to a supported structure are transferred through compressible insulation without diminishing the thermal character of the insulation, the support spacer apparatus comprising a spacer member having a plurality of fastener assemblies connected thereto and extendable through the insulation; the fastener assemblies attachable to an underlying substrate by the application of energy to the fastener assemblies for supporting the spacer member at a predetermined distance from the substrate such that the insulation is disposed substantially in its prepenetration state after attachment of the fastener assemblies to the substrate. Write: **PATENT 1,136,825**, Encon Products, Inc., 210 S.W., 89th Street, Oklahoma City, Oklahoma 73139 and send a copy of your initial correspondence to Canadian Consulate General, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201-3051, U.S.A.

Fishing Jig/325

Appât artificiel de pêche/325

There is provided a novel fishing device comprising a support member, a fishing rod member pivotally supported intermediate its ends by said support member for rotation about a horizontal axis; a motor; a linkage driven by said motor and adapted to be pivotally and detachably connected to one end of said fishing rod member; whereby, when said motor is activated, said fishing rod member is rotated in a rocking motion about a horizontal axis by said linkage and is detached from said linkage when a predetermined force is applied to the opposite end of said fishing rod member. Write: **PATENT 1,136,855**, Harold Frank, 1751 - 7th Avenue East, Owen Sound, Ontario N4K 2Z7 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Roof Supports/325

Soutènements de toit/325

The invention relates to a self-advancing roof supporting apparatus for providing temporary support of a portion of the roof of a tunnel, for example in an underground mine such as a coal mine. When tunnels are being extended, temporary roof supports need to be erected whilst the newly excavated material is removed and permanent roof supports installed. The apparatus of the invention has means engageable upon the permanent roof-supports to suspend the apparatus therefrom, and preferably has two relatively slidable gripping devices or sets of devices to enable the apparatus to be advanced or withdrawn along the tunnel. Write: **PATENT 1,136,871**, John D. Harding, 8 Field Close, Gedling, Nottingham, England NG4 4DE and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Internal Zone Growth Method for Producing Metal Oxide-Metal Eutectic Composites/325

Méthode de fusion dans l'âme pour l'obtention de composites faits d'oxyde métallique et de métal eutectique/325

An improved method for preparing a cermet comprises preparing a compact having about 85 to 95 percent theoretical density from a mixture of metal and metal oxide powders from a system containing a eutectic composition, and inductively heating the compact in a radiofrequency field to cause the formation of an internal molten zone. The metal oxide particles in the powder mixture are effectively sized relative to the metal particles to permit direct inductive heating of the compact by radiofrequency from room temperature. Surface melting is prevented by external cooling or by effectively sizing the particles in the powder mixture. Write: **PATENT 1,136,969**, Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to the Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Photographic Paper Punch/325

Perforatrice mécanique de papier photographique/325

A pneumatic punch for paper, and particularly photographic paper. The punch comprises a cylinder having a piston seated within, to be pneumatically driven between upper and lower limits in the cylinder chamber. For this purpose, actuation and retraction air inlet ports are provided through the wall of the cylinder, the ports being separated by the piston against fluid communication within the cylinder chamber between the ports. An elongated guide of constant, circular cross-section is secured centrally to the piston on the side thereof exposed to the air from the retraction air inlet port. An elongated punch of circular cross-section is concentrically secured to the free end of the guide. A central relatively restricted air passageway extends from the actuation air inlet port side of the piston, passing through the piston, guide and punch. A die co-operates with the punch, the die having a body rigidly associated with the cylinder and having a slot of circular cross-section to receive the punch. A space is provided between the punch, when the piston is at its upper limit, and the entrance to the slot of the die to receive and permit passage of paper to be punched. During operation, air pressure from the actuation air inlet port drives the piston to its lower limit as air is passed through the central air passageway of the piston, guide and punch to force a slug of punched paper on through the slot. Such a punch avoids the need for solenoids, often found in prior art punches used for photographic paper and permits smooth operation, ready adjustment and combined pneumatic punching and removal of slugs of paper produced by the punching process. Write: **PATENT 1,136,983**, Jose M. Garrocho, 7572 Rockhill Road, Mississauga, Ontario L4T 2Z7 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Method of Making Dresses for Dolls and the Like and Product Obtained by this Method/325

Méthode de fabrication de vêtements pour les poupées et autres jouets du genre et produit ainsi obtenu/325

A method for making doll clothing comprises superimposing two pieces of weldable synthetic fabric, making a line of discontinuous welds to join the pieces along garment ledges to be joined. The garment is cut from the pieces around the whole garment outline. The welds are discontinuous to obtain advantageous flexibility and managability at the joining lines. Decorations depicting clothing accessories such as collars and buttons may be printed on the material strips before superimposition thus avoiding finishing steps in garment manufacture. Write: **PATENT 1,137,045**, Giulio S. Furga, Via Fatebenefratelli 12, Milano, Italy and send a copy of your initial correspondence to the Canadian Consulate General, Via Vittor Pisani 19, 20124 Milan, Italy.

Static Monolithic Alveolated Cylindrical Structure with Extended Contact Surface/325

Structure cylindrique alvéolaire monolithique statique à grande surface de contact/325

Structure cylindrique alvéolaire monolithique statique à grande surface de contact en matériau céramique, comportant une pluralité de canaux parallèles définis par des parois de type radial et des parois de type circulaire, dans laquelle les canaux forment deux groupes, traversés chacun par un fluide, les canaux de l'un des deux groupes étant imbriqués entre les canaux de l'autre groupe selon un décalage angulaire, la section droite de la structure comportant une zone annulaire composée de canaux parallèles et un canal central, qui est obturé par un bouchon et qui permet l'admission et/ou l'évacuation des fluides par des communications sélectives avec l'un ou l'autre des deux groupes de canaux. Cette structure est caractérisée par le fait qu'à chaque extrémité, un embout obture la zone annulaire et que les parois de type circulaire des deux groupes de canaux parallèles sont inscrites dans plusieurs cylindres coaxiaux à ladite structure. Écrire à: **BREVET 1,137,074**, Ceraver, 12, rue de la Baume, 75008 Paris (France) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, 35, avenue Montaigne, 75008 Paris (France).

Heat Treatment of Material/325**Traitement thermique/325**

A method for the heat treatment of a material in discrete form is disclosed. The method includes the steps of burning a fuel in a fluidised combustion bed, arranging a heat treatment bed of the material in close adjacency with the combustion bed such as to be in heat exchange relation therewith, and introducing combustion gases from the combustion bed into the heat treatment bed which is fluidised at least partly by the gases. Preferably, the combustion gases from the combustion bed are passed in heat exchange relation with the heat treatment bed prior to the introduction of the gases into the heat treatment bed. Write: **PATENT 1,137,304**, Coal Industry (Patents) Limited, Hobart House, Grosvenor Place, London S.W.1, England and send a copy of your initial correspondence to the Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Energy Radiation Reflector/325**Capteur-concentrateur de l'énergie dégagée par les rayons du soleil/325**

The ENERGY RADIATION REFLECTOR is a reflective surface for the concentration of light and heat from the sun's radiation to a particular area. Its unique shape will accept incident rays from a large variety of solar zenith angles and reflect them into a focusing pattern of one long narrow straight line which falls mostly within the confines of the shape of the reflective surface and the encompassing enclosure into which it is mounted onto a heat and light receptor structure containing a circulating heat transfer medium, either liquid or gaseous. This reflective surface is three dimensional and bent in its long horizontal plane in accordance with the following mathematical equation, in which "x" is the vertical axis and "y" is the horizontal axis, then, expressed by the following 8TH degree polinomial, with minor deviations:

$$y = - (6.4550 \times 10^{-13}) \times^8 + (2.7799 \times 10^{-10}) \times^7 \\ - (4.9542 \times 10^{-8}) \times^6 + (4.7343 \times 10^{-6}) \times^5 \\ - (2.6403 \times 10^{-4}) \times^4 + (8.8896 \times 10^{-3}) \times^3 \\ - (1.9194 \times 10^{-1}) \times^2 + (2.7232) \times (2.1227 \times 10^{-1})$$

Write: **PATENT 1,137,371**, Keith I. Jarvis, 27 Sunset Dr., Orangeville, Ontario L9W 2G8; Maurice W. Gardner, R.R. 5, Orangeville, Ontario L9W 2Z2 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Solar Energy System with Composite Concentrating Lenses/325**Système d'énergie solaire muni d'une lentille convergente composite/325**

In order to improve the efficiency of a solar energy system utilizing a Fresnel lens for concentrating solar rays on a conduit system or the like, only the central portion of a Fresnel lens, otherwise of large width, is utilized and slide assemblies, each containing a plurality of reflective slides disposed at an angle such as to reflect solar energy to the same focal point as the Fresnel lens, are disposed on each side of the lens thereby effectively increasing the aperture of the lens and increasing the concentration. Write: **PATENT 1,137,372**, Virgil Stark, 936 Fifth Avenue, New York, N.Y. 10021 and send a copy of your initial correspondence to the Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.A.

Arrangement for Compensating Detrimental Magnetic Influence Between Two or More Rows of Longitudinally Oriented Electrolytic Cells or Pots for Producing Metal, for Example Aluminum, by Electrolytic Reduction of a Melt Bath/325**Dispositif pour compenser les effets magnétiques nuisibles entre deux rangées ou plus de cellules ou cuves électrolytiques installées longitudinalement pour obtenir un métal, par exemple de l'aluminium, par réduction électrolytique d'un composé en fusion/325**

An arrangement is disclosed for compensating detrimental magnetic influence on longitudinally oriented pots (U_3) in a pot row, from the current in one or more adjacent pot rows, in plants for producing metal, for example aluminum, by electrolytic reduction of a molten bath. Two substantially symmetrical groups (k_{31} , k_{32}) of cathode taps located at opposite sides of the positive end of the pot, are each connected to a separate compensation bus bar (X, Y) so located in relation to the pot (U_3) that they form a current loop around the cathode in a clockwise or in a counter-clockwise direction, depending upon whether a positive or a negative vertical magnetic field is to be compensated for. Write: **PATENT 1,137,446**, Ardal og Sunndal Verk A.S., Sørkedalsveien 6, Oslo 3, Norway and send a copy of your initial correspondence to Canadian Embassy, Postuttak, Oslo 1, Norway.

Storage Rack/325

A storage rack for suspended attachment to a ladder having a platform pivotally mounted on spaced vertical parallel members. The platform is adjustable to a substantially horizontal position independent of the incline of the ladder to which the rack is attached. To provide additional storage room the rack may further comprise a tray fixed to the parallel members and extending below the platform and/or a receptacle which can be releasably attached to one of the parallel members and which is adapted to be disposed to one side of the ladder. Write: **PATENT 1,137,450**, John S. Garrett, P.O. Box 72, Erskine, Alberta T0C 1G0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Rayonnage de rangement/325

Polar Beam Measuring Instrument and Antibioqram Reader Using Same/325

Un dispositif de mesure de rayon polaire ayant pour objet un dispositif de détermination d'un rayon polaire sur une figure, caractérisé par des moyens générateurs d'un cercle dit "index", des moyens de modification du diamètre dudit index, des moyens d'observation simultanée de ladite figure et dudit index, et des moyens de mesure du diamètre dudit index. Application à la lecture d'antibiogrammes en boîtes de PETRI. Écrire à: **BREVET 1,137,784**, Compagnie Générale d'Automatisme, 12, rue de la Baume, 75008 Paris (France) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, 35, avenue Montaigne, 75008 Paris (France).

Dispositif de mesure d'un rayon polaire et lecteur d'antibiogrammes en faisant application/325

Cattle Restraining Device/325

A device for restraining cattle, i.e., a cow during calving includes a pair of gates pivotally mounted on a wall for movement into and out of parallel, cattle restraining relationship to each other. One of the gates is longer than the other and can be locked in one position. The second gate can be releasably connected to the first gate by chains extending for facilitating access to the cow. Write: **PATENT 1,137,836**, Wayne Leask, Box 225, Cremano, Alberta T0M 0R0; Alexander W. Dietz, 340 - 99 Avenue S.E., Calgary, Alberta T2J 0J6 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Dispositif de rétention de bovins durant la mise bas/325

Coal Extraction/325

Coal extracts from hydrogenative liquid extraction of coals can be more easily and more quickly filtered if the extraction is carried out at a temperature over 420°C and the resulting extract is fractionated using a cut point in the range 200 to 300°C to remove low boiling material. The product is then filtered to give a filtrate containing less than 0.1% by weight of mineral matter. Write: **PATENT 1,137,903**, Coal Industry (Patents) Limited, Hobart House, Grosvenor Place, London S.W. 1, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Procédé d'extraction du charbon/325

Extendible Auger/325

An extensible grain auger includes a casing defined by co-axial telescoping sections, with an inlet at one end and an outlet at the other end of the casing, a pair of interconnected auger tubes rotatably mounted in the casing, the flight of one tube being threadable into the auger flight of the other tube; and an extension tube and screw assembly rotatably mounted in the auger tubes, the extension tube extending out of the casing at one end and the screw being connected to a nut in the tube and to the other end of the casing, so that one casing section can be extended and retracted relative to the other casing section. Write: **PATENT 1,137,915**, Frank A. Togstad, 452 Norfolk Way, N.W., Calgary, Alberta T2K 5R1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Vis de manutention extensible/325

Process and Device for the Transfer of Yarn Hanks/325

The process for transferring hanks from a first series of moving hank carriers or supports to a second series of moving hank carriers or supports provides a synchronized movement for said two series, the supports of which are parallel and adjoining, upon application of a force to the hanks transversely to the movement thereof. In order to supply such a force, the device has a rod push means which is transversely reciprocated relative to the motion of the conveyors. In another embodiment, the device has a chute-like push means which can take an operating position in the path of the hanks, and an idle position out of the path of the hanks. Write: **PATENT 1,138,005**, Officine Minnetti di Ornella Raveggi & C.S.a.s., Via Colonna, 2, 51018 Pieve A Nievole (Pistoia) Italy and send a copy of your initial correspondence to Canadian Embassy, Via G.B. de Rossi 27, 00161 Rome, Italy.

Méthode et dispositif de transfert d'écheveaux de fil/325

Slider Assembly for Curling Boots or Shoes/325**Patin pour chaussure de curling/325**

A slider is secured to the sole and, if desired, the heel of a curling shoe or boot and consists of a perimetrical slider strip or strips around the outer edge of the sole thus preventing undesirable rocking that often takes place with a flat slider which extends across the full width of the sole. It can be made in one piece but is preferably made of a plurality of pieces to permit flexing of the sole and also to permit one size to fit several sizes of shoes. When made from a plurality of pieces, the rear end portions of the sides of the sole portions may be left unglued for full flexibility of the sole. Write: **PATENT 1,138,194**, Dale Bullock, Mair, Saskatchewan S0G 3H0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Animal Trap Attachment/325**Accessoire pour piège d'animaux/325**

A spring and ball attachment for coil-spring, leg-hold animal traps which provides a firm stable base therefor to prevent tipping thereof to alarm the animal if a jaw is stepped on and which increases the traps holding power by preventing the animal from getting a solid pull or jerk when caught in the trap jaws and causing injury to its leg. Write: **PATENT 1,138,200**, John R. Beck, R.D. 2, Knox, Pennsylvania 16232 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Method of Forming Floor Drainage Trough Installation/325**Méthode de fabrication de goulotte de plancher, et installation de ladite goulotte/325**

In a floor drainage trough installation substantially in order to prevent gaps between the upper edge portions of the side walls of the floor drainage trough and the body of concrete in which the trough is set, such gaps resulting from shrinkage of the concrete as the body of concrete is cured, strips of woven glass fiber material are provided in the upper edge portions of the side walls of the trough during the molding thereof, with closely spaced loops of the glass fiber material of which the strips are formed being coated with the plastics material of which the trough is formed during the molding of the trough and outwardly projecting under the influence of the inherent resiliency thereof by removing the trough from the mold prior to the plastics material becoming fully set. The loops are securely embedded in the body of concrete, so that during the curing of the body of concrete the shrinkage thereof causes slight splaying apart of the upper edge portions of the side walls of the trough, thereby preventing formation of the above-mentioned gaps. Write: **PATENT 1,138,217**, John K.D. Richardson, 303 Nantucket Boulevard, Scarborough, Ontario M1P 2P2 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Solder Feeding Gun and Attachment/325**Pistolet-soudeur et accessoire/325**

A device of the gun type adapted to carry a soldering torch and to feed a strip of solder adjacent the nozzle of the torch. This solder feeding gun is characterized by being adapted to carry such torch and to feed the strip of solder with only one hand, by allowing to feed either a bar or a wire of solder, and by allowing use of both the torch and the solder feeding gun separate from each other. This solder feeding gun comprises a body forming a hand grip portion, a holder portion for a soldering torch, a holder for a supply of coiled solder, and a piston chamber portion, with a piston and a finger actuated lever to feed the solder adjacent the nozzle of the soldering torch. An attachment is also particularly adapted to fit on the nozzle to enhance heating and melting of a strip of solder and to channel the flow of the melted solder. Write: **PATENT 1,138,260**, Réal Gravel, 9026 de la Montagne Street, Valcourt, Quebec J0E 2L0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Oil Recovery Method and Apparatus/325**Méthode et dispositif de récupération du pétrole à la surface d'un plan d'eau/325**

An oil spill recovery method and apparatus is disclosed. The method of recovery involves the pumping of an oil/water mixture from a concentration area to the submerged portion of a vertically oriented cylinder, open at both ends, and the separation of the oil from the water in the cylinder. Oil floats to and accumulates on the surface of the water in the cylinder and uncontaminated water flows out through the lower open end of the cylinder. The apparatus includes a collection unit which defines the concentration area within three walls thereof, a recovery unit which follows the collection unit and mounts the cylinder therein, and a submerged pumping unit which carries an oil/water mixture from the concentration area in the collection unit to the cylinder in the recovery unit. There is very little emulsification of the oil in the cylinder and hence there is very efficient separation of the oil from the water. Write: **PATENT 1,138,352**, M. Martin Wylie, P.O. Box 271, Summerland, British Columbia V0H 1Z0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Fuel Oils from Coal/325**Carburant diésel tiré du charbon/325**

Fuel oils especially suitable as gas oils for fuelling high speed Diesel engines, are made by hydrogenating a middle oil derived from coal and containing at least 90% of polycyclic hydrocarbons and essentially no paraffinic material, and fractionating the hydrogenated oil to yield the gas oil. The product oil is fully competitive with gas oils from petroleum, and may be blended with petroleum gas oil. Write: **PATENT 1,138,359**, Coal Industry (Patents) Limited, Hobart House, Grosvenor Place, London S.W. 1, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

**Automatic Orientation Circuit Indicator Device for
Portable Power Tools and the Like/325****Indicateur d'orientation automatique pour outils
électriques portatifs et autres objets similaires/325**

A gravity-activated, electric switch rigidly mountable on any type of tool which is to be used in a precisely accurate position respective to a horizontal or vertical plane the switch including a sealed cylindrical case having an electric contact at each end, a spherical steel ball activated by gravity to freely roll inside the case for making electrical connection between the contacts, the contacts being located so that the gravity-activated ball makes connection therebetween only when the tool is in a precisely accurate position respective to a horizontal or vertical plane. Write: **PATENT 1,138,554**, Frank Rosa; Richard L. Miller, 3612 Woolworth Building, New York, New York 10020 and send a copy of your initial correspondence to Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.A.

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Fluorination by Inorganic Fluorides in Glow Discharge/325

Filed June 7, 1982, by the Department of Agriculture. Many industries, and especially the textile industry, are constantly in search of new and improved methods of rendering materials soil resistant or for new soil resistant materials. Due to the problems existing with products formed from the polyfluorinated polymers itself, it was decided to cover synthetic or natural fibers with a polyfluorinated polymeric coating. The coating surface would then provide the necessary hydrophobic and oleophobic properties to the underlying material. Write: **PAT-APPL-6-385 674**, NTIS.

Weld Quality Monitor/325

Filed May 29, 1981, by the Department of the Army. Weld arc voltage, weld arc current and weld arc travel speed are monitored on a real-time basis during the welding process. Each monitored quantity or parameter is compared directly with a reference value indicative of a high quality weld, and an alarm is activated when a preselected variation in the measured and the reference quantities occurs. The monitored quantities are also used to calculate additional welding parameters, including heat input, weld bead area and cooling rate. These parameters are also compared to ideal reference values in

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NASA

Negotiating centers for NASA patent applications and the Canadian trade offices concerned are listed with the item.

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Fluorination par des fluorures inorganiques en tube à décharge lumineuse/325

Moniteur de la qualité des soudures/325

order to control weld quality. The sensors used for measuring the welding parameters are selected so as to provide minimal interference with the welding process. For example, Hall effect transducers are used for current measurements, while a unique opto-electronic noncontacting sensor is used for measuring the weld speed. Write: **PAT-APPL-6-268 216**, NTIS.

Optoelectronic Weld Evaluation System/325

Dispositif optoélectronique de contrôle de la qualité des soudures/325

Filed May 29, 1981, by the Department of the Army. The radiation emitted from a hot weld bead is received by a lens system and focused onto a first end of a fiber optic light pipe. The received radiation is separated into spectral bands by the use of optical filters, and is then transmitted to one or more photo detectors, each producing a corresponding output signal. The output of each photodetector is compared with a known reference value indicative of an ideal weld. A significant deviation of the output from the reference value indicates the presence of a weld flaw. Write: **PAT-APPL-6-268 224**, NTIS.

Testing System for Electro-Optical Radiation Detectors/325

Système d'essai pour détecteurs de rayons électro-optiques/325

Filed November 27, 1981, by the Department of the Army. A laboratory testing mechanism for determining conformance of an optical radiation detector to prespecified time response requirements, comprising an electrically-operated shutter and a fast-moving rotary disc located between a radiation source and the detector under testing. Proximity switch associated with the disc provide electrical signals representing the time at which the window of the detector is initially exposed to the radiation source and selected elapsed time intervals thereafter. Write: **PAT-APPL-6-325 471**, NTIS.

Wheel Deceleration Sensor/325

Détecteur de freinage pour roue/325

Filed December 14, 1981, by the Department of the Army. The patent application describes an anti-skid braking system, an improved sensor responsive to forces associated with deceleration of the vehicle road wheel. The sensor comprises a housing driven at a speed related to road wheel speed; an annular inertia mass is connected to the rotary housing via a multi-convolution hair spring wound to bias the inertia mass against the direction of housing rotation. Deceleration of the housing causes the inertia mass to angularly advance relative to the housing. A cam-follower mechanism translates the angular advance into linear motion of an output stem member located on the housing rotational axis. Stem member movement can be used to effect pulse control of the anti-skid braking system. Write: **PAT-APPL-6-330 056**, NTIS.

Polarization Control Element for Phased Array Antennas/325

Élément de commande de polarisation pour antennes réseaux en phase/325

Filed April 12, 1982, by the Department of the Army. This invention provides for the control of the phase and the angle of the radiated linear polarization from a phased array antenna radiating element. The device consists of a cascade of a non-reciprocal circular polarizer, a Faraday rotator, and a magnetically rotatable non-reciprocal circular polarizer. The control windings for the Faraday rotator and rotatable non-reciprocal circular polarizer are excited by an electronic driver. A linear polarized wave entering the device is converted to a circular polarized wave by the circular polarizers. The Faraday rotator causes the wave to be phase shifted as it propagates through this section of the device. The circular polarizer that is encountered next converts the circular polarized wave back to a linear polarized wave. The angle of the radiated linear polarization is controlled by varying the orientation of the principle axes of the rotatable non-reciprocal circular polarizer. The reciprocal phase shift is produced by a technique similar to that used by a dual mode phase shifter and the rotation is produced by rotating bias fields in a manner similar to that used by a rotary field phase shifter. The phase shift and rotation are produced by a single device as opposed to multiple devices, this leads to lower insertion loss, smaller size, and less weight. Write: **PAT-APPL-6-367 504**, NTIS.

Transmission Disconnect/325

Débrayage de boîte de transmission/325

Filed April 21, 1982, by the Department of the Army. The patent application relates to an engine-transmission disconnect mechanism that includes mating splines and spline grooves on a drive collar-shaft assembly. End areas of selected splines are set back from the collar-shaft interface to facilitate meshed engagement of the splines and grooves when the engine is operated. The mechanism can be shifted between the connect and disconnect modes while the engine is running. Write: **PAT-APPL-6-370 306**, NTIS.

Multifunction Sensor Using Thin Film Transistor Transducers/325

Détecteur multifonction utilisant des transducteurs à transistors à couche mince/325

Filed May 3, 1982, by the Department of the Army. A multifunction sensor provides two axes of angular rate and two axes of linear acceleration information from a single instrument. The multifunction sensor utilizes an air bearing rotor to support the spinning transducers. Angular rate measurements are made by utilizing two thin film transistors mounted on the rotor and oriented to sense strain about axes in a first plane orthogonal to the rotor spin axis. The two transducers output signals are summed to provide common mode rejection. A second set of thin film transistors are mounted on the rotor and oriented to sense strain along the axes in second plane orthogonal to the rotor spin axis and the first plane. Two axes of acceleration can be measured in the second plane by integrating this output signal at the proper time using a clock frequency. Angular rate and linear acceleration signals may be extracted from the rotating member via slip ring contacts or inductive pickoffs. Write: PAT-APPL-6-373 922, NTIS.

Spare Wheel-Tire Carrier/325

Porte roue de secours/325

Filed June 17, 1982, by the Department of the Army. The patent application describes a spare tire carrier attachable to the underside of a trailer or other vehicle not equipped with an interior spare tire storage space. The carrier includes three or more transversely extending roller support units located to underlie a surface of the tire when it is in its stored position. During manual movement of the spare tire to or from its stored position the rollers turn on their rotational axes to facilitate tire motion. The carrier can be constructed in different sizes for use with different vehicles and spare tire sizes. The carrier is preferably formed from standard commercially-available structural components, such as rods, bars and tubes, thereby facilitating use on military vehicles where the low volume usage does not warrant an expensive tooling investment. Write: PAT-APPL-6-389 198, NTIS.

Improved Acceleration-Resistant Crystal Resonator/325

Résonateur à cristal amélioré résistant aux accélérations/325

Filed June 17, 1982, by the Department of the Army. A crystal resonator features two crystals mounted such that the acceleration sensitivity vector of one crystal is an antiparallel relationship to the acceleration sensitivity vector of the other crystal. The composite resonator eliminates acceleration-induced frequency shifts for acceleration in all directions. Write: PAT-APPL-6-389 315, NTIS.

D.C. Lamp Burn-Out Protection/325

Système de protection contre le grillage des lampes alimentées en continu/325

Filed June 21, 1982, by the Department of the Army. A D.C. lamp system having a number of small zener diodes arranged in electrical parallelism with various lamp current supply wires. The zener diodes are sized so that the collective wattage ratings of the zeners is equal to the arithmetical product of the D.C. supply voltage and the summation of the safe amperages of the lamps in the system. In event of normal lamp turnout, any tendency of the other lamps to also burn out due to excessive current surge is counteracted by the action of the zener diodes; potential excess current is drained through the zener diodes to ground. A large number of small zener diodes are used in preference to one large zener diode, thereby minimizing the need for heat sinks or special cooling means required by a large zener diode. Write: PAT-APPL-6-390 426, NTIS.

Chemical Modifications of Proteins Which Induce New Receptor Specificities and Therefore Elicit New Effects in Cells/325

Modifications chimiques des protéines induisant de nouvelles spécificités aux récepteurs et produisant par conséquent de nouveaux effets dans les cellules/325

Filed October 23, 1980, by the Department of Health and Human Services. A new reagent effective in inhibiting cholesterol synthesis 75% in human fibroblasts derived from patients suffering from the disease familial hypercholesterolemia is Man6P-low density lipoprotein and is effective in tissue culture test systems at 100 micrograms/ml after a ten-hour exposure. The broad purpose of this invention is to modify the receptor specificity of a protein so that it will enter cells which were previously impermeable and exert new effects or reverse a pathological condition. Write: PAT-APPL-6-199 781, NTIS.

Ricin and Modeccin Reagents Effective as Tumor Suppressive Cytotoxic Reagents/325

Réactifs à base de ricine et de Modeccin efficaces comme agents cytotoxiques anticancéreux/325

Filed January 21, 1982, by the Department of Health and Human Services. The patent application is for a new reagent effective in inhibiting cholesterol synthesis 75% in human fibroblasts derived from patients suffering from the disease familial hypercholesterolemia. The reagent is Man6P-low density lipoprotein and is effective in tissue culture test systems at

100 micrograms/ml after a ten-hour exposure. The broad purpose of this invention is to modify the receptor specificity of a protein so that it will enter cells which were previously impermeable and exert new effects or reverse a pathological condition. Write: **PAT-APPL-6-341 572**, NTIS.

**Inactivating Protein Synthesis by Incubating
Anti-Thy 1.1-Ricin A Chain Hybrids with Target
Protein Cells/325**

**Inactivation de la synthèse protéique par
incubation d'hybrides anti-Thy 1.1-ricine à chaîne A
avec les cellules cibles/325**

Filed February 19, 1982, by the Department of Health and Human Services. The invention shows the rates of inactivation of protein synthesis between 2 and 24 hours for two A chain hybrids with widely differing affinities for the alternate receptor. The alternate binding proteins are monoclonal antibodies which bind the Thy 1.1 antigen present on AKR cells. Ricin B chain properties are studied by adding the B chain to mixtures of the A chain hybrids and target cells. Write: **PAT-APPL-6-350 222**, NTIS.

**Monoclonal Antibody-Ricin or Ricin A Chain
Hybrids/325**

**Anticorps ricine monoclonaux ou hybrides de
ricine à chaîne A/325**

Filed February 19, 1982, by the Department of Health and Human Services. The invention, the third in the series, teaches the use of ricin in combination with Thy 1.2 as a pretreatment regimen to protect mice from lethal graft-versus-host-disease during bone marrow transplant operations. This is most crucial in the treatment of diseases such as leukemia which, up until now, have shown limited success with the bone marrow transplant method. Write: **PAT-APPL-6-350 223**, NTIS.

Isolation of Hepatitis A Virus Strain HM-175/325

**Isolement de la souche HM-175 du virus de
l'hépatite A/325**

Filed April 7, 1982, by the Department of Health and Human Services. Human hepatitis A virus (HAV), taken directly from human clinical specimens, can be isolated and serially passaged in primary African green monkey kidney (AGMK) cell cultures. This strain induced antibody to HAV in inoculated chimpanzees and is useful for vaccine. Write: **PAT-APPL-6-366 165**, NTIS.

Vibration Dosimeter/325

Dosimètre de vibrations/325

Filed May 20, 1982, by the Department of health and Human Services. This invention relates to vibration dosimeters, and more particularly to an apparatus to monitor and record two important frequency components in a vibratory industrial environment which may adversely affect the human spinal system. Write: **PAT-APPL-6-380 471**, NTIS.

Inactivation of a Lipid Virus/325

Inactivation de virus à lipides/325

Filed June 10, 1982, by the Department of Health and Human Services. The patent application is for a method of inactivating a lipid virus in a protein carrier selected from the group consisting of Hepatitis B virus (HBV) and non-A, non-B hepatitis (NANBH) by contacting said virus for an extended period of time and ambient temperature with a halohydrocarbon treating agent preferably chloroform in an amount of 5% v/v to 50% v/v. Write: **PAT-APPL-6-386 991**, NTIS.

**Recovery of Mercury from Ores and
Concentrates/325**

**Extraction du mercure des minerais et concentrés
de minerais/325**

Filed December 31, 1981, by the Department of the Interior. Mercury is recovered from ores, concentrates, or wastes by means of a process comprising leaching with an aqueous solution of cupric chloride to form mercuric chloride and cuprous chloride. In addition, an additive such as calcium chloride is preferably used to increase the solubility of the cuprous chloride. Recovery of mercury metal from the leach solution is preferably accomplished by electrowinning, with simultaneous oxidation of cuprous chloride to cupric chloride for recycle to the leaching step. Write: **PAT-APPL-6-336 133**, NTIS.

**Thermoregulated Magnetic Susceptibility Sensor
Assembly/325**

**Détecteur de susceptibilité magnétique à
régulation thermique/325**

Filed March 30, 1982, by the Department of the Interior. A thermoregulated magnetic susceptibility sensor assembly for well-logging or the like is disclosed. The assembly includes a sensing solenoid and a non-metallic container for the sensing solenoid. Located in the container and spaced from the sensing solenoid are a plurality of heaters. These heaters are uniformly positioned about the sensing solenoid and a heat transfer material is located between the heaters and the sensing solenoid. The heat transfer material conducts the heat from the heaters to the sensing solenoid in a substantially uniform manner so that the sensing solenoid is maintained at a uniform temperature. Preferably, temperature sensors are provided to control the heat output of the heaters to maintain the sensing solenoid at the desired uniform temperature. To minimize heat transfer to the heaters from the external environment, a layer of insulation is provided around the heaters. The heaters are also preferably arranged in an even number of columns and are connected in a series so that adjacent columns have current flowing therein in opposite directions. Write: **PAT-APPL-6-357 363**, NTIS.

**Method and Apparatus for Telemetry of Borehole
Data/325**

**Méthode et instrument de télémétrie des données
de sondage/325**

Filed March 12, 1982, by the Department of the Interior. The disclosed invention provides a method and apparatus for transmitting information from a borehole to the surface. The method has the steps of sensing in the borehole the borehole data to be transmitted to the surface, generating a voltage signal which correlates to data, converting that voltage signal to a current signal in the transmission line, sensing at the surface the current signal in the transmission line and converting the current signal to a second voltage signal. Write: **PAT-APPL-6-357 364**, NTIS.

Separation of Zirconium and Uranium/325

Séparation du zirconium et de l'uranium/325

Filed March 30, 1982, by the Department of the Interior. Zirconium- and uranium-containing hydrocarbon-amine solutions are treated for separation of zirconium and uranium by means of a process comprising: (1) selective stripping of zirconium with an aqueous chloride solution, and (2) scrubbing the resulting aqueous solution with chloride-loaded hydrocarbon-amine solution to selectively remove uranium, thereby yielding an aqueous zirconium solution of low uranium content. Write: **PAT-APPL-6-363 367**, NTIS.

**Fully Plasma-Sprayed Compliant Backed Ceramic
Turbine Seal/325**

**Joint d'aubes de turbine, à couche de céramique
conformée par vaporisation de plasma/325**

Filed November 30, 1981, by NASA. A seal with a high temperature abrasible lining material which encircles the tips of turbine blades in turbomachinery was designed. The seal is directed to maintaining the minimum operating clearances between the blade tips and the lining of a high pressure turbine. A low temperature easily decomposable material in powder form is blended with a high temperature oxidation resistant metal powder. The two materials are simultaneously deposited on a substrate formed by the turbine casing. Alternately, the polymer powder may be added to the metal powder during plasma spraying. A ceramic layer is then deposited directly onto the metal-polymer composite. The polymer additive mixed with the metal is then completely volatilized to provide a porous layer between the ceramic layer and the substrate. Thermal stresses are reduced by the porous structure which gives a cushion effect. No brazing is required by using only plasma spraying for depositing both the powders of the metal and polymer material as well as the ceramic powder. Write: **PAT-APPL-6-325 931**, NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

**Real Time Pressure Signal System for a Rotary
Engine/325**

**Détecteur de pression en temps réel pour moteur
rotatif/325**

Filed February 19, 1982, by NASA. Apparatus for developing a signal which is a composite of the pressures at four different points in the chamber of a rotary type engine is disclosed. The composite signal can be read by an IMEP meter or displayed on an oscilloscope. The physical arrangement of a Wankel engine and the correlation embodying the invention is shown. The profile of the inner surface of a Wankel engine housing and the profile of a three lobed rotor together with the positions of the transducers are also shown. The timing diagrams depicting the active regions of the transducers and timing signals used in the correlator circuitry are illustrated. Write: **PAT-APPL-6-350 473**, NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Ion Beam Textured Graphite Electrode Plates/325

Électrodes de graphite texturé par faisceau ionique/325

Filed March 31, 1982, by NASA. A specially textured surface of pyrolytic graphite exhibits extremely low yields of secondary electrons and reduced numbers of reflected primary electrons after impingement of high energy primary electrons. Electrode plates of this material are used in multistage depressed collectors. An ion flux having an energy between 500 eV and 1000 eV and a current density between 1.0 mA/sq cm and 6.0 mA/sq cm produces surface roughening or texturing which is in the form of needles or spires. Such textured surfaces are especially useful as anode collector plates in high efficiency electron tube devices. Write: **PAT-APPL-6-364 072**, NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Method and Apparatus for Strengthening Boron Fibers/325

Méthode et appareil de renforcement des fibres de bore/325

Filed April 23, 1982, by NASA. The tensile strength of commercially available boron fibers produced by the chemical vapor deposition of boron onto tungsten wire substrates is increased by treating the fibers in an oxygen plus inert gas (argon) atmosphere to about 880°C. High temperature oxidation increases the residual compression of each tungsten core by forming a thin boron oxide coating on the fiber surface so that the fiber contracts axially. This increases the intrinsic strength of the fiber by raising the tensile strength level required for core initiated fracture. After cooling to room temperature the fibers are chemically polished to reduce their diameters by 0.2 mils to 0.6 mils. The reduction in diameter removes both original and oxidation induced surface flaws. The strengthened fibers are intended to be utilized as reinforcement in composite materials. Such materials may be boron/aluminum or boron/epoxy. Write: **PAT-APPL-6-371 354**, NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Improved Thermal Barrier Coating System/325

Revêtement de barrière thermique amélioré/325

Filed May 6, 1982, by NASA. A high temperature oxidation resistant thermal barrier coating system for a nickel-, cobalt-, or iron-base alloy substrate is described. An inner metal bond coating contacts the substrate, and a thermal barrier coating covers the bond coating. NiCrAlR, and CoCrAlR alloy are satisfactory as bond coating compositions where R = Y or Yb. These alloys contain, by weight, 0-35% chromium, 6-18% aluminum, and 0.05 to 1.55% yttrium or 0.05 to 3.0% ytterbium. The coatings containing ytterbium are preferred over those containing yttrium. An outer thermal barrier coating of partially stabilized zirconium oxide (zirconia) which is between 6% and 8%, by weight, of yttrium oxide (yttria) covers the bond coating. Partial stabilization provides a material with superior durability. Partially stabilized zirconia consists of mixtures of cubic, tetragonal, and monoclinic phases. Write: **PAT-APPL-6-375 784**, NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Imaging X-Ray Spectrometer/325

Spectromètre de visualisation des rayons X/325

Filed February 19, 1982, by NASA. An X-ray spectrometer for providing imaging and energy resolution of an X-ray source is comprised of a thick silicon wafer having an embedded matrix or grid of aluminum completely through the wafer fabricated, for example, by thermal migration. The aluminum matrix defines the walls of a rectangular array of silicon X-ray detector cells or pixels. A thermally diffused aluminum electrode is also formed centrally through each of the silicon cells with biasing means being connected to the aluminum cell walls and the centralized aluminum electrode for causing lateral charge carrier depletion between the cell walls so that incident X-ray energy causes a photoelectric reaction within the silicon producing collectible charge carriers in the form of electrons which are collected and used for imaging. Write: **PAT-APPL-6-350 477**, NASA, Goddard Space Flight Center, Mail Code: 204, Greenbelt, Maryland 20771 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Apparatus for Disintegrating Kidney Stones/325

Appareil de désintégration des calculs rénaux/325

Filed May 13, 1982, by NASA. A mechanical system for disintegrating urinary calculi, particularly an ultrasonic apparatus for fragmenting urinary calculi in situ is described. The useful life of the wire probe in an ultrasonic kidney stone disintegration instrument is enhanced and prolonged by attaching the wire of the wire probe to the tip of an ultrasonic transducer by means of a clamping arrangement. Additionally, damping material is applied to the wire probe in the form of a damper tube through which the wire probe passes in the region adjacent the transducer tip. Novelty is believed to reside in the combination of a grooved adjustable anvil in the transducer tip at the clamping point of the wire probe to lessen concentrated stresses in the wire and a vibrational damper system which minimizes lateral wire motion at the transducer tip while

nevertheless transmitting linear motion which acts to prolong the useful life of the wire probe. Write: **PAT-APPL-6-377 891**, NASA, Goddard Space Flight Center, Mail Code: 204, Greenbelt, Maryland 20771 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Hot Melt Recharge System/325

Système de mise en place d'adhésif à chaud/325

Filed March 24, 1982, by NASA. A package assembly for precisely positioning a charge of hot melt adhesive onto an attachment pad or point of use is described. The adhesive is heated to softening or melt temperature (280°F to 325°F) and thereafter cooled to resolidifying temperature. A single sided pressure sensitive polyimide film tape serves with another film strip to protect the sandwiched adhesive strip until use and to hold the adhesive in precise position until it is thermally bonded to its point of use. Tab ends serve as aids in stripping the tapes from the adhesive charge. Write: **PAT-APPL-6-361 215**, NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Magnetic Heading Reference/325

Indication du cap magnétique de référence/325

Filed April 9, 1982, by NASA. The invention relates to devices which vectorially sum the output signals from two magnetometers on an aircraft to produce a signal which is indicative of the error in the heading of the aircraft. This error in heading signal is used either by the pilot or an automatic control system to correct the heading. The device for generating a signal indicative of the difference between the actual heading and the selected heading of a vehicle is described. Write: **PAT-APPL-6-367 187**, NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Interlocking Wedge Joint/325

Joint d'accouplement à cale de retenue/325

Filed April 23, 1982, by NASA. An interlocking wedge joint is described comprising a male member having a tapered columnar body with an interlocking means on the end thereof, a female member having a tapered columnar body with a receptacle means therein, and a sleeve member having a tapered tubular body. To assemble the joint the male member interlocking means is inserted transversely into the female member receptacle means and the sleeve member is slid over the male member and female member interface thus locking the members into place. Write: **PAT-APPL-6-371 353**, NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

High Temperature Emittance Coatings and Coating Compositions/325

Revêtements à émittance thermique élevée et compositions de revêtements/325

Filed January 26, 1982, by NASA. A composition consisting essentially of finely divided particles of silicon carbide dispersed in an alkyl alcohol and containing a minor amount of an emulsifiable polyethylene wax is used to deposit a coating of silicon particles on the surface of insulating articles in order to impact high temperature emittance to the surface. The coating can be applied under the ambient conditions of space to repair insulated surfaces of aerospace vehicles such as the tiles on space shuttle orbiters. Write: **PAT-APPL-6-342 858**, NASA, Lyndon B. Johnson Space Center, Mail code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201-3051, U.S.A.

A Method and Technique for Installing Light-Weight Fragile, High-Temperature Fiber Insulation/325

Méthode et technique de pose d'isolant fibreux léger pour hautes températures/325

Filed March 25, 1982, by NASA. A method of installing fragile, light-weight, high-temperature fiber insulation, particularly where the insulation is to be used as a seal strip providing a high order of thermal barrier insulation is described. The process is based on provision of a strip of the mineral batting cut oversize by a predetermined amount, saturated in a fugitive polymer solution, compressed in a mold, dried and cured to form a rigidized batting material which may be machined to required shape. The machined dimensions would normally be at least nominally less than the dimensions of the cavity to be sealed. After insertion in the cavity, which may be a wire-mesh seal enclosure, the apparatus is subjected to baking at a temperature sufficiently high to cause the resin to burn off cleanly, leaving the batting substantially in its original condition and expanded into the cavity or seal enclosure. Write: **PAT-APPL-6-361 711**, NASA, Lyndon B. Johnson Space Center, Mail code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201-3051, U.S.A.

**High Temperature Silicon Carbide Impregnated
Insulating Fabrics/325**

Filed April 6, 1982, by NASA. A gap filler used between the tiles on the space shuttle comprises a high temperature, flexible, insulating fabric of closely woven heat resistant fibers having silicon carbide dispersed through the fabric and bonded to the fibers with an emulsifiable polyethylene wax. Suitable fibers include silica fibers having a diameter of 1 micron to 3 microns, and alumina borosilicate fibers having a diameter of 10 microns to 12 microns. The woven fabric of such fibers can be impregnated with the following typical composition: butyl alcohol (82% by weight), silicon carbide (12% by weight), and emulsifiable polyethylene wax (6% by weight). The butyl alcohol acts as a carrier and is evaporated off. The silicon carbide imparts a high temperature emittance, and the wax enables the fabric to retain its integrity and flexibility. Write: **PAT-APPL-6-365 950**, NASA, Lyndon B. Johnson Space Center, Mail code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201-3051, U.S.A.

**Tissus isolants imprégnés de carbure de silicium
pour utilisation à température élevée/325**

**Absorbent Product and Articles Made
Therefrom/325**

Filed April 14, 1982, by NASA. An invention comprising a multi-layered absorbent article suitable for collecting body waste products is described. Write: **PAT-APPL-6-368 187**, NASA, Lyndon B. Johnson Space Center, Mail code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201-3051, U.S.A.

**Produit absorbant et articles à base de ce
produit/325**

**Prosthetic Occlusive Device for an Internal
Passageway/325**

Filed April 23, 1982, by NASA. A prosthetic device for occluding an internal passageway of the human body, for example, for closing the urinary canal, is described. The device includes a cuff having a backing collar and two isolated cuff chambers. The fluid pressure of one chamber is regulated by a pump/value reservoir unit. The other chamber is unregulated in pressure but its fluid volume is adjusted by removing or adding fluid to a septum/reservoir by means of a hypodermic needle. Pressure changes are transmitted between the two cuff chambers via faying surfaces which are sufficiently large in contact area and thin as to transmit pressure generally without attenuation. By adjusting the fluid volume of the septum, the operating pressure of the device may be adjusted to accommodate tubular organs of different diameter sizes as well as to compensate for changes in the organ following implant without re-operation. Write: **PAT-APPL-6-371 352**, NASA, Marshall Space Flight Center, Mail Code: CC01, Huntsville, Alabama 35812 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303-1290, U.S.A.

**Dispositif d'occlusion artificiel applicable aux
voies corporelles internes/325**

**Improved Process for Preparing Perfluorotriazine
Elastomers and Precursors Thereof/325**

Filed April 6, 1982, by NASA. Perfluoroether triazine elastomers having improved properties are prepared from oligomeric imidoamidines that were, in turn, prepared by the process of reacting a perfluorodinitrile with liquid ammonia to yield a perfluorodiamidine, isolating the perfluorodiamidine, reacting the isolated diamidine with a perfluorodinitrile to yield a perfluoro(imidoamidine) dinitrile, and then repeating the steps to sequentially grow an oligomer of desired molecular size. The isolated amidine and nitrile intermediates are also disclosed. Write: **PAT-APPL-6-366 025**, NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California 94035 and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111-3468, U.S.A.

**Procédé amélioré pour la préparation
d'élastomères de perfluorotriazine et de ses
précurseurs/325**

**Electronic Scanning Pressure Measuring System
and Transducer Package/325**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed April 30, 1982, by NASA. This electronic scanning pressure system includes a plurality of pressure transducers. A means obtains an electrical signal indicative of a pressure measurement from each of the plurality of pressure transducers. A multiplexing means is connected for selectively supplying inputs from the plurality of pressure transducers to the signal obtaining means. A data bus connects the plurality of pressure transducers to the multiplexing means. A latch circuit is connected to supply control inputs to the multiplexing means. An address bus is connected to supply an address signal of a selected one of the plurality of pressure transducers to the latch circuit. In operation, each of the pressure transducers is successively scanned by the multiplexing means in response to address signals supplied on the address bus to the latch circuit. Write: **PAT-APPL-6-373 771**, NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California 94035 and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111-3468, U.S.A.

**Système de mesure de pression à balayage
électronique et bloc de transducteurs/325**

A Brushless DC Tachometer/325**Tachymètre c.c. sans balai/325**

Filed February 19, 1982, by NASA. A brushless dc tachometer is disclosed that includes a high strength toroidal permanent magnet for providing a uniform magnetic field in an air gap, an annular pole piece opposite the magnet, and a pickup coil wound around the pole piece and adapted to rotate about the axis of the pole piece. The pickup coil is rotated by an input shaft to which the coil is coupled with the friction clip. The output of the coil is conducted to circuitry by a twisted wire pair. The input shaft also activates a position transducing potentiometer. Write: **PAT-APPL-6-350 475**, Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014-1377, U.S.A.

State-of-Charge Coulometer/325**Coulombmètre d'état de charge/325**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed April 9, 1982, by NASA. A coulometer for accurately measuring the state of charge of an open cell battery utilizing an aqueous electrolyte is described. The coulometer includes a current meter for measuring the battery charge/discharge current and a flow meter for measuring the rate at which the battery produces gas during charge and discharge. Coupled to the flow meter is gas analyzer which measures the oxygen fraction of the battery gas. The outputs of the current meter, flow meter and gas analyzer are coupled to a programmed microcomputer which includes a CPU and program and data memories. The microcomputer calculates that fraction of charge and discharge current consumed in the generation of gas so that the actual state of charge can be determined. The state of charge is then shown on a visual display. Write: **PAT-APPL-6-367 136**, Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014-1377, U.S.A.

Correlation Spectrometer Having High Resolution and Multiplexing Capability/325**Spectromètre à corrélation offrant une haute précision et permettant le multiplexage/325**

Filed April 30, 1982, by NASA. The development of a correlation spectrometer with an electro-optical phase modulator (EOPM) is discussed. The correlation spectrometer includes an EOPM and a reference cell which are fixedly positioned in the path of light from a source between a sample cell and a detector. The EOPM is adjusted so that when it is turned ON the incident radiation from the sample cell containing an absorption line is modulated so that the energizing radiation appears as sidebands absorption patterns. The total amount of energy absorbed from the original radiation remains constant. When the EOPM is OFF, the incident radiation passes unaffected. When there is no coincidence between the constituents in the sample cell and the reference cell, the detector output is the same when the EOPM is OFF or ON. Write: **PAT-APPL-6-373 770**, Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014-1377, U.S.A.

Heat Driven Heat Pump Using Paired Ammoniated Salts/325**Pompe à chaleur, entraînée par la chaleur, exploitant une paire de sels ammoniacés/325**

Filed August 29, 1980, by the Department of the Navy. A cycle for a heat driven heat pump using two salts $\text{CaCl}_2 \cdot 8\text{NH}_3$, and $\text{ZnCl}_2 \cdot 4\text{NH}_3$ which may reversibly react with ammonia with the addition or evolution of heat. These salts were chosen so that both ammoniation processes occur at the same temperature so that the heat evolved may be used for comfort heating. The heat to drive the system need only be slightly hotter than 122°C . The low temperature source need only be slightly warmer than 0°C . Write: **PAT-APPL-6-182 367**, NAVY.

Integral/Low Voltage Control for Miniature Impact Tool/325**Commande de tension intégrale/basse pour outil miniature à percussion/325**

Filed May 11, 1981, by the Department of the Navy. The patent application describes a miniature impact tool that has an electrical switch mounted on the tool for ease of operation. The switch is connected to a bench mounted speed control unit that has a built-in relay and transformer for safety. The line that is operated by the switch is on the low voltage side of the transformer to reduce any chance of electrical shock. The speed control unit is electrically connected to a drive motor. The drive motor has a flexible drive shaft connected to the tool for mechanically driving the tool. Write: **PAT-APPL-6-262 581**, NAVY.

Ellipticized Acoustic Lens Providing Balanced Astigmatism/325

Lentille acoustique elliptique pour équilibrer l'astigmatisme/325

Filed September 21, 1981, by the Department of the Navy. An ellipticized singlet azimuth versus elevation optimized and aperture extremized nonspherical acoustic lens antenna of very low or even minimal F-number providing balanced astigmatism for wide angle acoustical applications in underwater sound is described. The acoustic lens has an elliptical periphery and surfaces defined by a system of nonlinear partial differential equations, the surfaces acting together to produce two perfect primary off-axis foci F and F' at a finite distance in back of the lens and two perfect conjugate off-axis foci F infinity and F prime infinity in front of the acoustic lens at infinity; i.e., the lens simultaneously focuses energy from the primary foci F and F prime into two off-axis parallel ray plane wave sonic beams directed towards infinity at equal but opposite angles with respect to the acoustic lens axis. The acoustic lens may be built of various materials such as Sylgard rubber RTV 3120 or as a liquid filled thin metal walled shell lens using as the liquid filling any suitable organic or inorganic liquid such as carbon tetrachloride, fluorolube or certain liquid metal mixtures. Write: **PAT-APPL-6-309 758, NAVY.**

Light-Induced Unidirectional Light Amplifier/325

Amplificateur de lumière unidirectionnel à induction lumineuse/325

Filed October 13, 1981, by the Department of the Navy. A unidirectional light amplifier is described wherein laser light is utilized to create an anisotropic medium in which light is fully amplified in only one direction and fully absorbed in the opposite direction. It is analogous to the way in which a junction diode conducts electrical current more easily in one direction than in the other direction. This patent application is co-pending with my related patent application entitled 'Light-induced Unidirectional Switch' filed on the same date as subject patent application. Write: **PAT-APPL-6-310 938, NAVY.**

Light-Induced Unidirectional Light Switch/325

Interrupteur de lumière unidirectionnel à induction lumineuse/325

Filed October 13, 1981, by the Department of the Navy. A light induced unidirectional light switch is described wherein a unidirectionally emitting medium is obtained using the method of Doppler compensation by light-induced velocity-dependent light shifts. The emission in the emitting medium can be switched on by a pulse of laser light which acts as a light induced light switch. This patent application is co-pending with my related application entitled 'Light-Induced Unidirectional Light Amplifier' filed on the same date as subject patent application. Write: **PAT-APPL-6-310 939, NAVY.**

Aircraft Weight and Center of Gravity Cockpit Readout System/325

Dispositif d'affichage de la masse et du centre de gravité pour cabine de pilotage/325

Filed October 26, 1981, by the Department of the Navy. The patent application describes an aircraft system which provides the pilot with a continuous cockpit readout of the weight and center of gravity of an aircraft carrying an externally lifted load together with the impact on aircraft controllability of load shifts and fuel burnoff, by transmitting input signals from load cells installed in the lifting hook system, input signals from a fuel totalizer, and input data from a system keyboard to a system computer. Write: **PAT-APPL-6-314 616, NAVY.**

Continuous Poling Technique for PZT Fibers/325

Technique de poussage continu pour fibres PZT/325

Filed January 18, 1982, by the Department of the Navy. A continuous electrically poling technique for piezoelectric materials is described wherein the piezoelectric elements or rods are gradually advanced through a region of electric field with two metallic plates with flexible contacts used as electrodes. Write: **PAT-APPL-6-339 922, NAVY.**

Ellipticized Acoustical Liquid Filled Lens Providing Balanced Astigmatism/325

Lentille acoustique elliptique, remplie de liquide, pour équilibrer l'astigmatisme/325

Filed March 25, 1982, by the Department of the Navy. An ellipticized singlet azimuth versus elevation optimized and aperture extremized nonspherical acoustic lens antenna of very low or even minimal F-number providing balanced astigmatism for wide angle acoustical applications in underwater sound is described. The acoustic lens has an elliptical periphery and surfaces defined by a system of nonlinear partial differential equations, the surfaces acting together to produce two perfect primary off-axis foci F and F prime at a finite distance in back of the lens and two perfect conjugate off-axis foci F infinity and F prime infinity in front of the acoustic lens at infinity; i.e., the lens simultaneously focuses energy from the primary foci F and F prime into two off-axis parallel ray plane wave sonic beams directed towards infinity at equal but opposite angles with respect to the acoustic lens axis. The acoustic lens may be built of various materials such as Sylgard rubber RTV 3120 or as a liquid filled thin metal walled shell lens using as the liquid filling any suitable organic or inorganic liquid such as carbon tetrachloride, fluorotube or certain liquid metal mixtures. Write: **PAT-APPL-6-362 004, NAVY.**

P1 Polyphase Code Expander-Compressor/325**Extenseur-compresseur de code polyphasé P1/325**

Filed May 11, 1982, by the Department of the Navy. A pulse expansion and compression system, especially useful for radar ranging, comprising a pulse coder for expanding an input pulse and a pulse compressor of the matched-filter type. The coder consists of a plurality of delay stages into which the input pulse is fed, a discrete Fourier transform (DFT) circuit to which the output signals of the delay stages are fed by way of respective phase weights and for which every other frequency port is inverted prior to entry to a time-dispersion-means (TDM) comprising an arrangement of adders interconnected by delay stages for differently delaying the output signals from the DFT. The TDM output is fed to a phase modulator and then to the transmitter. The echo signals are conjugated, time-inverted, and passed through the same DFT as the input pulse signal by way of the phase weights. The outputs of the DFT are then inverted at every other frequency port and passed through the TDM, but this time in time-inverted order. The outputs of the TDM are fed through an envelope detector to provide a cross-correlated facsimile of the original input pulse. Write: **PAT-APPL-6-377 106**, NAVY.

Phase-Coded Pulse Expander-Compressor/325**Extenseur-compresseur d'impulsions à codage de phase/325**

Filed May 11, 1982, by the Department of the Navy. A pulse expansion and compression system, especially useful for radar ranging, comprising a pulse coder for expanding an input pulse and a pulse compressor of the matched-filter type. The coder consists of a plurality of delay stages into which the input pulse is fed, a discrete Fourier transform (DFT) circuit to which the output signals of the delay stages are fed by way of respective phase weights and for which every other frequency port is inverted prior to entry to a time-dispersion-means (TDM) comprising an arrangement of adders interconnected by delay stages for differently delaying the output signals from the DFT. The TDM output is fed to a phase modulator and then to the transmitter. The echo signals are conjugated, time-inverted, and passed through the same DFT as the input pulse signal by way of the phase weights. The outputs of the DFT are then inverted at every other frequency port and passed through the TDM, but this time in time-inverted order. The outputs of the TDM are fed through an envelope detector to provide a cross-correlated facsimile of the original input pulse. Write: **PAT-APPL-6-377 107**, NAVY.

Licences from Hungary

The following opportunities to manufacture, market and export under license are offered to Canada manufacturers through the Hungarian State Licensing Agency. Write, quoting the code number and title, to: Novex Co. Ltd., P.O. Box 62, H-1364 Budapest, Hungary and send a copy of your initial correspondence to the Canadian Embassy, Budakeszi ut 55/dP/8, H-1021 Budapest, Hungary.

Multitube Separator System for Water and Effluent Treatment/325

A widely applicable gravitational separator system, which can advantageously be used both in water and effluent treatment. The system is based on several Hungarian inventions and consists of an optimized construction for the very separator elements and a large application know-how with special hydraulic lay-outs for a lot of different types of equipment and forms of application. The system offers enhanced process efficiency — an improvement of 50 to 150 per cent at least — the possibility of obtaining high specific performance characteristics together with low specific investment and operating costs and trouble-free operation. The system is also apt for retrofitting. The system can advantageously be used when there is or there can be gravitational separation. Patent applications filed in 15 countries. The patents cover not only the special separator elements but also the essential parts of the application know-how, e.g. the special hydraulic lay-outs. Code Number 8002.

Industrial Water Filter with Continuous Flushing/325

The water-filtering plant for the removal of solid suspended contamination from industrial waters utilizes conventional filtering materials in a novel, continuously flushed filter configuration. Simultaneously with retaining solid particles, the plant continuously regenerates the filtering layer. The device consists of a filter cage rotating in a cylindrical casing which rests on steel legs. The crude water enters the device, its speed decreasing, passes the filter elements, which are box-like containers, packed with sand or crushed quartz, active carbon or porcelain; the filter elements collect the impurities, a small portion of the filtered water flows against the filter, thereby removing the settled impurities, which leave the equipment through the flushing-water duct. So filtering and flushing take place continuously. The contaminations retained in the filtering medium can be continuously removed, no maintenance staff is needed, cost of production of the filter is low, it can be simply installed in existing works, the resistance of the filter is constant, and it has a small geometric size. Code Number 8025.

Licences de la Hongrie

Les possibilités ci-après de fabrication, de mise en marché et d'exportation sous licence sont offertes aux fabricants canadiens par l'Office hongrois des licences. Écrire, avec citation du numéro de code et du titre, à: Novex Co. Ltd., C.P. 62, H-1364, Budapest (Hongrie) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Budakeszi ut 55/dP/8, H-1021 Budapest (Hongrie).

Séparateur à faisceau de tubes pour le traitement des eaux et des effluents/325

Ce séparateur à gravité, à usages multiples, qui peut être mis à profit pour le traitement des eaux et des effluents, s'inspire de plusieurs inventions hongroises. Il consiste en un montage optimisé des éléments du séparateur et s'accompagne du savoir-faire complet concernant un aménagement hydraulique spécial pour une grande diversité de matériels et de formes d'applications. Il a un rendement de traitement amélioré de 50 à 150% au moins, offre des possibilités de rendement élevé pour certains paramètres particuliers, à un coût en capital et des frais d'exploitation peu élevés, et ne nécessite aucun entretien. Il peut aussi être adapté à une installation existante. Il convient à toute installation où la séparation se fait ou peut se faire par gravité. Des demandes de brevet ont été déposées dans 15 pays. Le brevet porte non seulement sur les éléments spéciaux du séparateur, mais aussi sur les parties essentielles du savoir-faire, notamment sur l'aménagement hydraulique spécial. Numéro de code 8002.

Filtre à chasse continue pour eaux industrielles/325

L'usine de filtration, destinée à éliminer les contaminants en suspension dans les eaux industrielles, fait intervenir du matériel de filtration classique dans un nouveau montage à chasse continue. Tout en retenant les matières solides, l'appareil régénère continuellement la couche de filtration. L'appareil consiste en une cage filtrante qui tourne dans un cylindre supporté par quatre pieds en acier. Les eaux brutes entrent dans l'appareil, décèlent, traversent les éléments filtrants qui sont des compartiments remplis de sable ou de quartz, de charbon activé ou de porcelaine broyée. Les éléments filtrants retiennent les impuretés; une faible portion de l'eau filtrée est refoulée, entraînant avec elle les impuretés qui sortent de l'appareil par la chasse d'eau. La filtration et la chasse se font donc en continu. Les contaminants retenus dans le milieu filtrant sont éliminés continuellement. Aucun personnel d'entretien n'est requis. Le coût de production du filtre est faible. La pose dans une installation existante est simple. La résistance du filtre est constante et le filtre est peu encombrant. Numéro de code 8025.

Universal Polygon Turning Fixture/325

The polygon turning fixture fitted in place of the rear tool box of universal lathes is suitable for turning polygonal — epi — and hypocycloidal — surfaces of shafts and holes examples. (See illustration page 31.) The polygon turning fixture offers a simple, economical and rapid production technology for fitted polygon surface shafts and holes, taper shafts and holes with a polygonal surface, driving flanks of cycloidal gear couplings, and roller free-wheels, etc. As it is well balanced, with mechanical connection between the main spindle of the lathe and the tool it enables much quicker and more precise work than copying, or other production methods with easy change over to new profile types. Fields of application include: the whole mechanical industry; small and middle series; high torque transmissions; mould production in glass making and the plastics industry; heavy building, mining and agricultural machinery, etc. Patent applications filed in Canada and 10 other countries. Code Number 9050.

A Transportable Device for Removing Oil Contamination Floating on the Surface of Rivers/325

New device called "OIL TRAP" for collecting liquid pollutants especially oil from the surface of flowing water, e.g. rivers and industrial watercourses which does not contain any moving part, uses no energy source, except the energy of flowing water, duplicable to waters of high (up to 1.0 m per second flowing speed, easily transportable, quick response to accidental oil spills, the collected oil can be removed by known methods and devices, e.g. pumps, operation is simple, the "Oil Trap" in combination with a tow-boat or a push-boat can also be used in still waters. Patents granted in 15 countries. Code Number 80029.

Economical Carburetor for Otto Motors/325

The new carburetor produces an improved fuel air mixture. Servo control is used to adjust the position and cross section of carburation. The mixture is produced at a high speed, close to the speed of sound at any r.p.m. of the motor, ensuring perfect atomization, i.e. superfine vapor with a drop size of a few microns. Fuel consumption is reduced by 12 to 20%, reduction of pollutants, e.g. CO emission is only 0,1 - 0,2 weight percent, faultless operation at a reduced fuel air mixing ratio, elimination of the overconsumption due to wrong driving techniques. The carburetor can be used with both two stroke and four stroke motor types with the same efficiency. Modifications of the existing carburetor are inexpensive and can be made at any service station. The new development was intended for LADA 1200 passenger cars

Support de tournage de polygones universel/325

Le support de tournage de polygones se monte à la place de la boîte à outils arrière des tours universels et sert au tournage des surfaces polygonales, épicycloïdales et page 31.) Le support de tournage de polygones représente un moyen simple, économique et rapide de fabrication de précision des surfaces polygonales des arbres et des trous, des arbres et des trous coniques ayant une surface polygonale, des flancs d'attaque des accouplements à engrenages cycloïdaux, des roues libres à rouleaux, etc. Le support, bien équilibré et reliant mécaniquement la broche principale du tour et l'outil, permet un travail beaucoup plus rapide et plus précis que le tour à copier ou toute autre méthode de fabrication, et permet une transformation facile aux nouveaux types de profil. Les domaines d'utilisation comprennent: l'ensemble de l'industrie mécanique; la production en petites et moyennes séries; les boîtes de transmission à couple élevé; la fabrication des moules pour l'industrie du verre et du plastique; les machineries lourdes pour la construction, les mines et l'agriculture, etc. Demandes de brevets déposées au Canada et dans dix autres pays. Numéro de code 9050.

Dispositif transportable servant à éliminer le pétrole flottant à la surface des cours d'eau/325

Ce nouveau dispositif appelé "OIL TRAP" sert à éliminer les polluants liquides, et plus particulièrement le pétrole, flottant à la surface d'une eau en mouvement, comme celle des rivières et des cours d'eau à usage industriel. Ce dispositif ne renferme aucune pièce mobile, ne requiert aucune source d'énergie, autre que l'énergie cinétique de l'eau qui se déplace, est utilisable dans des cours d'eau de débit élevé (vitesse maximale de 1,0 mètre/seconde), se transporte facilement et réagit rapidement au pétrole déversé accidentellement. Le pétrole recueilli à l'aide de ce dispositif de fonctionnement facile peut être éliminé en utilisant des méthodes et un matériel connus (p. ex. des pompes). On peut aussi l'utiliser en eau morte en le remorquant ou en le poussant avec un bateau. Des brevets ont été accordés dans quinze pays. Numéro de code 80029.

Carbureteur économique pour moteurs Otto/325

Le nouveau carbureteur offre un mélange air-carburant amélioré. Une servocommande règle la configuration et la surface de carburation. Le mélange est produit à haute vitesse, soit près de la vitesse du son pour tout régime du moteur, ce qui assure une parfaite atomisation, c'est-à-dire une vapeur superfine dont les gouttelettes ne mesurent que quelques microns. Il en résulte une diminution de la consommation de carburant variant entre 12 et 20%; une réduction des gaz polluants, p. ex. les émissions de monoxyde de carbone se situent à 0.1 ou 0.2 p. cent par poids; un fonctionnement sans problèmes à un rapport stoechiométrique réduit et l'élimination de la surconsommation due aux mauvaises techniques de conduite. Le carbureteur peut équiper les moteurs à deux et à quatre temps en offrant la même

but by minor modifications can be adapted to any kind of motors. Patent applications filed in 13 countries. Code Number 81023.

Isoquinolinone Derivatives of Anticonvulsive Properties/325

The technology developed by EGYT Gyogyszervegyeszeti Gyar, Budapest, relates to new compounds and is protected by product patents in those countries where it is possible. The new isoquinolinone derivatives act primarily on the central nervous system, block the spasm provoked by electric current or by penthamethylenetetrazole, can be used as active agents of anticonvulsive medicines, especially anti-epileptic preparations. Summary of the tests: the compounds are of a low toxicity and their protective index is 1 to 2 orders of magnitude greater than that of known reference substances (10-24 compared to 1.0-2.5). Further development and testing are to be carried out jointly with the companies interested in final exploitation. Code Number 82011.

efficacité. Les modifications à un carburateur courant sont peu coûteuses et peuvent être faites à n'importe quelle station service. Prévues à l'origine pour les voitures de tourisme LADA 1200, cette innovation peut être adaptée à n'importe quel type de moteur moyennant de légères modifications. Des demandes de brevet ont été déposées dans 13 pays. Numéro de code 81023.

Dérivés de l'isoquinolinone ayant des propriétés anticonvulsivantes/325

Cette innovation technologique mise au point par EGYT Gyogyszervegyeszeti Gyar, Budapest, a trait à de nouveaux composés chimiques, et est protégée par un brevet dans tous les pays où la chose est possible. Les nouveaux dérivés de l'isoquinolinone agissent d'abord sur le système nerveux central, bloquent les spasmes provoqués par le courant électrique et le pentaméthylène-tétrazole et peuvent servir de principe actif pour des anticonvulsivants, et particulièrement pour les préparations antiépileptiques. Résumé des tests: les dérivés présentent une faible toxicité et leur indice chimiothérapeutique est supérieur d'un à deux ordres de grandeur à ceux des substances de référence connues (10-24 comparativement à 1,0-2,5). Des travaux ultérieurs de mise au point et des tests devront être effectués en collaboration avec les sociétés intéressées à l'exploitation des dérivés. Numéro de code: 82011.

Licensing Opportunities Through Georgia Tech Research Institute, Atlanta, Georgia, U.S.

Possibilités de licence par l'intermédiaire du Georgia Tech Research Institute, Atlanta (Georgie) É.-U.

The following licenseable inventions are available from the Georgia Institute of Technology. Interested Canadian manufacturers wishing to ascertain terms of the agreement, manufacturing and marketing rights should write, quoting the GTRI Records of Invention number to: Mr. Richard P. Dobb, Georgia Tech Research Institute, Administration Building, Atlanta, Georgia 30332, telephone: (404) 894-4812. A copy of the initial correspondence should be sent to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, N.W., P.O. Box 56169, Atlanta, Georgia 30303-1290, U.S.A.

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Self-Calibrating Voltage Standing-Wave Radio Meter System/325

Système de mesure, à auto-étalonnage, du rapport d'onde stationnaire/325

GTRI Record of Invention 641NC, U.S. Patent 4,249,258, 2/3/81. The device consists of a meter which measures the voltage standing-wave ratio (VSWR) directly without calibration. The device will work from a two-watt to a 1000 watt output from a transmitter. No battery or external power supply is needed for operation of the meter. The system is used for measuring VSWR of citizens band or ham radio antennas. A prototype has been completed.

Automatic Ear-Training Apparatus to Aid in Basic Musical Training/325

Appareil automatique de dictée musicale destiné aux débutants en musique/325

GTRI Record of Invention 644NC, U.S. Patent 4,321,853, 3/30/82. An electronic device for use in aiding the instruction of musical students. The device is composed of a metronome and a plurality of tone generators, all under the control of a microprocessor computer. The system has the capability of interacting with the student to exchange musical responses for evaluation.

Unloader/325

Déchargeur/325

GTRI Record of Invention 646C. A steel cylinder large enough and long enough for one or more vehicles to roll into, which has openings along one side or wall which mate with vehicle openings. The cylinder is then rotated 180 degrees and back to zero. The invention can be used for unloading material which can be poured or dumped. Can unload one vehicle or a train quickly and without handling or removing from main line. A prototype unit has been tested and is now operational.

Holographic Content-Addressable Memory System for Parallel Processing of Digital Data/325

Système de mémoire adressable à contenu holographique pour le traitement en parallèle des données numériques/325

GTRI Record of Invention 657C, U.S. Patent 4,318,581, 3/9/82. An optical holographic content-addressable memory system has been devised for parallel processing of digital data. When fully developed, operations such as addition and subtraction could be performed by the system on 100 pairs of 16 bit words every 100 nanoseconds. The invention permits rapid parallel processing of multiple parallel digital data. The system described is capable of handling a large number of parallel data channels and providing computations at rates up to 10 billion multiplications per second, which is a higher capacity than any single commercially available computer.

Time Domain Measurement of Moving Coil Loudspeaker Driven Parameters/325

Mesure de paramètres temporels à l'aide d'un haut-parleur électrodynamique/325

GTRI Record of Invention 660NCS, U.S. Patent 4,284,860, 8/18/81. The patent applies to a new method for the measurement of the small-signal parameters of a moving-coil electromagnetic transducer driver. The technique is based on a time-domain analysis of the transient response of the loudspeaker voice-coil circuit to a current step of excitation. By sampling the damped sinusoidal transient generated by such an excitation, the loudspeaker parameters can be calculated from a linear predictive analysis of the recorded data. The method has many applications involving measurement or calibration of second-order electro-mechanical transducers such as moving-coil loudspeaker drivers and seismometers. The technique is extremely rapid compared to conventional techniques. It makes use of a digital computer to calculate the transducer parameters from many data samples, whereas conventional techniques calculate the parameters from only a few data samples. Thus, there is a potential for increased accuracy. The way in which the parameters can be determined makes the method suitable for assembly line testing. The technique is also applicable other second-order electro-mechanical transducers, i.e., seismometers. The concept has been tested in the laboratory.

An Optic Probe for the Viability of Myocardium/325

Sonde optique pour déterminer la viabilité du myocarde/325

GTRI Record of Invention 661CS. The optic probe is designed for clinical use to spatially pinpoint vigor, resting and active regions of myocardium in pathological conditions, such as cardiac infarction. This method allows pinpoint with spatial resolution in the order of 50 micrometers, determination of heat muscle viability, thus eliminating the uncertainty inherent in other methods such as x-ray angiography which is by inference, and finite element method which is global. A prototype is being developed.

Process for Producing Absolute Ethanol by Solvent Extraction and Vacuum Distillation/325

Production d'éthanol absolu par extraction par solvant et distillation sous vide/325

GTRI Record of Invention 664NC. Liquid/liquid extraction is used to remove alcohols from water. The solvent is regenerated using vacuum distillation. The method incorporates reduced energy use and lower costs as compared to distillation methods. The concept has been tested in the laboratory. A U.S. Patent Application has been filed, Serial Number 309,258.

Process for Producing Absolute Ethanol by Continuous Fermentation, Solvent Extraction, and Vacuum Distillation/325

Production d'éthanol absolu par fermentation en continu, extraction par solvant et distillation sous vide/325

GTRI Record of Invention 666NC. Liquid/liquid extraction is used to extract ethanol and other alcohols away from water. The extract is regenerated using vacuum distillation. The ethanol is continuously removed from the fermenter to yield higher production rates. The invention covers a method of producing anhydrous alcohols. Reduced energy use and lower costs result when this method is used as compared to distillation. The concept has been tested in laboratory. A U.S. Patent Application has been filed, Serial Number 265,328.

Method and Apparatus for Determining Thermal Stability of Moist Porous Materials/325

Méthode et appareillage pour déterminer la stabilité thermique des matériaux poreux humides/325

GTRI Record of Invention 671NC. This method of determining thermal stability is based on the transient temperature response of a heated wire or heated cylindrical probe embedded in a moist, porous medium. The thermal stability limits for the medium depends upon the initial moisture content of the medium and the amount of heat dissipated per unit length of the probe. The results of thermal stability tests using this method are independent of the probe diameter, and the thermal stability criteria are developed from points of inflection which occur in the transient temperature response of the probe when the response is plotted as temperature rise versus the logarithm of time. The invention is primarily intended for use as a design tool for underground thermal systems such as electrical power cables, heat pump coils, and other systems which employ cylindrical heat sources. Thermal stability depends upon the heat dissipated per unit length of the heat source as well as the initial moisture content of the medium. The present method is capable of determining this dependence whereas the old method is not. Furthermore, with the present method thermal stability limits obtained using a small diameter probe can be related to the limits for larger diameter heat sources. A prototype has been developed and tested in the laboratory.

Lignin/Cellulose Precipitation Process from Organic Extractants/325

Méthode de précipitation de la lignine/cellulose contenues dans les liquides d'extraction organiques/325

GTRI Record of Invention 673NC. High molecular weight materials, such as lignin and cellulose, may be stripped from solvents using this precipitation technique. A lime strike is carried out either in a stirred tank or by passing the extract through a fixed bed. The precipitant is removed as a sludge. The process can be used in solvent regeneration when the solute is a waste and avoids the use of less efficient precipitation techniques such as by water dilution. The concept has been tested in the laboratory.

Processes for the Removal of Metal Contaminants from Catalysts/325

Méthodes permettant de débarrasser les catalyseurs des contaminants métalliques/325

GTRI Record of Invention 674NCS. Processes for the removal of metal impurities (i.e. nickel and vanadium) from hydrodesulfurization and catalytic cracking catalysts used in oil refining have been developed. The processes can be employed for catalyst regeneration and/or metals recovery. The process incorporates relatively mild processing conditions as compared to any existing technology. The concept has been tested in the laboratory and needs further development tailored to specific needs of the licensees. A U.S. Patent Application has been filed, Serial Number 313,458.

ILS (Instrument Landing System) Indicator Requiring Minimal Pilot Concentration/325

Indicateur ILS de bord (système d'atterrissage aux instruments) à lecture facile/325

GTRI Record of Invention 676NC. The subject invention discloses an indicating device to be used by aircraft pilots making ILS approaches. Owing to its design, it relieves the pilot of some interpretation and instrument concentration. It differs radically from conventional flight directors. The device can be used with light, general aviation aircraft equipped for IFR. This indicator makes ILS approaches much easier and safer than usual. A prototype has been built and tested.

Audio Distortion Analyzer Using Noise Excitation/325

Analyseur de distorsion audio excité par le bruit de fond/325

GTRI Record of Invention 677NC. An audio distortion analyzer which does not use periodic waveform excitation. It can be used for audio equipment repair, design and manufacturing. This equipment makes more meaningful measurements because the excitation is more similar to conventional music program material. A prototype has been built and tested.

Vehicle Speed Measuring and Recording Device Using Infrared Light/325

Dispositif à infrarouge de mesure et d'enregistrement de la vitesse/325

GTRI Record of Invention 681NC. An optical radar system consisting of a camera body attached to a special lens assembly consisting of an infrared laser, an infrared sensor and a digital readout. The unit will provide a digital readout of speed when aimed at the vehicle, using the camera viewfinder. A photo can then be taken showing the vehicle, its speed, and other information, such as time, date and event number. The device acts as a police speed detection recorder. The system is accurate and difficult to detect or circumvent. It can be operated to distances in excess of 1.6 km. A theoretical system has been evaluated using available technology.

Ejector-Operated Refrigeration Cycle/325

Éjecteur commandé par le cycle de réfrigération/325

GTRI Record of Invention 682NCS. An ejector-operated refrigeration cycle uses thermal energy rather than electrical energy to compress the refrigerant. The thermal energy vaporizes a portion of the refrigerant at high temperature and pressure. Then the high pressure vapor compresses the low pressure vapors from the evaporator in an ejector to permit condensing the combined vapors using external air cooling. Used primarily, for solar air conditioning, the invention is based on using multistage compression requiring a series of ejectors in order to increase the coefficient of performance of the cycle. The concept was first evaluated using a computer simulation of the operating characteristics of an ejector or a series of ejectors. An experimental cycle has been constructed but has not been tested.

Waste Heat Recovery System/325

Système de récupération de la chaleur perdue/325

GTRI Record of Invention 689C. Designed to recover both sensible and latent heat from dirty and/or corrosive exhaust streams, the system circumvents the usual problems of heat exchanger fouling and corrosion. The process recovers waste heat from dryers, boilers, or other medium-temperature exhaust streams. Most economizer-type systems can not be used below the dew point of the exhaust or on dirty streams such as textile, rock, or clay drying operations. This device overcomes those limitations and is cheaper than an economizer. A U.S. Patent Application has been filed, Serial Number 293,665.

Speed Timing Radar Speed Estimate Confirmation and Training Device/325

Dispositif de formation des opérateurs de radar de contrôle de vitesse et de confirmation des vitesses évaluées/325

GTRI Record of Invention 690NC. This unit would be used with a speed timing radar. It inhibits the speed from being displayed until the radar operator inputs his estimate of the speed of the approaching vehicle. If the radar measured speed and the operator's estimate agree to within a tolerance set by the court, speed will be displayed. The unit would ensure fairness by radar operators who use their radars as tools to confirm visual estimates of a violator's speed. The use of this unit would restore public confidence in speed timing radar, would require that the operator maintain a tracking history as recommended by the National Highway Traffic Safety Administration, would eliminate the possibility of many errors that are claimed to occur in speed timing radars due to operator inattention to target vehicle activity. A conceptual design has been completed and a complete description based on micro-processor simulation.

RUNOPT — A General Purpose Distillation-Sequence Optimization Program/325

Programmes d'usage général d'optimisation des séquences de distillation — RUNOPT/325

GTRI Record of Invention 691NC. RUNOPT is a collection of advanced computer programs that permit detailed process state and structural optimization calculations for distillation systems as they commonly occur in industry. The analysis permits repetitive evaluations of economic objective functions, such as venture cost, to minimize both capital investment and annual utility requirements. This program can be used for industrial distillation/refrigeration systems analysis (e.g. refinery operations on chemical plant separation trains). RUNOPT provides significant engineering cost savings for existing distillation systems when retrofit is possible or for grass roots facilities. It has already been used to identify improved operating systems for deethanizer sequencing in ethylene plants. The concept has been tested in the laboratory. A U.S. Patent Application has been filed, Serial Number 299,623.

A Child Resistant Trigger Locking Mechanism for Firearms/325

Mécanisme de blocage de la gachette d'une arme à feu, inviolable par des enfants/325

GTRI Record of Invention 694NC. The invention discloses a locking mechanism which does not require a key for opening as do the currently available trigger locks. This is a safety device for firearms which preserves rapid access for adults while preventing access by children.

Low Cost Reflector Antennas/325

Réflecteurs d'antenne économiques/325

GTRI Record of Invention 735NC. An innovation of implementing antenna reflectors on the same low density dielectric that forms a protective radome results in a low cost design. The flat outward looking surface is easily weather protected via fiberglass (or epoxy type) coating. Used in satellite ground terminal and TVRO applications, radar antennas, communications antennas, military, satellite antennas, and other space borne antenna applications, it is lightweight and easily reproduced. The Fresnel zoned versions are also relatively thin, compared with parabolic reflectors of the same diameter. Potential cost is about one third the cost of a metal parabolic antenna reflector. A 25 cm diameter Fresnel reflector, 11.25 cm thick has been constructed and is currently being tested.

Low Level Altimeter for Crop Dusting Airplanes/ Helicopters/325

Altimètre de basse altitude pour avions et hélicoptères d'épandage agricole/325

GTRI Record of Invention 736NC. For low flying aircraft, the invention can be used with crop dusting aircraft. Advantages over current technology are low cost, reliability and ease of operation. The principle has been verified.

Pulsating Combustor Capable of Burning Either Solid, Liquid, or Gaseous Fuels for Steam Raising, Water Heating and Drying Applications/325

Installation de combustion pulsatoire pouvant brûler des combustibles solides, liquides ou gazeux pour la production de vapeur et d'eau chaude ou pour des opérations de séchage/325

GTRI Record of Invention 743NCS. The developed combustor consists of a tube of length L that is open at both ends. Under forced flow operation, a specified flow rate of air enters the tube through an acoustic decoupler. This air mixes and reacts with the fuel at a distance L/4 from the entrance to the tube. The combustion heat released at the L/4 location results in the excitation of the fundamental acoustic mode of the tube which, in turn, results in a more intense and efficient combustion process. Cooling the combustion products at a distance of 3L/4 from the entrance of the tube further amplifies the generated pulsations. The combustion products leave the combustor at the other end that is also connected to an acoustic decoupler. The latter separates the pulsating combustor from the remainder of the system or the outside and it may house a heat exchanger or drying apparatus, if necessary. The combustor can be used in applications involving heating water and/or air, raising steam, drying and gasification of solid fuels. The invention embodies a highly intense combustion process with high combustion and thermal efficiency, reduced pollutant formation, intensified convective heat transfer and reduced slagging (when burning coal). The combustor is capable of using different fuels, of self aspirating operation and of maintaining clean heat transfer surfaces.

Hydrogen Sulfide Fuel Cell/325

Pile à combustibles à l'hydrogène sulfuré/325

GTRI Record of Invention 744NCS. A fuel cell utilizing hydrogen sulfide and air to make sulfuric acid and electric power which can be used in refineries where hydrogen sulfide is produced. Electric power is produced which is not available by current techniques and a valuable product, concentrated sulfuric acid is obtained.

Conversion of Pyrolytic Oils from Biomass into Hydrocarbon Fuels and Chemical Feedstocks by Catalytic Processing/325

Transformation catalytique en carburants d'hydrocarbures et en produits chimiques d'huiles pyrolytiques obtenues à partir de la biomasse/325

GTRI Record of Invention 749. Biomass pyrolytic oils are processed with zeolite catalysts to convert oxygen containing components to hydrocarbon compounds. It is used to process biomass pyrolytic oils into fuels similar to petroleum fuels and more suitable chemical feedstocks. Advantages: Petroleum type fuels are more useful in current modes of transportation and for industrial uses. Petroleum type feedstocks are more useful for present chemical processes and chemical plants than biomass pyrolytic oils. The process is in a conceptual state. More definitive bench scale experimental work is needed.

Two-Cycle Concept for Recovery of Fuel-Grade Alcohols/325

Méthode à deux cycles permettant de récupérer des alcools de qualité carburant/325

GTRI Record of Invention 751NCS. This process uses liquid/liquid extraction to dehydrate alcohols, such as ethanol, and recover them from dilute aqueous mixtures. It is used for alcohol dehydration of chemical feedstocks and for the recovery of ethanol from dilute wines and beers for the production of Gasahol. The process reduces processing costs and energy use compared to distillation. A small bench-scale apparatus has been operated to prove the recovery principle.

Modified Centrifugal Separators for Pyrolysis Off-Gases/325

Séparateurs centrifuges modifiés pour les gaz de pyrolyse/325

GTRI Record of Invention 757NCS. This is a modification of a rotary recycling smoke separator (U.S. Patent No. 4,278,450). Means are provided to overcome the repulsive effects of electrostatic charges on the dispersed particles and/or droplets by grounding the outer collector shell and/or the central rotor, by impressing an electrostatic potential between the central rotor and the collecting shell, or by dissipating the charges on the dispersed aerosol by means of "soft" ionizing radiation. The system can be used to separate wet, dirty, greasy smokes into a clear gas and a liquid or slurry. Applications might include pyrolyzer or gasifier effluents, coal smokestacks, kitchen vents and smelter stacks. Exploitation or neutralization of the electrostatic charges on the dispersed particles or droplets reduces the power required to operate the separator and contributes to cleaner separations. Conceptual design has been completed.

Non-Invasive Biological Coupling Using a Magnetic Graded Field Motor/325

Couplage biologique non-intrusif employant un champ magnétique moteur graduel/325

GTRI Record of Invention 758NCS. This invention discloses a non-invasive method of stimulating neurons and pumping interstitial cartilage fluids in the body using magnetic fields. The device will be used primarily to accelerate healing of broken bones and the stimulation of neurons to diagnose damaged nerve tissue. The treatment can be carried out using non-surgical techniques. A specialized motor has been built to induce a nearly constant voltage around the body.

Utility Knife/325

Couteau tout usage/325

GTRI Record of Invention 761NCS. This new design incorporates an automatic safety feature to protect cardboard box cutters from inadvertent injury, and includes other features for ease of handling. The knife can be used as a utility cutting tool. One-piece plastic molding reduces the cost of the design and also allows usage in wet environments (i.e., in a grocery store produce department). A model has been constructed.

Bibliography

Bibliographie

An Intellectual Property Law Primer/325

Price: U.S. \$39.50, less 10% if payment made with order, 2nd edition published 1982 by Eart W. Kintner and Jack Lahr, to be supplemented periodically. Describes how intangible property rights work and who needs to know; what they are and are not; how they are gained and lost; what can and cannot be done with them; intellectual property professionals; general legal practitioners; corporate executives; technical administrators. Written in the context of U.S. and World Patent law, the most important aspects of the law are clearly explained and illustrated with real life examples. Available from Clark Boardman Company, Ltd., 435 Hudson Street, New York, N.Y. 10014, U.S.A.

Arbitration and the Licensing Process/325

Price: U.S. \$75.00, less 10% if payment made with order, published 1981 and edited by Robert Goldscheider and Michel de Haas, to be supplemented periodically. As the pace of technological innovation continues to accelerate, disputes over such questions as changed competitive position, payment requirements, and non-compliance of confidentiality have increased dramatically. Since few practitioners in the field of technology transfer possess an expertise in arbitration, the need for this specific knowledge has become readily apparent. Bringing together some of the best in current thinking in this dynamic area of law, this authoritative reference work places at your fingertips all the relevant information necessary for making a pragmatic decision on whether to employ the various facilities of arbitration when considering a licensing agreement, as well as how such proceedings might best be organized to meet the needs of the respective clients. Since the matter becomes even more urgent when parties of differing nationalities are reluctant to submit to foreign jurisdiction, this comprehensive volume provides both principals and draftsmen with a thorough knowledge of the different forms of arbitration available, the substantive effects of all the various approaches, plus all the important elements to be determined in an arbitration clause including: ad hoc or institutional arbitration; choice of law; language; procedural rules; amiable composition; designation of arbitrators; definition of disputes, and many other vital points that can help facilitate a more informed decision. Available from: Clark Boardman Co. Ltd., 435 Hudson Street, New York, N.Y. 10014, U.S.A.

Trademarks in Developing Countries/325

Price: U.S. \$25.00, 180 pp., 1982, by A. Vida, Ph.D. and edited in English for L.E.S. International and the Publishing House of the Hungarian Academy of Sciences by Philip Mitches of London, Ontario. Three primary subjects are discussed. Are the developing countries interested in the use of trade marks or will they be in the foreseeable future? Are trade marks considered a positive or a negative right in their economic development? Considering the economic infrastructure, what can or what are the economic roles of trade marks for the development of undeveloped countries? Specific case studies are presented for India, Brazil, Morocco, Ivory Coast and Cuba. Also, Equitorial Africa, South and Central American practices and legal considerations are reviewed. Available from: L.E.S. International, c/o P.O. Box 98, London, Ontario N6A 4V3.

An Intellectual Property Law Primer/325

Prix: É.-U. \$39.50, moins 10% pour paiement à la commande. Deuxième édition de 1982, par Eart W. Kintner and Jack Lahr. L'ouvrage décrit le mécanisme de l'intangibilité des droits de propriété et précise ce qu'ils sont ou ne sont pas, comment on les acquiert et on les perd ainsi que le genre d'usage qu'on peut en faire. Il s'adresse aux spécialistes de la propriété intellectuelle, aux hommes de loi, aux dirigeants d'entreprises et aux administrateurs techniques. Écrit dans le contexte des lois américaines et mondiales sur les brevets, ce livre en explique et en illustre, par des exemples réels, les principaux aspects. Il est vendu par Clark Boardman Company, Ltd., 435 Hudson Street, New York (N.Y.) 10014, États-Unis.

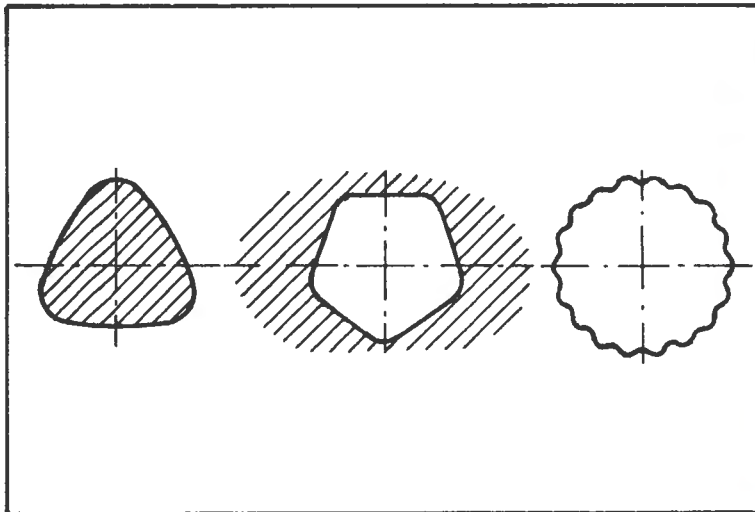
Arbitration and the Licensing Process/325

Publié en 1981 et édité par Robert Goldscheider et Michel de Haas; mise à jour périodique. Le prix de vente est de 75\$ US, avec escompte de 10% si le paiement accompagne la commande. Le progrès technologique s'accéléralant, le nombre des différends a considérablement augmenté: position concurrentielle mouvante, modalités des paiements et non-respect du caractère confidentiel. Peu de praticiens du domaine du transfert de la technologie possédant la compétence voulue en arbitrage, l'importance de l'ouvrage de référence est manifeste. Faisant le point sur les grands courants de la pensée dans ce dynamique domaine du droit, il met à portée tous les renseignements pertinents dont on a besoin pour décider s'il faut avoir recours aux divers outils d'arbitrage pour l'établissement d'un contrat de licence et pour déterminer comment procéder au mieux des besoins des clients. Comme le problème se pose avec encore plus d'acuité lorsque des parties de nationalités différentes répu-gnent à se soumettre à une juridiction étrangère, l'ouvrage donne au profane autant qu'à l'initié une connaissance approfondie des différentes formes d'arbitrage, des conséquences principales des diverses approches ainsi que de tous les éléments majeurs à déterminer: arbitrage ad hoc ou institutionnel; choix du droit; langue; règles de procédure; compromis à l'amiable, désignation des arbitres; définition du différend; et nombreux autres points vitaux susceptibles de faciliter la prise de décisions rationnelles. On peut commander l'ouvrage à l'adresse suivante: Clark Boardman Company Ltd., 435 Hudson Street, New York (N.Y.) 10014, États-Unis.



Silo Bag Filling Machine
(See page 2)

Machine à ensacher
(Voir page 2)



Universal Polygon Turning Fixture
(See page 22)
Support de tournage de polygones universel
(Voir page 22)



Thermo Cover for Metal Vessels
(See page 1)
Thermocouvercles pour récipients métallurgiques
(Voir page 1)



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